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## **DOCTOR OF PHILOSOPHY**

### **Testing behavioural and developmental models of migration : a re-evaluation of "Migration patterns among the elderly" and "Why older people move"**

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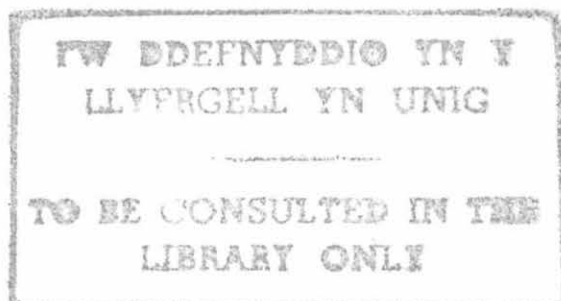
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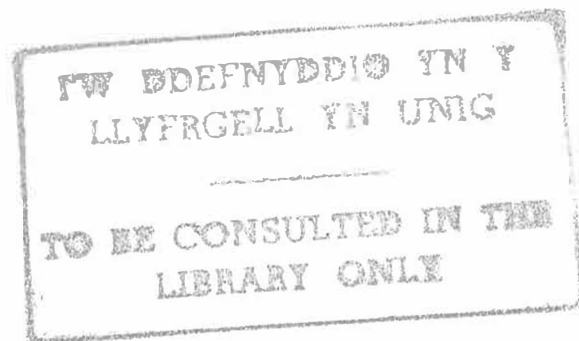
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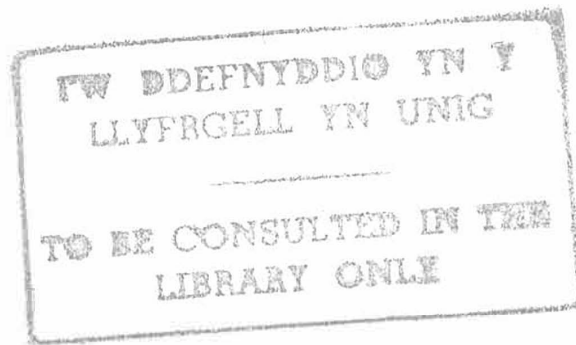


# TESTING BEHAVIOURAL AND DEVELOPMENTAL MODELS OF MIGRATION



# **TESTING BEHAVIOURAL AND DEVELOPMENTAL MODELS OF MIGRATION:**

## **A Re-evaluation of “Migration Patterns Among the Elderly” and “Why Older People Move”**



Vanessa Burholt



## SUMMARY

The results from analysis of data from the Bangor Longitudinal Study of Ageing (BLSA) is organised in order to test two main propositions:

1) Using the motives for relocation given by older people a classification of types of move will be developed. It is possible to assign respondents to these categories, from the relationships between combinations of observable factors. Probabilistic equations are devised that state the relationship of factors to each other and a set of theoretical statements are achieved that describe each category of migration for rural communities in Wales.

2) The typologies that have already been used to categorise older peoples moves (Litwak & Longino 1987, Wiseman 1980) are not *entirely* supported by empirical evidence from the BLSA. It is hypothesised that, a) the best fitting model has a greater number of types of move than the three proposed by Litwak and Longino (1987) but fewer than the eight suggested by Wiseman (1980), but regardless of the types of moves identified, b) a comparison between those who entered residential care and those people remaining in the community, supports Litwak and Longino's (1987) assumptions that formal service provision is insufficient for people with major chronic disabilities to remain at home and its inadequacies play a part in institutionalisation.

Logistic regression is used to identify the factors that are most likely to predict who will move and who will stay put. Exploratory latent class analyses is used to develop a model of types of moves from the reasons that people gave for relocating.

Confirmatory latent class analyses is used to determine the adequacy of Litwak and Longino's (1987) and Wiseman's (1980) models. Qualitative data from intensive interviews with respondents illustrate the quantitative findings. The conclusions are organised in two broad themes: methodological issues and implications for social policy.

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## PREFACE

*My mother's house was  
a place of comfort,  
a place of memories,  
where I grew up.  
Then I put her in a nursing home.  
She didn't remember  
her house anymore.*

*Now my mother's house is mine,  
but I don't want to go there.  
I try to stay away.  
It's not home anymore;  
My mother isn't there.  
There's only memories of how I failed,  
and guilt because I'm not still trying  
to make her house her home.  
(Sibley 1996)*

In December 1994 I was employed as a member of the support networks team at the Centre for Social Policy Research and Development (CSPRD) to work on data from the Bangor Longitudinal Study of Ageing (BLSA). My previous research had focused on housing, in particular the inadequacies of the housing market, homelessness, and its influence on people's self esteem (Burholt 1994). As I became involved with data analysis, I realised (with a little prompting from Professor Clare Wenger) that I could put to use the knowledge I had gained previously, and exploit the wealth of data spanning sixteen years, by examining the residential environments and relocation of older people. Previous analysis conducted on data from the BLSA had looked at: support networks; sources of help; friendships; morale and loneliness; and successful ageing, but had not yet addressed issues surrounding older peoples' housing or their choices in moving or staying put (Wenger 1984,1989, 1990(a), 1990(b), 1992, 1993, 1996(b), Wenger & Shahtahmasebi 1991, Wenger et al. 1995, Wenger & Scott 1995, Wenger et al. 1996, Wenger & Burholt 1997)

My first impressions from the BLSA data led me to believe that neither of the two most frequently cited theories concerned with relocation of older people (Wiseman 1980, Litwak & Longino1987) would adequately describe the types of move made by the respondents. Now I needed a method to test this hypothesis. Fortunately,

whilst working with Merrill Silverstein (Ethel Percy Andrus Gerontology Center, University of Southern California, Los Angeles), comparing relationships between older people and their adult children in Wales and Los Angeles (Silverstein et al. in press), I was introduced to latent class analysis. This was just what I was looking for in order to test the fit of the aforementioned typologies to the BLSA data.

As with other research conducted at CSPRD it has been important to ensure that this analysis is relevant to older people. Alongside the quantitative analysis, I have used qualitative data from in-depth interviews with respondents. This has enabled me to highlight areas in social policy which need attention regarding their suitability in meeting the needs and wants of older people themselves.

## ACKNOWLEDGEMENTS

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I also wish to thank the following people for their help over the last three years:

Anne Scott and Chris Whitaker for statistical and mathematical support and advice; Brian Jones for technical and computer support; all of the interviewers for BLSA, whose reports were a valuable source of information; Beth Parry-Jones, the other member of the CSPRD post-graduate support group; and Professor Clare Wenger, for un-wavering supervision. I would also like to thank my seven year old son for putting up with a mother who has (often unsuccessfully) tried to juggle the time spent in front of a computer poring over this thesis, with leisure time spent with him - a special big thank you Ezekiel.

Finally, the study would not have been possible were it not for the older people who have participated in the BLSA over sixteen years. I am indebted to them.

# PART I

## CHAPTER 1

### INTRODUCTION TO THEORIES OF MIGRATION

This thesis adds to the already substantial knowledge on migration by describing the housing situation and relocation patterns of older people in six rural Welsh communities over a period of sixteen years. The socio-demographic characteristics of those in the study are examined and those who moved are compared with non-movers. Logistic regression is used to identify the factors that are most likely to predict who will move and who will stay put.

The results from analysis of data from the Bangor Longitudinal Study of Ageing (BLSA) are organised in order to test two main propositions:

1) Using the motives for relocation given by older people a classification of types of move will be developed. It is possible to assign respondents to these categories, from the relationships between combinations of observable factors. Probabilistic equations are devised that state the relationship of factors to each other and thus a set of theoretical statements are achieved that describe each category of migration for rural communities in Wales.

2) The typologies that have already been used to categorise older people's moves (Litwak & Longino 1987, Wiseman 1980) can not be *entirely* supported by empirical evidence from the BLSA. It is hypothesised that,

a) the best fitting model has a greater number of types of move than the three types proposed by Litwak and Longino (1987) but fewer than the eight classes suggested by Wiseman (1980).

but regardless of the types of classes identified,

b) a comparison between those who entered residential care and those people remaining in the community, supports Litwak and Longino's (1987) assumptions that formal service provision is insufficient for people with major chronic disabilities to remain at home and its inadequacies play a part in institutionalisation.

## ***BACKGROUND***

Studies of migration and housing of older people are encompassed by many disciplines including sociology, environmental psychology, demography, phenomenological geography, cultural history and design professions. Although the study of migration patterns had been a topic of interest for many years the distinction between migratory differences in younger and older populations has been a relatively newly explored area. Warnes (1994) has described how data on movement throughout the life course shows that the highest level of movement between residences has been found to occur in the 15-29 age bracket. The likelihood of movement remains high for people throughout their twenties but steadily declines from the 30's onwards (Warnes 1994). Early studies looked at those aged 60 and over as a homogenous group (Ravenstein 1885, Redford 1926, Schofield 1987). This age group showed no deviation from the steady decline in relocation from age 30 and onwards. One of the first mentions of variation in migration rates for subgroups of older people was by Dorothy Thomas (1938).

Since then one of the most cited books that takes into account vicissitudes in migration for different stages of the 'life cycle' is *Why families move* (Rossi 1955).

One of the differences between younger people and the older population is that elderly people are more likely to remain in place than are people in other age groups (Lawton 1985, 1990, Struyk & Soldo 1980, Bryant & El-Attar 1984, Serow 1987, Callahan 1992, Halfacree et al. 1992). In the USA those households headed by someone under 65 years old are three and a half times more likely to move than those over 65 (Reschovsky 1990). Although overall older people are less likely to relocate than younger people, investigation and analysis of data into small age groups for those over 60 shows that there is a peak in movement at retirement age (Karn 1977, Law & Warnes 1980, 1982, Cribier 1982, 1989, Wenger 1984, Warnes 1994) and an increase in the propensity to move for those aged 75 and over (Wiseman & Roseman 1979, Warnes 1992(a)).

## ***CONCEPTUAL FRAMEWORK***

### **'Life cycle' model**

Theories have been developed to try to explain residential mobility at different stages of life. Early studies focused on the model of the 'life cycle', compartmentalising stages throughout life and associating needs with them (Table 1.1). Early models of the 'life cycle' relating to housing needs tended to associate all movement of older people with the need for aid and support, as physical or cognitive impairment increased (Leslie & Richardson 1961, Yee & Van Ardsol 1977, Warnes 1992(b)). The life cycle stage and associated decision to relocate is allied to the area of relocation. For example the pre-child stage with the associated housing need for a central city apartment would be due to the requirement to be close to the area of employment.



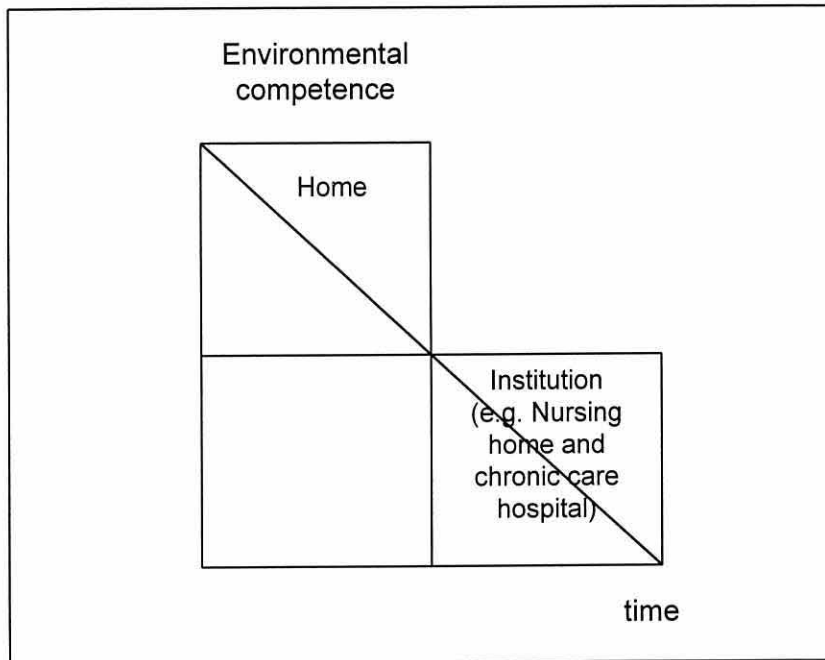
**Table 1.1. Stages in the ‘life cycle’ related to housing needs**

Life cycle stage		Housing needs and aspirations
1	Pre-child	Cheap, central city apartment
2	Child-bearing	Rental single family dwelling close to apartment zone
3	Child-rearing	Owned single family suburban home
4	Child-launching	As 3, or higher-status home/area
5	Post-child	Smaller, high-quality home
6	Later life	Institutional/apartment/live with children

*Source:* Warnes, T., 1992, Temporal and spatial patterns of elderly migration, in Stillwell, J., Rees, P. and Boden, P., (eds.), *Migration processes and patterns: Volume 2. Population redistribution in the 1980's*, Belhaven, London :Adapted from Abu-Lughod, et al., 1960, *Housing choice and housing constraints*, Unwin Hyman, London, and Jones, H. R., 1990, *Population Geography 2nd Edition*, Paul Chapman, London.

The ‘life cycle’ theory when applied to migration presents a simplistic view with each stage of life associated with a particular housing need. It omits any reference to economic factors that may either facilitate or constrain the choices that people have. It fails to take account of temporal differences allowing for variance in the social construction of old age. Socially constructed stereotypes of older people change through time creating a fluid perception of ‘retirement’ directly influenced by society’s expectation of behaviour in older people. This may also influence older people in their decisions to move or ‘stay put’ or where they will relocate to. It also fails to take account of spatial difference for example the housing needs associated with each life cycle stage of those in rural communities. The model assumes that the choice of housing in later life is to remain in the home for as long as environmental competence allows after which institutionalisation is inevitable. This outdated model has been described as the traditional home/institution approach and is illustrated in Figure 1.1. It has been criticised for being responsible for the early institutionalisation of older people (Filion et al. 1992).

**Figure 1.1 The traditional home/institution approach to housing**



**Source:** Filion, P., Wister, A., & Coblenz, E. J., 1992, Subjective dimensions of environmental adaptation among the elderly: A challenge to models of housing policy. *Journal of Housing for the Elderly*, 10(1/2), 3-32.

### **‘Life course’ model**

The ‘life cycle’ theory has tended to be rejected in favour of the ‘life course’ approach. This theory attempts to remove some of the previous assumptions associated with the stages of the ‘life cycle’. It does not assume that everyone follow the same behavioural sequence. The ‘life course’ theory takes into account how other aspects of life impinge on a person’s decision to relocate and emphasises the importance of continuity and change in a person’s life (Elder 1995, Moen 1995, Robison & Moen 1995)

**Table 1.2. Life-course transitions associated with household changes and migration**

Life-course transition		Housing needs and aspirations	Distance of moves <sup>1</sup> (repeated frequency (f) per year) <sup>2</sup>	Ages
1	Leaving parents' home	Low-cost, short tenancy, central city, often share	Short and long distances; high frequency (1+)	16-22
2	Sexual union	Low/medium-cost, tenancy few years	Short distance; medium f (0.3)	20-25
3	Career position	Low-mortgage flat or house	Many long distance; medium f (0.5)	23-30
4	1st child (good income)	Medium-mortgage 2+ bedroom house	Short distance; (long suburban move in large cities)	23-30
5	1st child (low income)	Local authority flat or house	Very short distance	21-28
6	Mid-career promotions or inheritance	Higher-mortgage, larger house	Many long distance; low f (0.1)	30-55
7	Divorce	Low-cost, short tenancy	Short distance	27-50
8	Cohabitation and second marriage	Medium-cost rental or low-mortgage	Short and long distance; low (0.1)	27-50
9	Retirement	Buy outright medium- or low-cost house	Many long distance to peri-urban areas	55-68
10	Bereavement or income collapse	Low-cost, rental or share in well serviced areas	Short distance or return migrations	70+
11	Frailty or chronic illness	Low-cost, rental, share, congregate or institutional	Short distance; medium f (0.3)	75+

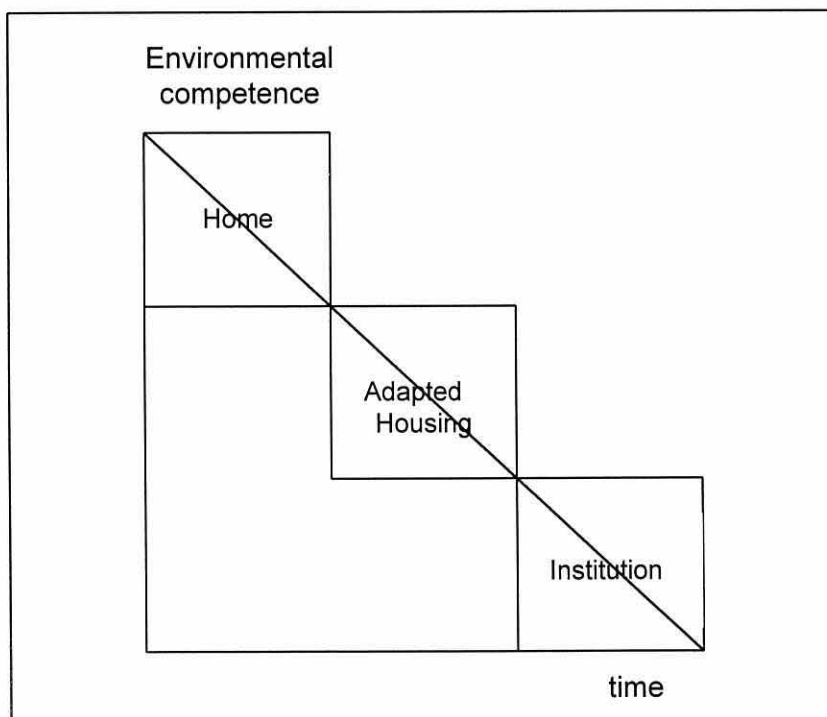
*Source:* Warnes, T., 1992(b), Migration and the life course, in Champion, T. and Fielding, T., *Migration processes & patterns, Volume 1: Research progress & prospects*, Belhaven, London

<sup>1</sup> Warnes (1992) states that “the typology attempts to represent likely distance (mean or variance) of the migrations associated with each transition”, but does not give a unit of measurement to differentiate between long and short distance moves.

<sup>2</sup> No stated frequency indicates that the moves is a ‘once-off’ at the time of the life transition, and not likely to be repeated.

In Table 1.2 the life course transitions in later life (9, 10, 11) and the resulting housing needs are associated with retirement (that is finishing employment), loss of spouse, loss of income, and as with the 'life cycle' theory an increase in physical or cognitive impairment (Rossi 1955, Speare 1970, Salins 1971). One of the most important differences in the movement of older people compared with younger people is that for older people the reason for moving will very rarely be to obtain employment (Lenzer 1965, Cebula 1974, Barsby & Cox 1975, Long & Hansen 1979, Pampel et al. 1984). This linear model leads to expectations that the environment in later life has to be adjusted to match the decline in functioning abilities of the person as they age (Kahana 1975, Nachison & Leeds 1983, Ellingham et al. 1984, Brink 1985, Hoglund 1985, Moen & Wethington 1992) and has been illustrated by Filion et al. (1992) as a 'continuum of adjustment' (see Figure 1.2).

**Figure 1.2 The continuum of adjustment perspective on housing**



**Source:** Filion, P., Wister, A., & Coblenz, E. J., 1992, Subjective dimensions of environmental adaptation among the elderly: A challenge to models of housing policy. *Journal of Housing for the Elderly*, 10(1/2), 3-32.

## **Developmental perspective**

The developmental perspective takes a similar position to the 'life course model' with regards to the three types of move anticipated for later life. The moves described in the 'life course model' are akin to those suggested by Litwak and Longino (1987). The three moves classified in the developmental perspective are 'retirement', 'moderate disability', and 'major chronic disability'.

The long distance<sup>3</sup> retirement move is most frequently undertaken by relatively financially secure, healthy, married couples who are home owners, and are perhaps to areas that they have previously visited during their vacations, or to areas where friends or relatives have moved. In turn non-movers are wealthier and healthier than local movers (Biggar 1980, Litwak & Longino 1987, Warnes 1994). Local movers, therefore are most likely to be in declining health and therefore in need of assistance (Lenzer 1965, Goldscheider 1966, Lawton et al. 1973).

The retirement move does not need to be a move to the proximity of the family as the migrators do not require the physical support from their family. Emotional support can be provided over the telephone, financial support in cash crises can take place over long distances and physical support for short-term recuperative care, maybe after an acute illness, can be given with only a journey by car or plane separating the two parties. Families are able to keep in close contact via the telephone and maintain their ties over long distances (Litwak & Longino 1987, Litwak & Kulis 1987, Warnes 1994).

---

<sup>3</sup> There is some controversy in the literature as to the definition of long-distance or local moves. The research in USA tends to define interstate moves as long-distance and all others as local (Wiseman & Roseman 1979, Biggar 1980, Wiseman 1980) whereas in the United Kingdom, Warnes (1994) defines long distance relocation as moves of more than 30 kilometres.

Litwak and Longino (1987) ascribe the second type of move in old age to moderate disability. Once chronic disability is manifest every day tasks become more difficult. It has been established that spouses often help with household tasks, therefore chronic disability can be compounded by widowhood (Litwak & Longino 1987, Bradsher et al. 1992, Warnes & Ford 1994). Litwak and Longino (1987) suggest that moderate disability sometimes coupled with widowhood precipitates a move closer to the family as help from friends and assistance provided by community social care is inadequate. They support this claim by stating that help for people that are chronically ill is time-consuming and requires considerable effort. If the help is not paid for then there must be basis for reciprocity. One of the reasons they give for the lack of support from friendship networks is that in a majority of cases friends will be of the same age as the person who is physically impaired. In this scenario they may not themselves be physically able to assist the person.

The reason given by Litwak and Longino (1987) for the inadequacy of social care is that it reduces the individual choice of a person. Social care involves a professional visiting the residence and therefore a fixed schedule is adhered to and times are imposed on the individual for activities such as getting out of bed or eating meals. They also point to the potential for laxity and abuse in managing tasks.

The third type of move in later life due to major chronic disability is from the care of the family to institutional care (Litwak & Longino 1987). This happens when the older person is more severely physically or mentally impaired and there are limited kin resources. The resources may be limited in two ways. Either the burden of care-giving becomes so much that responsibilities towards the other family members cannot be fulfilled, or the person may not have any close family.

Litwak and Longino (1987) do not assume that every elderly person will move three times after their retirement. They propose relocation will be characterised by moves to retirement destinations at the time of, or relatively soon after retirement and then back towards children at the onset of disability. Other research has been based on the assumption that a majority of moves in later life will fall into one of these three major classifications (Longino 1990, Reschovsky & Newman 1990, Rogers 1990, Longino et al. 1991, Longino & Smith 1991, Speare et al. 1991, Longino & Serow 1992, Silverstein 1995)

Studies have shown that considerable time is given to the consideration of moves pre-retirement or in the early retirement years (Law & Warnes 1980, Wiseman 1980) whereas those 75 years and older rarely think about a change in environment (Filion et al. 1992). The pre-retirement or early retirement move is usually associated with a desire for recreational facilities and improved climate and relocation later in life is allied with moves closer to kin as needs for assistance increase, as health decreases and maybe the loss of one's spouse occurs. The latter move may also be in anticipation of these events occurring (Wiseman 1980, Litwak & Longino 1987, Feinstein & McFadden 1989, Venti & Wise 1989). Following this reasoning, long distance moves are more likely for those having just reached retirement age and short distance moves are more likely at very old age. The reasons for relocation produce a different spatial configuration for elderly people compared with younger age groups, and different patterns of relocation for the young-old and old-old sub-groups of older people (Wiseman 1980).

Several studies have produced evidence that is not compatible with Litwak and Longino's (1987) typology. A study by Kivett et al. (1995) did not support the hypothesis that the use of telephone contact between parents and children who live at some distance from each other directly translates into more assistance, including emotional aid, being given by these children than by those who do not use the telephone.

There is also some controversy over the effect of widowhood on relocation. Chevan (1995) found that the need for help is not always required immediately following widowhood as widowed people on average remain in the house that they occupied at the time of bereavement for fifteen years, although the likelihood of a move is the greatest within the first year. He also found that after twenty years of widowhood most of the survivors had moved, which he saw as pointing to a move due to increased need for help. Rogers (1988) found that migration of widows increased with age which he also attributes to assistance-seeking moves.

It is difficult to assess the effects of widowhood and need for assistance in old age separately as the probability of widowhood is greater in the later years of life. An increase in difficulties with activities of daily living (ADL's) is associated with an increase in the probability of relocation for the overall older population (Colsher & Wallace 1990, Longino et al. 1991). In addition, a decrease in the level of functioning and ability to undertake ADL's combined with widowhood produces a higher likelihood of moving than would be expected due to widowhood or health status on their own (Bradsher et al. 1992). In other studies the same combination of factors has been shown to precipitate a change in environment, which may be achieved either through residential change (Teaford 1995), with adaptation or technological change within the household, or change in living arrangements (Jackson et al. 1991).



The relationship between health and change of location has also been noted elsewhere (Lawton 1980, Colsher & Wallace 1990, Jackson et al. 1991, Warnes & Ford 1994, Chevan 1995). For widows it has been found that there is a age-gender differential between the movement due to a serious decline in health. Whereas the percentage of men stating that they moved due to worsening health remains steady throughout the elderly age groups (Teaford 1995), for women although a decline in health is not an important reason to move for those age 60-69, for those aged 80 and over, declining health is a substantial factor in triggering a move (Warnes & Ford 1994).

Other studies have found that there is a gender differential associated with movement in widowhood. Surprisingly young elderly men who are widowed are more likely to move than older widowed men, whereas the highest probability of movement for widowed females is predominantly found in those aged 80 and over (Biggar 1980, Warnes & Ford 1994). According to Litwak and Longino's (1987) characterisation of older people's moves, widows could only be included in their second and third types of moves as the long distant retirement move is specific to couples (Chevan 1995). Although the moves described above for older widowed females would fit with Litwak and Longino's (1987) characterisation of moves, the moves by the young-old men do not fit so well.

There is some evidence to show that unmarried elderly people have a higher tendency to perceive that they will relocate from their current properties than do married couples. This may be because they anticipate that they will need help in later years which will not be provided by a spouse. A study of people aged 50-72 found a gender difference between the unmarried people that were in the sample. Unmarried men thought they were more likely to relocate from their current

property than did unmarried women. The expectations of a move for married men and married women were similar (Robison & Moen 1995).

The aforementioned studies show that although some literature supports the three classifications of relocation developed by Litwak and Longino (1987) there is a considerable variety of factors playing a significant part in the relocation process. Although later work by Jackson et al. (1991) argues that local moves can also be conceptualised within Litwak and Longino's model, and changes in living arrangements such as moving in with family, or other adaptations can be encompassed under 'environmental adjustment', the developmental model still appears to be lacking in several areas, as was the 'life cycle' model. Little or no attention is given to the role that other factors have in determining relocation. As people live longer in better health than before and residential mobility of older people increases one would expect the reasons for moving to become more diverse. It would also follow that this will necessitate a redefinition of the categories prompting movement, for example moves to assist other family members such as parents (Cribier & Kych 1992, Warnes 1993), or forced moves due to eviction and avoidance of environmental stress (Wiseman 1980).

### **Behavioural model**

A more comprehensive behavioural model of elderly migration process<sup>4</sup> and a complementary typology has been developed by Wiseman (1980). The behavioural model of elderly migration consists of several related decisions that the older person has to make that are involved in the resolution to move or not, including where to move and the housing type or living arrangement they currently have or intend to have. This is similar to early 'expectancy multiplied by

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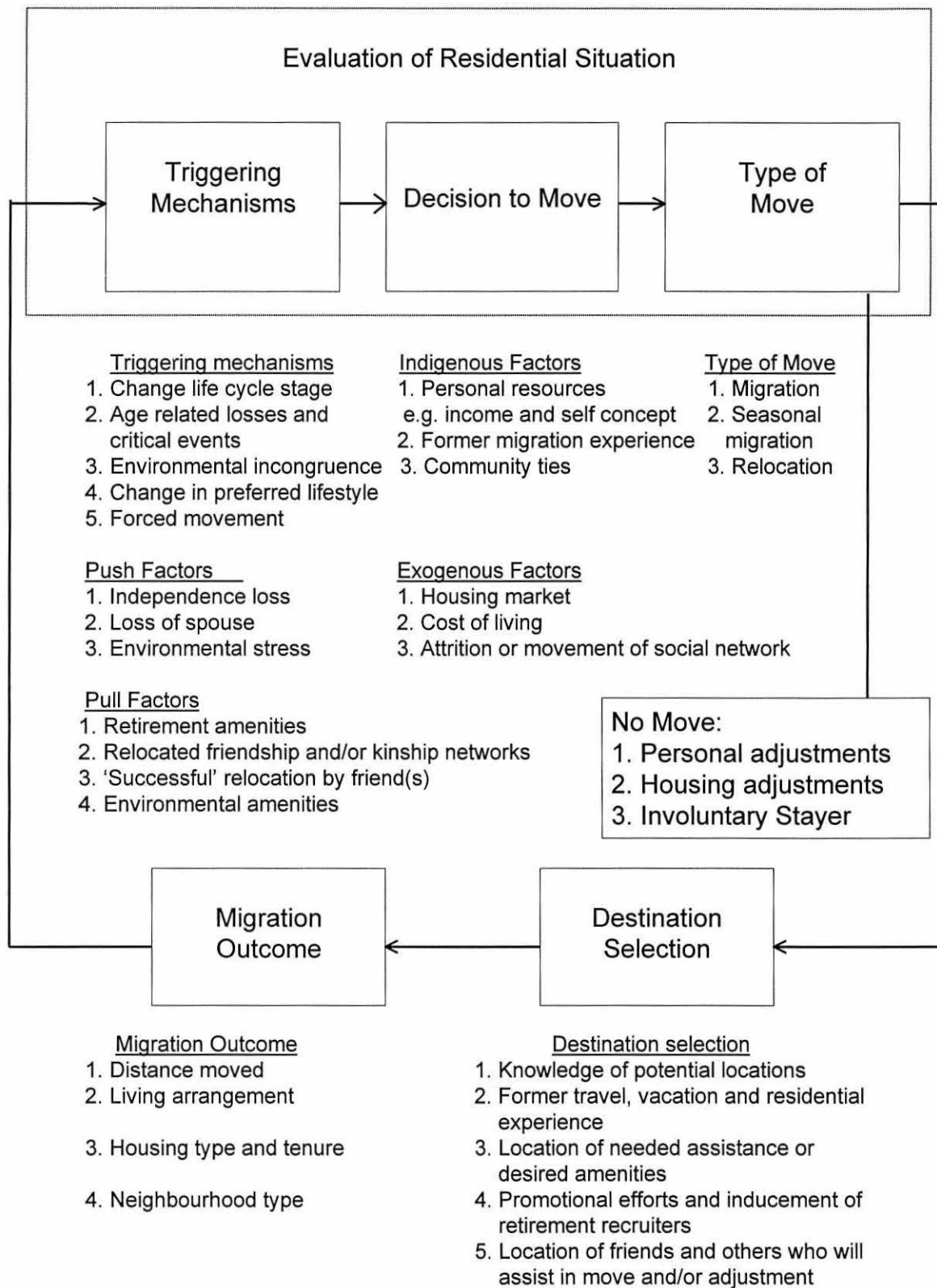
<sup>4</sup> The "theoretical model of elderly migration process" will be referred to as such throughout this thesis maintaining the wording used by Wiseman (1980). In Chapter 11, where a new model is developed by the author the title is changed to the "theoretical model of the migration process of older people" reflecting the currently acceptable syntax used within gerontology.

value' models (Kuhl & Beckman 1985) and more recently, the theory of planned behaviour.

Wiseman's (1980) model assumes that everyone is a potential migrant and that their current living situation is continuously re-evaluated with respect to their needs, desires, resources and the perception of what the final outcome will yield. Wiseman (1980) suggests that a move can be stimulated either directly or in anticipation of factors that he calls triggering mechanisms (see Figure 1.3). The triggering mechanisms include; changes in life cycle stage (for example from employee to retiree); age related losses and critical events (such as widowhood); environmental incongruence (including stress in the present environment, for example due to difficulties with the structure of the house or problems with the community such as noise); change in preferred lifestyle (perhaps more leisure oriented); and forced move (due to eviction or fire). The triggering mechanisms may occur throughout the course of older people's lives and therefore do not correspond to the life cycle model which relies on a chronological ordering of events (Wiseman 1980).

Triggering mechanisms can be divided into push factors and pull factors and the decision to move can be triggered by one or a combination of two or more of these factors. Wiseman (1980) based this assumption on an earlier framework which encompassed four push-pull factors; the life cycle and changes in family structure; social mobility; residential environment; and participation in social and local events (Van Ardsol et al. 1968). The push factors include independence loss, loss of spouse and environmental stress and the pull factors include retirement amenities, relocated friendship and/or kinship networks, successful relocation by friends and environmental amenities (Wiseman 1980). The outcome of the evaluation of push and pull factors is then affected by components that either

**Figure 1.3 Theoretical model of elderly migration process**



**Source:** Wiseman, R. F., 1980, Why Older People Move. *Research on Ageing*, 2(2) 141-154

facilitate or impede actual movement, these are shown on Figure 1.3 as indigenous and exogenous factors.

The indigenous factors include personal resources such as health and income. For example a high income means that relocation may occur so that the person can enjoy recreational facilities, a low income may mean that relocation does not occur or that relocation to a smaller property takes place to reduce the costs of home maintenance. A trigger can also change the indigenous factors. Widowhood, for example, may alter the availability of personal resources. It may lead to an increase in the burden of housing upkeep through a decrease in assistance which coupled with a decrease in other resources such as income, reduces the means available to maintain the current housing situation (Chevan 1995).

Former migration experience either personal or by word of mouth from friends or kin can impinge on the decision-making. Good experience may facilitate moving whereas a bad experience is likely to impede the decision to move. Also no experience of moving indicates long-term stability and is likely to have a negative influence on a decision to move. The continuity theory would also point to a disinclination for moving if residential stability had been established (Atchley 1989). Alternatively, the high mobility of younger relatives or retirement movement of peers may result in an undermining of the older person's residential stability. Experience of social network members dispersing to other areas may erode ties to the community of residence (Wiseman 1980).

The exogenous factors indicated on the diagram include the housing market conditions and the cost of living either in the present situation or in the future one. These factors have been included in economic frameworks to describe mobility decisions (Weinberg et al. 1981, Harmon & Potepan 1988, Reschovsky 1990).

The final outcome of the process will be determined by the push and pull factors of the triggering mechanisms weighted in balance of needs, desires and perceived outcomes plus the influence of facilitating or inhibiting factors. An outcome of moving or not moving will be achieved which Wiseman (1980) subdivides into voluntary and involuntary categories.

Voluntary non-movers could be defined as people who are satisfied with their residential situation. He suggests that satisfaction with residence can also be attained by people who desire to move but for whom indigenous or exogenous factors make this impossible. By adjusting the residential situation by improving the current property or by making personal adjustments to the value attached to various factors, then satisfaction can be gained from the residence.

Several studies support Wiseman's (1980) theoretical model of elderly migration process which suggest that personal adjustments are made if a move is unobtainable. It has been established that elderly people are more likely to remain in their homes than relocate (Struyk & Soldo 1980, Lawton 1990). It has been hypothesised that the low mobility of the elderly may be due to the balancing of push and pull factors and that the majority are experiencing equilibrium and have no need to move (Rabushka & Jacobs 1980, Lawton 1986(b)). It has also been suggested that this equilibrium is achieved because the inhibiting factors in moving are far greater for older people than younger age groups, although this may be anecdotal (Reschovsky 1990) and secondly that the elderly are more likely to state that they are satisfied with their housing situation than those who are younger (Carp 1975, Lawton 1978, Welford & Struyk 1978, Montgomery et al. 1980, Carp & Carp 1981, Golant 1986). Studies show that 75% of elderly people found areas of their environment unsatisfactory, although this was lower than assessments made by housing inspectors (Struyk & Soldo 1980) yet they still expressed a desire not to relocate (Butler & Lewis 1982, Warnes & Ford 1995). In light of these findings the

adjustments that these people make may include personal adjustments, that is reconstruing the current housing situation to one that gives satisfaction (Lawton 1983). It has been suggested that this psychological adaptation from environmental incongruence to congruence is an adjustment to frailty. This may include denial of the inappropriateness of the current environment (Filion et al. 1992) in order to avoid cognitive dissonance, that is the disparity between the reality of the situation and the assessment of it (Carp 1975). Others have suggested that the earlier encounters of elderly cohorts, such as hardship during wartime have resulted in appreciation of situations that in retrospective comparison may not seem as harsh (Campbell et al. 1976, Montgomery et al. 1980. O'Bryant 1983).

Wiseman (1980) also suggests that there are involuntary non-movers and movers. The involuntary non-movers are people who desire to move but are unable to, and who also cannot make personal adjustments or housing adaptations to increase their satisfaction with the present situation. On the other hand, involuntary movers are people who given the choice would rather remain in their residence. Push factors such as health or eviction mean that a move is forced upon them. Involuntary moves into residential care in later life, usually in the same area as the person has been dwelling, may account for the rise in local level moves at the ages of 70 and above (Wiseman 1980). Involuntary moves have also been described by Patrick (1980) who suggests that older people make their own decisions to move when they are in good health, tend not to move when in fair health but are moved by others, most frequently into institutions, when their health is considered to be very poor.

From the application of this model Wiseman (1980) constructed a typology of elderly migration subdivided into long-distance and local level. He suggests that there are three types of long-distance elderly migration: amenity, return migration and assistance.



The long-distance move for amenities encompasses the popular image of migration by older people, a move made at retirement age to a retirement resort. The decision to make this type of move may be made well before retirement. The trigger is often the desire for a change in lifestyle where the retiree can enjoy their new found leisure time, maybe in a sunnier climate, with amenities geared to their age group (Wiseman 1980). Retirement in pursuit of leisure has developed as a result of the obligation for older people to leave employment (Warnes & Ford 1995), increases in the income of retired people, state pensions available to all retirees (Phillipson 1982), a drop in the number of children that the older population have had to support and educate and the rise in home ownership (Karn 1977, Rees 1992, Warnes 1994, Wiseman 1980). More older people can now afford to live independently of their families. This is demonstrated in data from the USA which shows that in 1900 over a quarter (26%) of the population aged over 65 lived with a married child but by 1980 this had dropped to only 4% of the population (Stearns 1989). In addition, the drop in mortality rate has meant that the last years of life have become a time where plans can be made for enjoyment, rather than the expectations of previous generations that retirement would be a time to wind down whilst experiencing declining health.

The areas chosen as destinations that are perceived to have suitable amenities for retirees shifts over time and results in a change in distribution of elderly migrants (Warnes & Law 1984). Karn (1977) in her book *Retiring to the Seaside* explains how seaside resorts have developed as holiday destinations. Most of the expansion of seaside resorts started in the mid eighteenth century when doctors began to promote coastal sites as health resorts. Prior to this spa towns had been the areas that people had vacationed at for their health. Many of the South Coast resorts also became famous because of visits by royalty but their popularity was enhanced by the ease of access from London which was initially where most of the holiday demand was generated (Walton 1983). The change in vacation patterns has only



taken place over the last few decades with more people being able to afford holidays, and the holiday abroad becoming a reality for more people. This may have led to the increases in migration of the older generations as more people have experience of other communities and are therefore more aware than previous generations of the possibilities of relocation that are available to them (Wiseman 1980).

This form of retirement movement can lead to the highly channelled movement of elderly people to popular retirement destinations. Wiseman (1980) and other researchers (Brown & Moore 1970, Brown et al. 1977, Wiseman & Roseman 1979) have highlighted the importance of destination selection, or 'search space'. The destination may be decided through choosing to relocate in the same area as friends or kin, or a place that the person is familiar with through having spent vacations there previously (Wiseman & Roseman 1979, Wiseman 1980, Glasgow & Sofranko 1980). If friends or kin are already in an area then information about the place will be flowing to the potential migrant who in turn will probably talk about the place to other friends. In this way a channelled origin-destination migration stream will be developed (Beale 1975, Lawton 1990).

An example of channelled origin-destination for retirement movement can be seen to and from Florida. As Table 1.3 illustrates, the mean age of older movers to Florida is younger (68.4 years) than the movers from Florida (73 years). Only 15.5% of people moving to Florida are over 75 whereas 40.6% of those moving away are in this age group. More of those moving to Florida are married (75.9%) compared with those moving away (41.6%). This would lead one to expect a higher percentage of people leaving Florida to be widowed, which is the case. Only 17% of those moving to Florida are widowed whereas 47.8% leaving are in this situation. Three times as many people moving from Florida go to live with their children (16%) compared with only 4.8% moving in. Only 1.2% of those moving to

Florida are institutionalised compared with 11% moving out, and 8% of those moving in have a disability compared with 19.4% moving out.

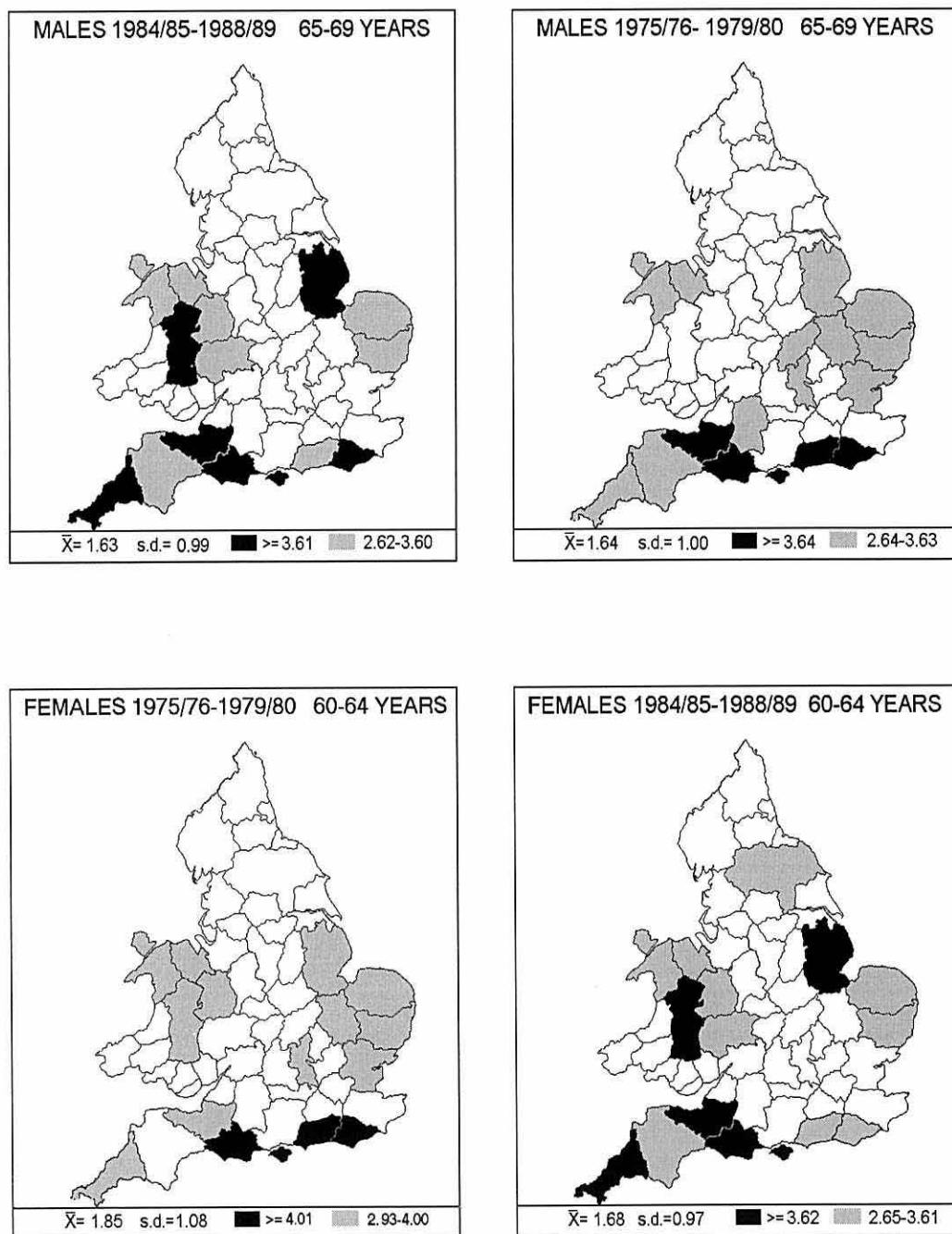
**Table 1.3 People age 60+ in Florida streams moving from and to New York, New Jersey, Pennsylvania and Ohio during the period 1975-1980**

Migrant characteristics	New York		New Jersey		Pennsylvania		Ohio	
	To Florida	From Florida	To Florida	From Florida	To Florida	From Florida	To Florida	From Florida
Total migrants	127,600	9,000	38,440	4,640	31,600	4,480	37,720	5,120
Mean age	69.2	73.2	68.2	72.4	68.3	73.3	68.0	73.1
% Age 75+	15.0	42.2	16.8	34.5	17.2	45.5	14.5	38.3
% Male	46.9	33.8	50.6	32.8	46.8	36.6	49.3	33.6
% Married	75.7	38.2	75.4	46.6	74.6	44.6	78.4	40.6
% Widowed	17.1	49.3	16.9	43.1	18.4	44.6	15.6	50.0
% With a disability	8.0	20.4	8.7	18.1	7.6	17.9	7.9	21.1
% Living independently	90.3	62.7	88.8	66.4	89.0	67.9	90.5	67.2
% Living with a child	4.5	20.0	5.3	17.2	5.3	12.5	5.0	10.9
% In institution	0.9	12.0	1.4	4.3	2.0	13.4	1.3	13.3
% Below poverty	6.8	11.6	7.6	15.5	3.8	6.3	5.4	8.6

*Source:* Litwak, E. and Longino, C. F., 1987, Migration patterns among the elderly: A developmental perspective, *The Gerontologist*, 27(3) 266-272

The differences between in-migration and out-migration although demonstrating channelled origin-destination stream also lends support to Litwak and Longino's (1987) developmental perspective with the highest proportions of in-migration coming from people who match the characteristics of first-stage movers and those moving out match the idiosyncrasies of the second and third stage movers. The people moving to Florida are younger, healthier, and more likely to be married than those moving away whereas the people that have disabilities or who are

**Figure 1.4 In-migration rates to Family Practitioner Committee areas of England and Wales at retirement age, 1975-80 and 1984-89.**



**Source:** Adapted from Warnes, T., 1992(a), Temporal and spatial patterns of elderly migration in Rees, P. and Boden, P., (Eds.) *Migration processes and patterns: Volume 2. Population Redistribution in the 1980's*. Belhaven, London.

institutionalised have the characteristics associated with their second move due to chronic disability.

The changes in spatial distribution of popular retirement destinations may be accounted for by changes in popular vacation areas. The most popular areas for migration destinations in the UK have changed over the last few decades and are no longer only the South Coast resorts. Warnes (1992(a)) used data from NHS patient re-registration data for Family Practitioner Committee areas to look at the change in destinations between two periods (1975/76-79/80 and 1984/85-1988/89) of retirement migrants. Figure 1.4 shows the change in distribution of in-migrants separately for males (65-69 years) and females (60-65 years). Warnes (1992(a)) calculated the means ( $\bar{X}$ ) and standard deviations (s.d.) for each age/sex-specific group. The areas that were identified with high in-migration rates were those that demonstrated a rise in one or two standard deviations from the mean.

In the late 1970's to early 1980's the most popular destinations for both males and females were Dorset, the Isle of Wight, East and West Sussex. In addition Somerset was a popular destination for males. Retirement to south coast resorts had been established since the early 1900's. Table 1.4 demonstrates that in the Sussex coastal resorts there have been greater proportions of older people since 1911, than overall in England and Wales (Walton 1983).

By the late 1980's the most popular retirement destinations had altered. West Sussex was no longer in the top category of retirement destinations, and East Sussex only remained in the topmost category for male retirees. Cambridgeshire had decreased its levels of both males and female in-migrants and Northamptonshire and Buckinghamshire had experienced a decrease in the latter. On the other hand several counties had emerged in the most popular category of destinations for in-migration; Cornwall, Somerset, Powys and Lincolnshire.

Although not in the topmost category, North Yorkshire had increased the level of female in-migration, Shropshire had experienced increases in male migrants and Hereford and Worcester was a popular destination for both genders. The shift in retirement destinations appears to be away from the traditional Sussex coastal resorts, associated with easy access from London, towards the periphery of other substantial urban-industrial settlements.

**Table 1.4. Age/sex structure of Sussex seaside resorts in 1911. Percentage of population over 60 years of age.**

Sussex seaside resorts	Over 60	
	Male	Female
<i>England and Wales</i>	3.6	4.6
Brighton	4.1	6.3
Eastbourne	3.4	5.4
Hastings	4.9	8.5
Hove	4.2	7.9
Worthing	4.5	8.4

*Source:* Adapted from Walton, J. K., 1983, *The English seaside resort: A social history 1750-1914*. Leicester University Press, Leicester.

With the advent of wider travel, migration patterns of British retirees also include other European destinations. The east coast of Spain is emerging as the most popular destination for retirees (Paniagua Mazorra 1991, Warnes 1991) who are migrating to residential areas concentrated around popular tourist resorts (Valero Escandell 1992). It cannot be assumed that all European destinations of retirement migrations are due to previous holiday experience as one study had indicated that long distance moves to rural France do not appear to be motivated by prior contact with the area (Hoggart & Buller 1995). Long distance retirement moves may be made for climatic benefits, for reductions in housing costs, for improved environmental conditions or to specific forms of housing.

The second type of long-distance move described by Wiseman (1980) is return migration which encompasses a move after retirement to either the place of birth, where the person was brought up or where they previously lived (Long & Hansen 1975). USA census data includes place of birth but it is recognised that this is not necessarily where the person was raised and therefore may not show the true figures of people moving back to the area where their childhood was spent. The typology fails to distinguish the distinct component that differentiates return migration as a separate category from amenity or assistance moves. A study of migration in Drenthe showed that 'return migration' only accounted for a very small number of moves by elderly people (Van der Molen & Voogd 1992).

Wiseman's (1980) third category of long-distance moves consists of relocation for assistance and is comparable to the moves that Litwak and Longino (1987) ascribe to moderate disability. These types of relocation are due to the need for assistance and will result in different spatial concentrations of older people than moves for amenities.

In addition to long distance moves, Wiseman (1980) classifies five types of local level migration. These are described as moves for local amenities, environmental relocation, assistance-seeking moves, chronic residential mobility and forced moves.

Local amenity moves are similar to the long distance moves for amenities but have less to do with the age of the mover and the transition from employee to retiree. Wiseman (1980) suggests that during all of the stages of the 'life cycle' moves are made for improved houses, gardens or neighbourhoods. In this context the local amenity move for some older people is no different than moves made by younger people. A local amenity move could also be made at the time of retirement for a

more leisurely and recreationally oriented lifestyle if the amenities are close at hand and do not require a move of great distance.

Whereas amenity moves involve 'pull' factors drawing people to a particular location, environmental moves are prompted by a 'push' triggering mechanism, that is when factors about the environment are causing stress. Wiseman (1980) says that the people who move for environmental reasons probably have fewer resources than those who are moving for amenities. They choose to relocate into a similar type of house, in a similar neighbourhood and at a similar cost. Goldscheider (1966) found that the most common reason given for local relocation was dissatisfaction with the present environment. Other studies have shown that moves due to environmental stress account for the largest proportion of elderly relocation from old, inner city areas, where the stressors may include a rise in crime, or lowering of the local socio-economy and dissatisfaction with the current environment (Wiseman & Virden 1977, Wiseman 1980).

Wiseman (1980) suggests that local level moves for assistance are also governed by 'push' factors; that is the need for help. The move will be determined by the type and level of assistance required. It may involve relocation to a communal living facility or sheltered accommodation which may or may not be warden assisted, in with children or other relatives or into an institution such as residential care or a nursing home. Although this move is similar to the move due to moderate disability described by Litwak and Longino (1987) it also spans the category of move due to chronic disability.

Wiseman (1980) defines local-level chronic movement as frequent movement from property to property. By applying the continuity theory of old age, he states that people who have had this type of lifestyle prior to retirement have no reason to change the habit of a lifetime upon reaching a certain age. Certainly other studies have found that a history of moving throughout the life course will decrease the likelihood of remaining in the same home (Robison & Moen 1995). Morrison (1971) also describes chronic movers and research on multiple place identity has found that older people that have moved frequently are more likely to have an attachment to many places than younger people who have moved as often (Cuba 1995). The research suggests that elderly chronic movers are a valid category.

Finally, forced local movement is either through eviction or other housing crises events such as fire or due to redevelopment of the neighbourhood (Kasteler 1968, Wiseman 1980). These moves are involuntary.

The behavioural model developed by Wiseman (1980) and the typology complement each other and appear to be more comprehensive than the three types of move described by Litwak and Longino (1987). The model ascribes individual movers motives for relocation which are the triggering mechanisms in Figure 1.3. The movers are then classified in the various groups of the typology (Table 1.5) according to the motives they have for relocation. It is assumed that the groups of movers share common characteristics as the factors that will have influenced their moves will be similar. For instance, it is assumed that long-distance retirement moves are likely to be made by people who are married, in good health and have relatively high incomes because these people experience the trigger mechanism (change in lifestyle due to retirement) and possess the resources to undertake this type of move. As the move has been influenced by various factors Wiseman (1980) suggests that these will be characteristic of the people making each type of move.



**Table 1.5. Wiseman and Roseman's (1979) typology of elderly migration.**

Type of move	Reasons for moving	Destination selection	Housing outcome	Who moves	Decision maker
<b>Migration:</b>					
<b>Amenity</b>	Retirement, amenity environment	Vacation experience & migration experience of others	All types except institutions	Retirees, couples, middle & upper incomes	Mover
<b>Return</b>	Retirement, importance of home	Previous residential experience	Family home, apartment, institution	Retirees, middle & lower incomes	Mover
<b>Assistance</b>	Need for limited care, loss of spouse	Locations of family members	Family home, apartment, institution	Singles, older	Mover & family
<b>Local:</b>					
<b>Amenity, suburbanisation &amp; exurbanisation</b>	Housing and neighbourhood	Suburban area	Home ownership	Pre-retirement middle & upper income, younger couples	Mover
<b>Environment into apartment</b>	Changing space & maintenance needs	Entire urban area	apartment, condominium	Middle & upper income	Mover
<b>Environment into communal facility</b>	Need for socialisation	Limited to a few specific places	High density communal	Singles, older	Mover
<b>Assistance, homes of kin</b>	Need for limited care, loss of spouse	Very limited, within family homes	Family home	Singles, older	Mover & family
<b>Assistance, into institution</b>	Need for personal care	Specific opportunities	Institution	Singles, older	Family, social worker, doctor
<b>Forced, inner city relocation</b>	Forced	Short distance, limited	Rented home or apartment	Lower income	Mover, government body.

*Source:* Adapted from Wiseman, R. F. and Roseman, C. C., 1979, A typology of elderly migration based on the decision making process. *Economic Geography*, **55**, 334-338.

## **Residential care**

The move into residential care is often considered to be the last move that an older person will make. Litwak and Longino (1987) include it in their model as a move due to major chronic disability. Wiseman (1980) also includes it in his typology as a short distance move for assistance. Data from studies suggest that entry into residential care will be dependent on the interrelated effects of social, environmental and personal factors (Baglioni 1989) such as the need to move due to marital status (e.g. widowhood or never married), health status or ability to manage activities of daily living (Bernstein 1982) and mental incapacity (Gillis et al. 1982 Greene & Ondrich 1990). The type of variables that prompt movement present a picture that suggests the older people incapacitated by these factors will move to satisfy care needs rather than for special accommodation.

The effects of relocation into residential care has been the subject of study from at least 1945 (Camargo & Preston 1945) with approximately a further two hundred studies on this topic up to date (Bourestom & Pastalan 1981, Baglioni 1989). An abundance of the literature about residential care has focused on the negative aspects of institutionalisation (Goffman 1961, Townsend 1962, King et al. 1971, Miller & Gwynne 1972, Tobin & Lieberman 1976, Vladeck 1980). These negative images may be as a result of the historical background of institutions and the resulting stigma attached to them (Driver 1993); that is, control (Jones 1967, Higgins 1980, Cohen & Scull 1985), and the associations with destitution and incarceration (Crowther 1981). Such associations are hard to dispel, and in the light of these historical images of institutionalisation it is not surprising that a majority of the older generation desire to stay in their own homes and do not want to move into residential care (Morgan 1982, Groth-Juncker & McCusker 1983, Varady 1984, Guttman & Blackie 1986, Warnes 1994).

Studies have looked at the loss of autonomy and learned helplessness of individuals who live in these environments (Wetle 1985, Wilkin & Hughes 1987, Fry 1989, Hofland & David 1990, Foy & Mitchell 1990, Lidz & Arnold 1990, Hall & Bocksnick 1995). Findings have revealed how a reduction in living space, loss of contact with friends, loss of control over the environment, decreases in decision making and loss of privacy can lead to a fall in self-esteem (Felton & Kahana 1974, Dougherty 1985, Taft 1985, Chowdhary 1990, Barer 1995).

Other studies have been conducted investigating levels of depression in residential care. These have identified associations between depression and social support in residential homes (Nelson 1989), length of institutionalisation (Bartoloni et al. 1993) and engagement in activities that are subjectively most enjoyed (Simpson et al. 1981). Elsewhere it was found that men in institutions were more likely to be depressed than those living in their own homes (Valliant & Furac 1993).

There is some controversy over the effect of relocation to residential care on mortality rates. Whereas some studies have found no evidence to suggest that relocation increases mortality rates (Markson & Cumming 1974, Zweig & Csank 1975, Borup et al. 1979), others have demonstrated that under certain circumstances such as involuntary moves and a lack of planning for the move, higher mortality rates ensue (Aldrich & Mendkoff 1963, Jasnau 1967, Killian 1970, Bourestom & Tars 1974, Hasselkus 1978, Coffman 1981, 1983, Bourestom 1984, Baglioni 1989) and that high activity levels within the residence decrease mortality rates (Stones et al. 1989).

Admission to residential care can lead to a deterioration in the older persons' well-being and several studies have attempted to identify the people in which this is most likely to occur. In 1978 a study showed that independent people in residential care homes experienced less deterioration than dependent elderly people (Pattie &

Gilleard 1978). More recently, the type of residential setting and the differential deterioration in personal functioning has been investigated. Results have shown that dependent older people have higher levels of functional deterioration in group homes than in traditional homes, whereas independent people experienced less deterioration in group homes (Booth & Phillips 1987).

Explanations for the deterioration of independent people in residential care have been noted elsewhere. Competent behaviour could be described as inappropriate, atypical and therefore detrimental in an environment that specifically caters for the least capable (Posner 1975). The deleterious provision of help above the needs of the individual has been described as 'overcare' (Ransen 1978).

In order to minimise the aforementioned negative effects of relocation to residential care various attempts have been made to maintain autonomy or promote the empowerment of the individuals in residence (Thomasma 1985, Clark 1988, Teitelman & Priddy 1988, Compton 1989, Collopy 1990, Schmidt 1990, Chowdhary 1991, Wells & Taylor 1991, Williams 1991, Barkan 1995, Brown 1995, Clark 1995). The results of a recent study showed that well-organised facilities promoting both self-directed behaviour and providing support had residents that rated their well-being higher than in other facilities, and required fewer health services (Timko & Moos 1991). Other studies have suggested that the provision of stimulating environments can improve the quality of life of residents (McGuire 1984, Coppola et al. 1990).

In the United Kingdom there was considerable variation between residential care homes in their facilities and type or level of care provision. In 1985 the Secretary of State for Health and Social Services commissioned the Independent Review of Residential Care (National Institute for Social Work 1988). This was intended to

inspect the situation within residential care homes in all sectors in England and Wales and to recommend changes and developments for the future to meet the demands of society.

The review committee chose to view residential care as part of the continuum of care in the community and highlighted the need for organisational coherence in ensuring that clients were not entering institutions unnecessarily. They recommended that personal social services should be provided to meet individual needs. They envisaged social services providing assistance in daily living which would include environmental adaptation to aid functional ability, provision of warmth, clothing and food when required, and help with activities of daily living such as washing, bathing and going to the toilet.

In addition, the review recommended that tailored programmes of care should be implemented that would provide assessment, treatment and rehabilitation with the,

“aim to produce substantial changes in individuals’ functioning so that they can live more freely, independently and with integrity”

(National Institute for Social Work 1988).

It was strongly emphasised that no-one should be expected to relocate from their permanent residence in order to receive assistance; personal social services required to meet people’s needs should be made available in their own homes.

The National Health Service & Community Care Act 1990 set out the Government's policy for health and social care and included some of the recommendations put forward by the review committee. One of its key objectives is,

“to promote the development of domiciliary day and respite services to enable people to live in their own home wherever feasible and sensible.... the Government will encourage the targeting of home-based services on those people whose need for them is greatest”

(HMSO 1989).

The objectives were to be met on a local level by joint planning of services between social service departments of local authorities (the council of a county), Family Health Services Authorities (responsible for managing family doctors, dentists, community pharmacists and ophthalmic opticians), and District Health Authorities (responsible for identifying and providing for the health care needs of its resident community).

It has been noted in the USA that vulnerable older people are subject to increased institutionalisation (Berman-Rossi 1991). Other studies have identified the availability of care-givers and functional ability as being important factors in the admission to residential care (Wingard et al. 1987, Knight 1985). In light of the policy guidelines laid down in the NHS & Community Care Act 1990, and the previous recommendations by the Independent Review of Residential Care (National Institute for Social Work 1988) it would be expected that vulnerable older people, those without carers or those who have difficulties with activities of daily living would be a priority target for health and social care services in the community to delay or avoid institutionalisation.

## ***SUMMARY***

This first chapter has shown that the study of relocation of older people has developed over time. Theories that compartmentalise stages through the life according to needs have evolved, leaving behind assumptions that everyone follows the same behavioural sequence. There remains a tendency for theories to focus on needs of older people and to describe environmental adjustment and relocation in terms of compensation for declining functional abilities.

Two theoretical models have been introduced that describe the types of moves made by older people. The models developed by Litwak and Longino (1987) and Wiseman's (1980) assume that people making a particular type of move will share common characteristics and that certain factors will trigger the different types of move. Chapter 2 takes up this theme and examines the research that has attempted to identify the factors that predict or determine moves.

Chapter 3 explains how the political and economic influences of housing policies throughout the study period affected the housing choices and decisions made by older people in Great Britain. In light of the impact that the UK housing market has had on residential mobility the final section of Chapter 3 discusses whether migration research conducted in the USA and the theories that have arisen from it can be generalised to the UK.

The second part of this thesis will focus on the analysis of data from BLSA. Chapter 4 outlines the background of the Bangor Longitudinal Study of Ageing; that is, the development of the longitudinal study, the primary objectives and the study area. It also looks at the social and economic status of rural communities in Wales, with particular regard to the effects that the fluctuations in the housing market had on rural communities.

Chapter 5 describes more of the background to the study and contains a description of the sample, a summary of the data that were collected and the coding of the variables used in the analysis. Following on from this, the subsequent five chapters present the analytical methodology and results for each piece of analysis.

In Chapter 6 logistic regression analysis identifies the factors that are most likely to explain which people move in BLSA. In Chapter 7, exploratory latent class analysis is used to develop a model of types of moves from the reasons that people gave for relocating. Latent class analysis is also used in Chapter 8, but here it is used in a confirmatory manner to determine if Litwak and Longino's (1987) or Wiseman's (1980) models adequately characterise the types of moves that were made by older people in BLSA. The exploratory latent class analysis and the confirmatory latent class analysis in Chapters 7 and 8 result in two different models producing an acceptable fit to the data. In Chapter 9 one model is chosen on the basis of the adequacy of its classification determining the motives for relocation. In Chapter 10 assumptions made by Litwak and Longino (1987) are tested; that formal service provision is insufficient for people with major chronic disabilities and that these inadequacies will play a part in institutionalisation. At the end of Part II, Chapter 11 draws together the findings from the analyses and uses qualitative data from intensive interviews with some of the respondents and observations from the interviewers' reports that illustrate the quantitative findings from the preceding chapters. The findings are discussed with reference to the Wiseman's (1980) theoretical model of elderly migration processes and an adapted version of this model is developed to fit the findings from the analyses of BLSA data.

Finally, in Part III Chapter 12 presents a conceptual and methodological overview of the thesis. It organises the conclusions that can be drawn from this thesis into two broad themes, that is, methodological issues and the implications for social policy.



### STUDIES OF MIGRATION

This chapter examines twenty studies of migration which are displayed in Table 2.1. Firstly the tools of analysis are examined with particular reference to their constraints. The findings of the studies and other relevant research are then organised into groups of factors that have explained migration. These are discussed under the headings; socio-demographic, socio-economic and health related factors. This is followed by a synthesis of the findings and how these correspond to the migration theories introduced in Chapter 1. Although housing has been incorporated under the theme of socio-demographic factors affecting residential mobility the housing market in the United Kingdom is discussed separately in Chapter 3.

#### *TOOLS OF ANALYSIS*

Attempts have been made to develop models that produce a hierarchy of factors associated with housing and whether elderly people move or 'stay put'. Over fifty percent of the studies listed in Table 2.1 used logistic regression or logit to model residential relocation. Linear regression analysis requires the dependent variable to be continuous whereas the dependent variable in logistic regression (including specific models such as logit or probit) can be non-continuous (Liao 1994). These models use independent factors to model the probability of a move taking place.

Five of the listed studies use cross-tabulation to examine the relationship between variables. In these instances the categories of 'moving' and 'not moving' are examined for relationships with other variables. The observed frequencies in each cell are compared with the frequencies that would be expected if there was no

**Table 2.1 Summary of 20 studies of older people's residential relocation.**

Authors	Sample	Sample size	Statistical method	Results <sup>5</sup>
Karn (1977)	Sample restricted to Clacton and Bexhill, UK. 1 in 10 sample of Bexhill electoral list and 1 in 9 sample of Clacton electoral list were then 'sifted' to include only those aged 55 and over who had moved to the towns for retirement.	998	Descriptive analysis of movers compared, where possible, to census data. 1. Social class 2. Age of retirement 3. Reasons for retiring 4. Timing of retirement 5. Marital status 6. Number of living children 7. Tenure 8. Motives for moving	Compared to the national average: Higher percentage of <b>social class I &amp; II</b> movers in Bexhill, whereas Clacton was similar to national average. Lower proportion of class IV & V movers in both areas. Lower than average retirement <b>age</b> . More people <b>retired voluntarily</b> . More <b>childless</b> people moved. Most moved in the <b>year of their retirement</b> and one year after retirement. 13-18% moved one year before. Most moves were made as a <b>married couple</b> . One-fifth of couples moved with a married child/ <b>children</b> . Most had been <b>owner occupiers</b> and continued to be so. Largest proportion had moved to <b>be by the sea</b> , for cleaner air and better climate.

<sup>5</sup> Only represents those that were found to be significant to residential relocation.

Authors	Sample	Sample size	Statistical method	Results
O'Bryant & Murray (1986)	Recently widowed women aged 60+ who had low to middle incomes, lived alone in their own home in an urban metropolitan area in the Midwest, USA. Selected by: examination of death certificates of all married males aged 64+ who died between September 1981 and October 1982; newspaper obituaries; homestead exemption property tax rolls. Excluded black women and women who relocated for health reasons. Re-interviewed three times during two years. Those that moved were re-interviewed 6-8 months after their move.	221	<p>T-tests; Pearson chi-square test. Compared movers and non-movers and movers at time one (at time of move) and time two (6-8 months after move) in the following areas:</p> <ol style="list-style-type: none"> <li>1. Housing quality (Interviewers ratings 14x5-point scales)</li> <li>2. Number of rooms in residence</li> <li>3. Housing satisfaction (5-point scale)</li> <li>4. Cost/benefit-of-home subscale (3 Likert-type items<sup>6</sup>)</li> <li>5. Comfort-of-home subscale (3 Likert-type items<sup>6</sup>)</li> <li>6. Family-tradition subscale (4 Likert-type items<sup>6</sup>)</li> <li>7. Competence-in-home subscale (6 Likert-type items<sup>6</sup>)</li> <li>8. Status-of-homeowner subscale (5 Likert-type items<sup>6</sup>)</li> <li>9. Group of activities (Number of attendances in last year)</li> <li>10. Loneliness (6-point scale)</li> <li>11. Positive-affect subscale (summed 'yes' responses to 5 of Bradburn's (1969) Affect Balance Scale)</li> <li>12. Negative-affect subscale (summed 'yes' responses to 5 of Bradburn's (1969) Affect Balance Scale)</li> <li>13. Number of relatives who live in the neighbourhood</li> <li>14. Frequency of family support (9-point scalex11 types)</li> <li>15. Frequency of neighbour support (9-point scalex11 types)</li> <li>16. Neighbourhood quality (5-point scale)</li> <li>17. Proximity of facilities (total mileage to facilities)</li> <li>18. Ability to drive</li> <li>19. Transportation problems (3-point scale)</li> <li>20. Age</li> <li>21. Self-assessed health</li> <li>22. Income</li> <li>23. Education</li> <li>24. Employment history</li> <li>25. Number of living children</li> <li>26. Number of living siblings</li> </ol>	<p>Comparison of movers and non-movers showed that movers were more likely to: have fewer siblings, and be <b>only children</b>, consider that their houses were <b>costing more than they were worth</b>, have <b>no relatives living in their neighbourhood</b>, and they were less likely to: consider their homes as part of <b>family tradition</b>. Non-movers were more likely to feel that their <b>houses demonstrated their competence</b>.</p> <p>Comparison of movers at time one and time two showed that movers at time two were more likely to: disagree with the <b>recognition and respect of home owners</b>, agree that their new residences <b>were worth the cost</b>. Although at time two movers had a slight increase in <b>income</b> there was also an increase in the <b>percentage of income that went towards housing</b> and therefore no change in the way they felt about their general economic situation. At time two movers felt <b>less comfortable</b> in their new homes, and the <b>size</b> of the residences had decreased, although their general <b>housing satisfaction</b> increased. <b>Neighbourhood quality</b> increased but <b>neighbourhood satisfaction</b> did not increase. At time two more <b>relatives lived in the proximity</b> of the new residence <b>but neighbour support</b> decreased. There was a decrease in number of movers who drove <b>cars</b>. <b>Negative affect and loneliness decreased</b>.</p>

<sup>6</sup> Average ratings

Authors	Sample	Sample size	Statistical method	Results
Sinclair et al. (1988)	Two social work/home help area offices of an outer London Borough, UK. Clients who were over 65, lived alone, and were not reported by social workers or home helps to be confused. Follow up after first interview 2 years 3 months to 4 years later.	134	One way tests of variance, Pearson chi-square test and discriminant analysis. 1. Death 2. Placement in residential care 3. Changes of home (all but one case entered sheltered housing) 4. Remaining in home Factors: 1. Dependency 2. Cognitive impairment 3. Morale 4. Social work vs. home help clients 5. Age 6. Isolation 7. Housing	Outcomes: <b>Social work clients</b> more likely to move from their homes than home help clients. Social work clients that were ambulant went to sheltered housing and housebound clients to residential care. Those that remained at home or were re-housed were on average <b>younger</b> , less <b>dependent</b> and less <b>cognitively impaired</b> <sup>7</sup> . Those who entered residential care had nearly twice the <b>cognitive impairment</b> score of those that died and over twice the score of those that remained in their own home or moved <sup>7</sup> . Those who were <b>cognitively impaired</b> and entered residential care were more <b>socially isolated</b> than others <sup>7</sup> . Chi-square tests showed that those who moved into sheltered housing expressed that their previous <b>housing</b> was a problem. In the discriminant analysis 90% of those that entered residential care were predicted by, <b>cognitive impairment, isolation</b> i.e. relatives visits and neighbours visits, <b>dependency</b> and interaction between <b>dependency and cognitive impairment</b> .

<sup>7</sup> Test based on the one way analysis of variance but unreliable because inequalities of variance break the assumptions on which the analysis of variance is based (Hoel 1954)

Authors	Sample	Sample size	Statistical method	Results
Speare & Meyer (1988)	The 1983 Annual Housing Survey, USA. Selected households from the sample that had a head of household aged 55+. Removed rural residents who were over-sampled and weighted data. Did not include people who moved into institutions.	22,845	<p>Identified four types of move from 'constellations' of reasons: Amenity; retirement; kinship; widowed.</p> <p>Cross-tabulation with age.</p> <p>Univariate analysis between mobility types and socio-demographic characteristics.</p> <p>Logit regression:</p> <p>Dependent variable: Four categories: amenity &amp; retirement movers; kinship &amp; widowhood movers; movement for other reasons; non-movers.</p> <p>Independent variables:</p> <ol style="list-style-type: none"> <li>1. Age group</li> <li>2. Household type (single person; 2+ persons; married couple)</li> <li>3. Previous tenure (homeowner; renter)</li> <li>4. Education in years</li> <li>5. Income</li> </ol>	<p>Cross-tabulation showed that the identified reasons for moving were more frequently cited by those aged 55+ than by those younger.</p> <p>Univariate analysis of socio-demographic characteristics showed that amenity &amp; retirement movers were more likely to be in the young-elderly <b>age</b> groups, <b>married, home owners, richer and more educated</b>. Kinship movers were <b>older</b> than other mover and more likely to be <b>renters</b>. Widowed movers were more likely to be in the <b>oldest age groups</b>, in <b>single person</b> households, in the <b>low income</b> bracket and have a <b>higher educational attainment</b>.</p> <p>Logit regression showed that for all types of mobility an increase in <b>age</b> decreased the likelihood of moving, however this was less pronounced for kinship &amp; widowed moves. Retirement &amp; amenity moves were most likely for <b>married couples</b> and Kinship &amp; widowed moves were most likely for <b>people without a spouse</b>. All types of mobility were more likely if the respondent was a <b>renter</b> although less pronounced for amenity &amp; retirement moves. Only weak relationship between high <b>income</b> and amenity &amp; retirement moves, and low income and kinship &amp; widowed moves was found.</p>

Authors	Sample	Sample size	Statistical method	Results
Clark & Davies (1990)	American Housing Survey, nationwide survey in 1985.	Not stated	<p>Twenty logit models predicting the probability of having moved are considered entering three variables in each model, evaluating:</p> <ol style="list-style-type: none"> <li>1. Main effects</li> <li>2-4. All one pairwise interaction effects</li> <li>5-7. All two pairwise interaction effects</li> <li>8. One three pairwise interaction effects</li> <li>9. Saturated model</li> </ol> <p>Dependent variable: Mobility status</p> <ol style="list-style-type: none"> <li>1. Age (6 categories)</li> <li>2. Tenure (owners; renters)</li> <li>3. Race (white; minority households)</li> <li>4. Housing costs relative to income (those spending more than 50% of their income on housing; others)</li> <li>5. Income (low; others)</li> <li>6. Location (central city; suburbs; non-metropolitan)</li> </ol>	<p>With both <b>location</b> and <b>age</b> in model main effects are the best predictors of moving. An increase in age decreases the probability of moving whereas living in central city increases the probability of moving. <b>Tenure, race, housing costs relative to income</b> and <b>income</b> differentiate further.</p>

Authors	Sample	Sample size	Statistical method	Results
Clark & White (1990)	American Housing Survey from 1983 and National and Standard Metropolitan Statistical Area samples for Atlanta and Philadelphia for case study areas for specific metropolitan areas. Data for Philadelphia and Atlanta was pooled from 1975 and 1978. Restricted to renters in the year of the survey or the prior year.	1545	Logistic regression entering variables stepwise. Dependent variable: Moving/not moving Independent variables: 1. Intraurban location (central city; suburbs) 2. Income (three categories) 3. Household size (1 person; 2+ people) 4. Number of rooms (1-2; 3; 3+) 5. Dwelling type (1-2 units; 3+ units) 6. Rent (three categories)	Model with best fit for national sample included <b>location, rent, income, household size</b> and interaction between <b>location &amp; rent</b> and <b>income &amp; household size</b> . Best fit model for Philadelphia included <b>income, household size, rent</b> and interaction between <b>income &amp; household size</b> . Best fit model for Atlanta included <b>location, income, household size, rent</b> and interactions between <b>income &amp; location, income &amp; rent</b> and <b>rent &amp; household size</b> . Income & mobility and rent & mobility approximately produce U-shaped relationships. As income increases for single person households, mobility increases, whereas for households with 2+ people mobility goes down. With rent levels the U-shaped curve is maintained in central cities but reversed in suburbs.

Authors	Sample	Sample size	Statistical method	Results
Colsher & Wallace (1990)	Iowa 65+ rural health study (National Institute on Aging 1986), USA. People aged 65 and older living in two rural Iowa counties. Included only those interviewed in person at baseline (excluded proxy interviews, abridged version, and telephone interviews) who were re-interviewed one year later not having entered residential care.	2977	Age and gender adjusted analysis of covariance. Pearson chi-square tests comparing moving/not moving with: Demographic characteristics 1. Gender 2. Age group 3. Educational attainment 4. Annual income 5. Living arrangements Health measures 1. Major illnesses 2. Health complaints 3. Self-assessed health rating 4. Physical functioning status 5. Ability to manage instrumental ADLs 6. Doctors' visits 7. Hospital admission Social and psychobehavioural measures 1. Participation in clubs, organisations & religious groups 2. Number of relatives 3. Contact with relatives 4. Availability of help in a crisis 5. Center for Epidemiological Studies Depression Scale (Markush & Favers 1973) 6. Kohout Anxiety Scale (National Institute on Aging 1986) 7. Life Satisfaction Index (Wood et al. 1969) 8. Modified Holmes and Rahe Social Readjustment Rating (Holmes and Rahe 1967) 9. 20-item recall task (National Institute on Aging 1986)	For demographic characteristics there was a significant relationship between likelihood of <b>relocation</b> and: the <b>younger age groups</b> (<84); higher levels of <b>income</b> ; and <b>living with someone else</b> . Health measures produced significant relationships between <b>moving</b> and poorer <b>physical functional status</b> , symptoms of <b>depression</b> and <b>anxiety</b> , more <b>doctors' visits</b> , Significant relationships were found between moving and social and psychobehavioural measures. Lower levels of <b>life satisfaction</b> , inability to manage <b>instrumental ADLs</b> (shopping, preparing meals, housework), <b>specific life events</b> (bereavement, marriage of children, and having someone move in with respondent) were associated with <b>relocation</b> .



Authors	Sample	Sample size	Statistical method	Results
Greene & Ondrich (1990)	Sub-sample of the National Long Term Care Channelling Demonstration (NLTCCD) data. 12 month nursing home use history from 10 sites (Baltimore, Houston, Cleveland, Miami, Philadelphia, Eastern Kentucky, Southern Maine, Middlesex county NJ, Rennselaer County NY, Greater Lynn MA, USA). Self-selected sample as individuals applied to NLTCCD to join the program. Targeting criteria: aged 65+; substantially functionally impaired; unmet need in functional areas; (if enrolled whilst in a nursing home) good prospects of being discharged within 90 days. Any respondents with missing data for any of the variables were excluded.	3332	<p>Hazard function analysis of nursing home admission.</p> <p>Enabling factors:</p> <ol style="list-style-type: none"> <li>1. Bed availability</li> <li>2. Informal care hours</li> <li>3. Income</li> <li>4. Availability of community-based resources</li> <li>5. Marital status</li> <li>6. Doctors' visits</li> <li>7. Living arrangements</li> <li>8. Rurality</li> </ol> <p>Need factors (functional and health deficits):</p> <ol style="list-style-type: none"> <li>1. Smoker</li> <li>2. Instrumental ADLs</li> <li>3. Cognitive impairment (Simple Portable Mental Status Questionnaire)</li> <li>4. Unmet needs</li> <li>5. Number of bed-days (previous 2 months)</li> <li>6. Self-assessed health</li> <li>7. Use of IV tubes (for feeding)</li> <li>8. Use of catheter</li> </ol> <p>Predisposing factors:</p> <ol style="list-style-type: none"> <li>1. Age</li> <li>2. Hispanic</li> <li>3. Black</li> <li>4. Gender</li> <li>5. Homeowner</li> <li>6. Life satisfaction</li> <li>7. Education</li> </ol>	<p>Predisposing factors that significantly influenced nursing home admission were; increasing <b>age</b>; ethnicity, <b>Blacks</b> and <b>Hispanics</b> [sic] were less likely to be admitted; <b>home owners</b> were less likely to be admitted.</p> <p>Enabling factors that significantly predicted admission were; <b>living alone</b>; number of <b>doctors' visits</b>; living in a community with larger <b>bed availability</b>.</p> <p>The need factors that significantly predicted nursing home admission were severe functional impairment i.e. inability to manage <b>ADLs</b> and <b>cognitive impairment</b> and feeding through <b>IV tubes</b>.</p>

Authors	Sample	Sample size	Statistical method	Results
Harrop & Grundy (1991)	Office of Population Censuses and Survey Longitudinal study enumerated in the 1971 census of England and Wales. Records added from the National Health Service Central Register and from the 1981 census for sample survivors	Not stated	Standardised institutionalisation rates by region. Cluster analysis: thirty-six socio-economically defined areas identified by Webber (1977).	Compared to average rate institutionalisation was higher in all but three <b>areas of destination for retirement migrants</b> . Positive association between institutionalisation and the <b>proportion of older people living in an area</b> . Clusters revealing significantly higher institutionalisation rates were ' <b>seaside and retirement areas</b> ', ' <b>high-status rooming-house areas</b> ' and ' <b>established high-status suburban areas</b> '. Significantly lower than average rates were found in ' <b>areas of poor-quality housing in areas of economic decline</b> .'
Jackson et al. (1991)	Longitudinal Study on Aging by the National Centre for Health Statistics. 1984 & 1986 waves. In 1984 a national probability sample of non-institutionalised persons aged 55 and over living in the US was taken. The study was limited to those that were aged 70+ in 1984 and were still living in the community in 1986 (i.e. not including those who had died, could not be located or had been institutionalised).	3920	Logistic regression: Dependent variable: Environmental adjustment (either residential relocation or change in living arrangements). Ten independent variables: 1. Self designated health status in 1984 2. Number of instrumental activities of daily living (IADL) in 1984 with which respondent had difficulty. 3. Change in IADLs between 1984 and 1986 4. Number of activities of daily living (ADL) in 1984 with which the respondent had difficulty 5. Change in ADLs between 1984 and 1986 6. Sex 7. Age in 1984 8. Duration of residence 9. Home ownership 10. Number of living children.	Best model included: <b>Number of IADLs in 1984</b> and <b>change in IADLs</b> which both had a positive effect on environmental adjustment. <b>Duration of residence</b> and <b>home ownership</b> both had negative effects. <b>Number of living children</b> and <b>health status</b> improved the fit of the model but only had a slightly positive effect on environmental adjustment.

Authors	Sample	Sample size	Statistical method	Results
Speare et al. (1991)	1984-1986 Longitudinal Study of Aging conducted by the National Center for Health Statistics with the National Institute on Aging, USA. The Supplement on Aging drew a national probability sample of non-institutionalised people aged 55+ were selected for baseline in 1984. Those aged 80+ in 1986 or Black and 70+ or who were 70-79 and were related to a person in the same household. Also 50% of those age 70-79 remaining were re-interviewed.	5151	Logistic regression Dependent variables: Institutionalisation; geographic mobility. Independent variables: 1. Difficulty with ADLs/IADLs 2. Change between 1984 and 1986 in difficulties with ADLs/IADLs 3. Confusion 4. Self-assessed health status 5. Living arrangements (alone; with spouse and/or other; living with adults other than spouses) 6. Living children (none; sons only; at least one daughter) 7. Age 8. Gender 9. Tenure (owners; renters) 10. Duration of residence 11. Income	Institutionalisation was determined by <b>confusion</b> and inability to manage <b>ADLs/IADLs</b> . When other factors were controlled institutionalisation was also related to increased <b>age</b> and to the <b>absence of a spouse</b> at baseline. Residential mobility was determined by <b>increases in difficulties with ADLs/IADLs</b> between 1984 and 1986. Both <b>home owners</b> and those who had <b>lived in their home for 15 years or more</b> were less likely to move. Mobility decreased from 70-74 <b>age</b> group to the 75-79 age group and then increased for those 80-84 and 85+.

Authors	Sample	Sample size	Statistical method	Results
Bradsher et al. (1992)	First two waves of the Longitudinal study of aging conducted by the National Center for Health Statistics with the National Institute on Aging, USA. A national probability sample of non-institutionalised people aged 55+ were selected for baseline in 1984. Those aged 70+ in 1986 were reinterviewed. Used data for those who were living in the community in 1984 and 1986.	3920	<p>11 logistic regression models.</p> <p>Dependent variable: Moved</p> <p>Independent variables:</p> <ol style="list-style-type: none"> <li>1. Number of IADLs in 1984 presenting difficulty</li> <li>2. Change in number of IADLs between 1984 and 1986 presenting difficulty.</li> <li>3. Number of ADLs in 1984 presenting difficulty</li> <li>4. Change in number of ADLs between 1984 and 1986 presenting difficulty.</li> <li>5. Self-assessed health</li> <li>6. Gender</li> <li>7. Age</li> <li>8. Duration of residence</li> <li>9. Home ownership</li> <li>10. Number of living children</li> <li>11. Income</li> <li>12. Becoming widowed between 1984 and 1986</li> <li>13. Proxy interview</li> </ol>	Best model included the <b>number of IADLs presenting difficulty in 1984</b> and the <b>change between 1984 and 1986 in the number of IADLs presenting difficulty</b> , a <b>proxy interview</b> and the <b>interaction</b> term between <b>change between 1984 and 1986 in number of IADLs presenting difficulty</b> and <b>recent widowhood</b> , which all had a positive effect on the probability of moving. Model also included: <b>duration of residence</b> and <b>home ownership</b> which had negative effects on the probability of relocation. Although the baseline IADL score is included in the model it does not significantly contribute to residential mobility,

Authors	Sample	Sample size	Statistical method	Results
Grundy (1992)	Office of Population Censuses and Survey Longitudinal study enumerated in the 1971 census of England and Wales. Records added from the National Health Service Central Register and from the 1981 census for sample survivors.	Not stated	Logit: Dependent variable: institutionalised Independent variables: 1. Age 2. Marital status 3. Tenure 4. Amenities Interactions of above Differentials: 1. Social class 2. Age 3. Tenure 4. Household type	Best model included: <b>Age</b> , which had a positive effect on institutionalisation for both genders, although stronger effect for women. <b>Marital status</b> ; a single status for men or women had a positive effect, and widowhood for women had a stronger effect than single status. <b>Tenure</b> ; the risk of institutionalisation for those living in privately rented accommodation rather than owner-occupiers was higher for both genders in addition, institutionalisation was as likely for private renters as those in local authority housing for women. The 'other and unclassified' <b>social class</b> for men <sup>8</sup> under age 75 years showed the highest rates of institutionalisation. Overall those 75+ in classes 'IV & V' and 'other and unclassified' demonstrated the highest rates of institutionalisation but when marital status was examined, more people that were married and institutionalised were in classes 'I & II' and 'IIIN'.

<sup>8</sup> Data only available for men.

Authors	Sample	Sample size	Statistical method	Results
Sommers & Rowell (1992)	First two waves of the Longitudinal study of aging (LSOA) conducted by the National Center for Health Statistics with the National Institute on Aging, USA. A national probability sample of non-institutionalised people aged 55+ were selected for baseline in 1984. Those aged 70+ in 1984 were selected. Listwise deletion of those with missing values for any variables. Weighted by LSOA weighting variable.	2950	Logistic regression Dependent variable: Moving/ not moving Independent variables: 1. Marital status (currently married; currently not married) 2. Number of living adult children 3. Self-assessed health 4. Number of ADLs presenting difficulty (bathing; dressing; eating; in and out of bed; walking; using toilet) 5. Duration of residence (< 1 year; 1-4 years; 5-9 years; 10-14 years; 15-19 years; 20+ years) 6. Tenure (home owner; renter) 7. Geographical setting (metropolitan; non-metropolitan) 8. Income (9 categories) 9. Number of support services used (senior centres; special transport; delivered meals; meal programs; home help; telephone checks; visiting nurses; health aids; adult day care) 10. Education 11. Age	The variables that made a significant contribution to the model (presented in decreasing strength of prediction) were <b>duration of residence, home ownership, use of support services</b> and <b>number of living children</b> , of which all but the latter decreased the probability of moving.

Authors	Sample	Sample size	Statistical method	Results
Bear (1993)	Data were collected on admissions to residential care homes that were registered for 17 or more residents in the central Florida area, USA. Sample consisted of primary care-givers of old people who had moved into residential care in the previous six months.	86	Logistic regression Dependent variables: 1. Out-of-place in the community labelling by a health professional 2. Residential care home referral by a health professional. Independent variables: 1. Network density 2. Reciprocity in care-giving relationship 3. Relationship of care-giver 4. Care-giver education 5. Payment 6. Hospitalised 7. Care-giver gender	Out-of-place labelling and residential care referral by a health professional explained by <b>hospitalisation</b> prior to entry into residential care. Referral to residential care was also dependent of the <b>relationship of the care-giver</b> : more likely to be by a professional if the care-giver was a friend, but more likely to be referred by an informal network member if the care-giver was a close relative.

Authors	Sample	Sample size	Statistical method	Results
Zimmerman et al. (1993)	First two waves of the Longitudinal study of aging conducted by the National Center for Health Statistics with the National Institute on Aging, USA. A national probability sample of non-institutionalised people aged 55+ were selected for baseline in 1984. Those aged 70+ in 1986 were re-interviewed. <b>Data</b> for those who were living in the community in 1984 and 1986 and whose functional health declined.	1277	Logistic regression Dependent variable: Change in residential location between 1984 and 1986. Independent variables: 1. Number of IADLs presenting difficulty in 1984. 2. Change in number of IADLs between 1984 and 1986 3. Self-assessed health 4. Income (eight categories) 5. Respondents' perception of whether there was someone at home who would provide care for several weeks if required. 6. Gender 7. Age 8. Duration of residence 9. Home ownership 10. Marital status (married; not married) 11. Interaction between change in IADLs and income. 12. Interaction between change in IADLs and availability of home care 13. Interaction between income and availability of home care	Best model included duration of residence, availability of home care, change in number of IADLs presenting difficulty and the interaction between change in IADLs and availability of home care. The variables that contributed significantly to the model were <b>duration of residence</b> and interaction between <b>change in IADLs and home care</b> . The latter showed the largest effect. The estimated probability of moving for those who had an increase of 3 or more IADLs that presented difficulty and no one available to care for them was more than twice as high as those who had someone in the home. For those who had an increase of 2 IADLs that presented difficulty and no one in the home to care for them, the estimated probability of moving was 1.5 times higher than for those who had someone in the home to care for them.
Burkhauser et al. (1995)	Individual level data from the cross-year 1989 file of the Panel Study of Income Dynamics in the USA. Each respondent was matched with a neighbourhood for each year between 1970 and 1985. Neighbourhood data was from a geo-code census extract file. Home owners only.	Not stated	Classification of neighbourhoods into 'distressed' or 'secure' based on a modified version of Ricketts & Sawhill (1988) and Ricketts & Mincy (1990) indicators of neighbourhood quality.  Distributions over the decade of moves in two age-groups (aged 45 and under; aged 55 and over) from and between neighbourhood types.	<b>Older</b> people move less than <b>younger</b> people. Unlike younger people, older people's <b>movement out of 'distressed' areas was lower</b> than out of 'secure' areas. Older people on <b>low incomes</b> in 'distressed' areas were even less likely to move than those with similar incomes in 'secure' areas. Movers from either type of area were most <b>likely to move to a similar type of area</b> , although older movers in 'distressed' areas were more likely than younger movers to move to another 'distressed' area.



Authors	Sample	Sample size	Statistical method	Results
Chevan (1995)	People who were widowed at 50+ were drawn from the first 21 waves of the Panel Study of Income Dynamics (USA) spanning 1968 to 1988.	639 <sup>9</sup>	Event history analysis (Kaplan Meier) Logit regression Dependent variable: moved Independent variables: 1. Single-family residence 2. Excess space in residence 3. Tenure 4. Duration of residence 5. Health 6. Education 12-15 years 7. Education 16+ years 8. Income 9. Age at widowhood 10. Age at move 11. Residence at widowhood 12. Time since widowhood 13. Year widowed 14. Race 15. Gender	Probability of a move is greatest in the <b>first year of widowhood</b> and subsequently diminishes. Residence in <b>single family dwelling</b> or college <b>education</b> leads to moving. <b>Excess rooms, home ownership</b> , good <b>health</b> , high <b>income</b> result in stability. These effects are not constant over time: <b>health, education, income, race</b> and <b>house type</b> only effect moving from the residence at widowhood but not subsequent residences; <b>home ownership</b> affects stability in early years of widowhood in later widowhood it is reversed.

<sup>9</sup> Although N=630 nine people were widowed twice which makes the incidents of widowhood 639.

Authors	Sample	Sample size	Statistical method	Results
Teaford (1995)	Men aged 60-69 living in the USA in a medium-sized Mid-western metropolitan area interviewed 12-18 months after the death of their spouse. Identified through death notices and obituaries in the local newspaper.	200	Pearson chi-square test Compared movers and non-movers in the following areas: 1. Self reported health status 2. Functional health 3. Income 4. Change in income 5. More/less children	Significant relationships between moving and <b>functional health</b> and <b>number of children</b> . Those who needed assistance were more likely to move. Those who had more children were more likely to move.
Warnes & Ford (1995)	ESRC supported study of Residential Mobility in Later Life (MILL). Postal inquiry of people age 60+ in South East England allocated proportionate to the elderly populations of Greater London, the Outer Metropolitan Area and the Rest of the South East. Stratified by age and area.	1896	Pearson chi-square test Comparing movers and non-movers. 1. 10 item RAND Physical Capacities Index (RPCI) (7 categories) 2. Health (two categories) 3. Household composition 4. Marital status 5. Receipt of care 6. Age 7. House type 8. Number of rooms 9. Floor space 10. Level access 11. Satisfaction with housing (absence of a desire to improve features of the residence) 12. Sources of dissatisfaction	Movers were more likely to; <b>live alone</b> , be <b>widowed</b> , <b>less able on RPCI</b> and <b>receive care</b> and less likely to be <b>married</b> . Moves to <b>supportive settings</b> increase with <b>age</b> . Older movers (75+) were more likely to move to <b>flats</b> , or properties with <b>fewer rooms</b> , less <b>floor space</b> and <b>level access</b> . Younger movers were more likely to move into <b>houses</b> . Movers were more likely to be <b>satisfied</b> with their residence. Those that moved 5 years ago had the highest level of satisfaction. Dissatisfaction is not a sufficient condition for the wish to move - 67% of those that were dissatisfied with their housing situation wanted to stay put. Most common motivations for moving were the <b>convenience of the location</b> , <b>distance from family</b> and <b>size of dwelling</b> .

association between the variables. If the observed and expected frequencies differ then an association can be assumed. The probability of this association being applicable to a larger population can be assessed using a test of significance (Gilbert 1993). The most common measure of the significance of the association is Pearson chi-square test (Caulcott 1973).

As the numbers of elderly migrants in many studies are quite small the statistical analysis is often also constrained by the sample size (e.g. Harrop & Grundy 1991). Over-generalisation from small observations may be misleading, for example Burkhauser et al. (1995) quote percentages of people moving from distressed and secure neighbourhoods in tables adjacent to the approximate population (in millions) living in these conditions. The temptation to use the percentages stated to estimate *real* numbers of people moving from these neighbourhoods should be weighed in light of the fact that many of the observations in this paper, for movers aged 55 and over, are based on fewer than 25 observations. It would not be appropriate to apply this to a whole population without taking into account the standard error.

In addition some analytical procedures are inappropriate for certain types of data. Sinclair et al. (1988) use a cognitive impairment score for which one way analysis of variance cannot be performed as inequalities break the assumptions on which the test is based (Hoel 1954). Sparse contingency tables for cross-tabulation may also cause problems with the reliability of Pearson chi-square test. In order to overcome these difficulties Clark & White (1990) reduced the categories of the variables they used, but this in turn this may lead to certain specific associations being overlooked.

The generalisation from the results can be reduced if the sample frame is not a random selection of the whole population. The results from Greene & Ondrich's (1990) study can only be applied to other frail older people, and the findings of Sinclair et al. (1988) could only realistically be applied to older people, living alone, who are in contact with social workers or home carers and are not reported to be cognitively impaired. Non-response especially during longitudinal studies may also produce biased results. Chevan (1995) noted that 13.1% of the widows in his original sample were dropped due to non-response. These people tended to be older, living alone and in worse health than those remaining in the sample.

The models in some circumstances were constrained by data collected. In some studies data were not collected specifically for the study and the variables that the author would have liked to use in the analysis were not included in the survey, were incomplete (Harrop & Grundy 1991, Grundy 1992, Speare et al. 1991) or excluded institutional moves and analyses were therefore restricted to moves only within the community (Sommers & Rowell 1992, Chevan 1995). In other studies the factors were selected for analysis according to the theoretical perspective adopted by the author for example, the evaluation of economic effects on mobility conducted by Clark and Davies (1990) necessitates the inclusion of socio-economic factors. In a majority of instances the purpose of the model was to determine the factors associated with moving within the community per se, but a minority chose to examine the factors associated with a particular type of move such as institutionalisation (Sinclair et al. 1988, Harrop & Grundy 1991, Grundy 1992, Bear 1993).

## ***FACTORS INFLUENCING MIGRATION AND RESIDENTIAL MOBILITY***

The twenty studies in Table 2.1 demonstrate that the movement of older people is influenced by a variety of factors that constrain and facilitate relocation possibilities. These factors are indicated by triggering mechanisms and indigenous and exogenous factors in Wiseman's (1980) model of residential relocation. A majority of the studies focus on combinations of factors that could be classified into three broad themes; socio-demographic, socio-economic and health related (which encompasses receipt of help and psychosocial factors).

### **Socio-demographic factors**

#### **i) Age**

It has been identified that the peak age of retirement migration is approximately 65 years for men and slightly earlier for women (61-62 years) which corresponds with the difference in ages of retirement, and also the likelihood that married women will accompany their husbands who are moving at retirement age (Rogers 1988). These moves represent the retirement 'bulge' or peak of long-distance amenity-seeking moves at, or shortly after retirement (Rogers 1988). Although the studies in Table 2.1 demonstrate that an increase in age decreases the likelihood of moving (Speare & Meyer 1988, Clark & Davies 1990, Colsher & Wallace 1990, Burkhauser 1995) if the rates of short distance moves are examined there is an upturn in the proportion of people moving at greater ages, which is not observed in the rates of longer distance moves (Bartiaux 1986, Rees & Warnes 1986, Rogers 1988). It therefore follows that long-distance retirement move exhibit peaks at around retirement age, whereas short distance moves do not display peaks but exhibit a progressive upturn in rates of movement for older age groups (Warnes 1993).

An increase in age has also been shown to decrease the desire to relocate (McHugh et al. 1990, Rossi 1955, Yee & Van Ardsol 1977). A study by Robison and Moen (1995) indicated that 45% of those aged 50-72 were certain that they would always remain in their current house but other data shows that although older people are less likely than younger people to relocate, greater age increases the likelihood of entry into institutions (Sinclair et al. 1988, Greene & Ondrich 1990, Speare et al. 1991, Grundy 1992).

The association between types of residential relocation and age needs to be understood in the light of future rises in the number of elderly people in society. Unless reasons for relocation, current housing needs, or inadequacies in housing situations for the older members of society are addressed then it will not be possible to plan community care for the appropriate areas of society. Current policies regarding housing of older people have been based on relocation to environments that have been perceived as being more suitable for older people, even though it appears that a majority wish to remain in their own homes.

## **ii) Marital status**

It has already been stressed that retirement and amenity moves are more likely for married couples and moves for assistance are most likely for single people (Speare & Meyer 1988). This is reflected in the peak in migration rates for married people which tends to be around retirement age (65 years for men and slightly younger for women) whereas never married and widowed people exhibit a rise in migration rates at older ages (Rogers 1988).

Institutionalisation is more likely for those without a spouse (Spear et al. 1991, Grundy 1992, Warnes & Ford 1995). Warnes & Ford (1995) found that relocation was more likely to occur if the person was widowed. The probability of moving increases in the first year of widowhood and subsequently diminishes (Chevan

1995) but widowhood has been found to interact with several factors in precipitating residential mobility, which will be mentioned below.

### **iii) Housing**

Housing is an important factor in both residential stability and mobility. Research has demonstrated how crucial housing and environment is to the social and psychological well-being of the resident (Altman et al. 1984, Carp 1966, Lawton et al. 1978, Lawton 1986(a), 1988). The application of environmental psychology has led Lawton (1988) to argue that there are three functions of the environment<sup>10</sup>: maintenance, stimulation and support.

The maintenance function of houses and the community is to provide an environment in which people may perform every day tasks within a familiar setting. This reduces the amount of energy expended in each routine as the spatial location of each element is well known and the function of each is customary. The home also provides a place in which to eat, sleep and relax which means that the majority of each day can be taken up with alternative operations rather than having to spend time seeking an environment in which these activities can be pursued. In this role the house provides a place of equilibrium where competence<sup>11</sup> and the resulting behaviour of the person are in harmony with the environment.

Lawton (1988) describes the majority of functioning in the home as 'the state of maintenance of a half-automatic interchange with the residential environment'. In the same vein, knowledge of the community, the public transport, the location of the shops, where to take a relaxing walk, have the same function of providing an environment in which performance can be almost automatic (Lawton 1988). Elderly

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<sup>10</sup> In this context Lawton (1988) defines the term environment as encompassing housing and neighbourhood.

<sup>11</sup> Lawton (1982) defines competence as 'the theoretical upper limit of capacity of the individual to function in the areas of biological health, sensation and perception, motor behaviour, and cognition'.

people are unlikely to be directly aware of their environment unless environmental incongruence occurs.

Familiarity with the environment and its importance in reducing the amount of effort expended in every day tasks (Lawton 1990) along with the desire to retain autonomy in familiar surroundings (Townsend 1957, Shanas et al. 1968, O'Bryant 1983, Wister 1985) have been cited as explanations for 'attachment to home'. Elsewhere it has been found that older people who were involuntarily being relocated felt that they would die in the new environment, having been stripped of the independence afforded by their own home (Collier & Oliver 1979, O'Bryant 1983). This highlights the symbolic function of the home as an indicator of autonomy (Kummerow 1980). Other explanations allude to the symbolic function of the home as a sign of personal achievement or as a place that is 'imprinted' with the resident (Relph 1976, Kummerow 1980, Rowles 1983, Rubinstein 1989, Rubinstein & Parmelee 1992, Oswald & Wahl 1995). The person may wish to remain in place because of the recollections associated with objects around them, the memories that the house itself retains (Townsend 1957, Langford 1962, O'Bryant 1983) or a desire for the house to remain in the family after their death. As home equity accounts for a majority of elderly people's wealth (Baer 1976, Struyk & Soldo 1980, Merrill 1984) it has been suggested that the desire for the house to stay in the family is due to older people wanting their children to inherit something of value from them (Sykes 1980).

Attachment to home and community or residential history has also been found to be a factor associated with likelihood of relocation (Lawton 1980). Those who are less attached to their home are more likely to relocate than those with a strong attachment (O'Bryant & Murray 1986, Rutman & Freedman 1988, Lee et al. 1994). Number of years in the home is also a factor that will increase the likelihood of staying put (Jackson et al. 1991, Speare et al. 1991, Bradsher et al. 1992, Sommers



& Rowell 1992, Zimmerman 1993, Robison & Moen 1995) which in terms of familiarity may well equate with attachment. There is disagreement on how widowhood may affect attachment to the home. Teaford (1995) states that the level of attachment to the home may be decreased by widowhood whereas Rubinstein (1989) suggests that fond memories of successful relationships within the house will increase the attachment to the home. Attachment to home has frequently been given as a reason for the relatively low mobility of older people compared with younger people (Butler 1975, Ferraro 1981, Lawton 1978, Reschovsky 1990).

In contrast to the maintenance function of housing, is its role in stimulation and support. Whereas the maintenance function emphasises the 'sameness' of the home, stimulation is based on novelty. For example, if a pipe starts to leak the central heating system may be brought to the front of the occupiers' consciousness and a problem has to be solved, whereas in its maintenance role the heating does not impinge on awareness. As long as the novel situation is not one that exceeds the competence of the resident then stimulation can be a beneficial event leading to feelings of pleasure. When a novel event and the resulting behaviour falls into this category, Lawton (1988) termed it the 'zone of maximum performance potential'. However, if the novel situation demands more from the person than their competence allows then it will produce a negative effect and result in maladaptive behaviour.

It has been suggested that adaptation of the competent elderly person's environment to contain a broad spectrum of enriching stimuli will produce beneficial outcomes (Lawton & Simon 1968, Lawton 1989). This is based on the environmental proactivity hypothesis. The benefits of novelty and a pleasurable experience can be used to move the housing situation from maintenance function to within the 'zone of maximum performance potential' by providing new situations, for example by redecorating. This will only provide a stimulating environment for a limited period

of time, after which it will once again become part of the maintenance function of the house. Stimulation may also be provided by a complete change in the environment by relocating. It could be argued that stimulation is the incentive for the retirement amenity move.

In addition to negative effects being produced by over-stimulation or an inability to cope with the demands of a novel situation, if the competence of the person is below the demands of the everyday environment then stress, anxiety and maladaptive behaviour will also emerge (Lawton & Nahemow 1973). The environmental docility hypothesis suggested that 'the environment was a more potent determinant of behavioural outcome as personal competence decreased' (Lawton & Simon 1968, Lawton 1989). Housing adaptations have been in general to compensate for age-related losses and the resulting difficulties that ADL's may present (Struyk & Katsura 1987, Winston 1975, Lawton 1990). According to the environmental docility hypothesis, adaptations that increase competence within the house will positively contribute to the well being and behavioural activity of the older person.

Housing adaptation and resulting behaviour can also be explained by examining the support function of the home which Lawton (1988) states is to reduce the amount of effort normally required to maintain the home and restore the equilibrium of functioning. For example a decline in mobility may result in extra support being required for bathing which may be achieved with the installation of a bath hoist. The design of neighbourhood environments bearing support functions in mind are also important for people with impairments, for example buildings allowing wheelchair access and the layout of street lighting (Howell 1980, Lawton et al. 1976). Adaptations or special design features can ease the demands of situations and reduce the expenditure of effort and stress required to undertake activities. Lawton

(1988) called the maintenance of demands from the environment within the range of competence of a person as the 'zone of maximum comfort'.

At the other end of the spectrum, too much support may lead to a rapid and sharp reduction of demand from the environment. A person who is institutionalised and given aid for a majority of activities of daily living may not have enough environmental stimuli to induce them into action. It has been suggested that this may be the reason that premature institutionalisation can induce cognitive and functional atrophy in elderly people (Filion et al. 1992).

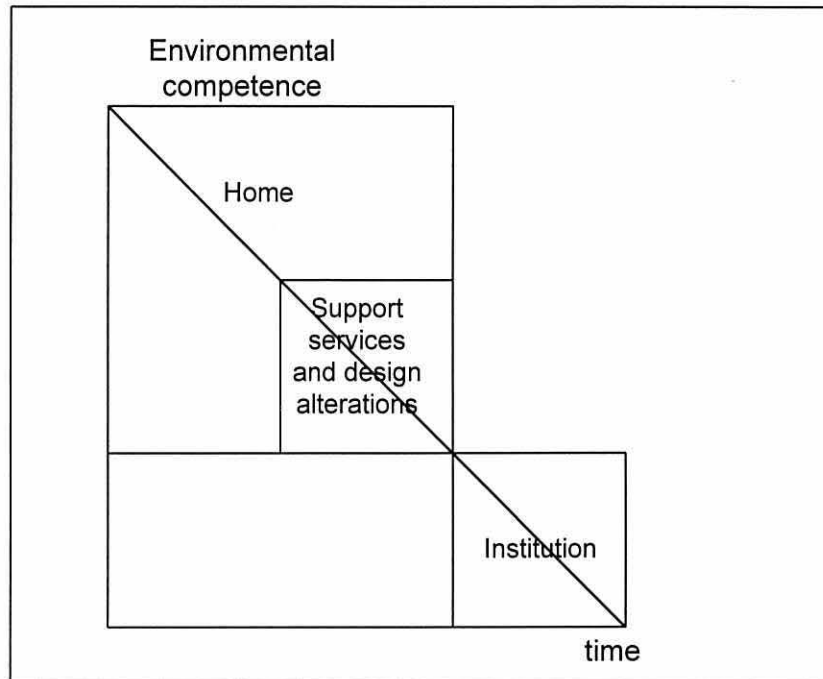
An area of study concerned with the adaptation of older people's housing is gerontechnology. Gerontechnology combines the study of technology and ageing with the intention of improving the lives of older people by providing aids to improve functioning in every day situations (Bouma & Graafmans 1992). A study in the Netherlands SENSE (SENIor people SErvices) have suggested specific adaptations to houses to meet the objective of keeping elderly people living in their home environments supporting the 'ageing in place' model (see Figure 2.1). It has been established that this is the option that most older people prefer (Lawton 1980, Butler & Lewis 1982, Thomae 1988, Lehr 1991, Filion et al. 1992, Oswald & Wahl 1995, American Association of Retired Persons 1996). Technological adaptations have been offered by SENSE in four main areas: housing resources, resources for communication and information, medical-technological resources and resources to compensate for functional impairment (Bogman 1992).

Housing resource adaptations offered in SENSE included widening doorways for wheel chair access, adding grab-bars or hand rails and increasing the accessibility of the house by providing ramps or chair-lifts (Bogman 1992). Although these technological adaptations have been classified as 'low-tech' (Regnier et al. 1992) this does not detract from their usefulness (National Home Modifications Action

Coalition 1997). In the USA it has been shown that even these basic adaptations to assist older people in their day to day living are not widespread. Only 6.6% of households of people aged 65+ had grab-bars or handrails with proportions of households that have other 'low-tech' adaptations even lower. The lowering or adaptation of sinks, taps and cupboards had only occurred in 1.2% of households, ramps were installed in 0.6%, special door handles in 0.7% and bathrooms for wheelchair use in only 0.3% of households (Struyk & Katsura 1987). It has also been found that renters are less likely than home owners to modify their homes (Robison & Moen 1995). Although it could be argued that not all older people require housing adaptations the figures suggest that a life-span approach to housing is not being pursued. The incorporation of supportive features in the design of a house would ensure accessibility in the residential environment for all people regardless of their age or level of physical ability or impairment (Null 1989, McLeister 1989, Mace et al. 1990, Belser & Weber 1995, National Home Modifications Action Coalition 1997).

Mid-level technology also plays a part in housing adaptations and has been classified as the refinement of household products, such as baths and kitchens. One of the most important advancements in this area that relates to housing is with the design of wheel-chairs. Newly designed wheel-chairs can pivot within a much smaller area than previous designs (which required a five-foot turning space). It would be appropriate to take this into account when designing houses. The effort and money spent on making the hallways and doorways large enough for old design wheel-chairs can be eliminated if designs were based on the new style of wheel-chair (Regnier et al. 1992).

**Figure 2.1 Ageing in place perspective of housing**



**Source:** Filion, P., Wister, A., & Coblenz, E. J., 1992, Subjective dimensions of environmental adaptation among the elderly: A challenge to models of housing policy. *Journal of Housing for the Elderly*, 10(1/2), 3-32.

SENSE also offered adaptations in resources for communication and information and medical-technological resources. Communication systems, such as 24-hour alarm systems, are essential if emergency support services are going to be offered. Another form of communication included in the study was education through the media of television. Medical technology can be used to allow older people to receive treatment at home rather than travelling to a clinic or hospital to be treated. Equipment included oxygen supplies, means of administering medicine and food, patient activated pain-control mechanisms and heart monitors (Bogman 1992). This type of equipment has been classified as 'high-tech', along with prototypical robotic designs that are promising to provide aid with activities of daily living and technological support for sensory- or motor-impairment.

The housing options open for older people include not only adaptations to the current housing situation but also relocation. Relocation decisions may be taken on a cost versus comfort trade-off (O'Bryant 1983). O'Bryant (1983) describes this as a balance between how much the home costs to maintain or how much money would be made if it were to be sold, weighed against the adequacies of the environment, that is whether it was comfortable or uncomfortable to live there

The size of accommodation has been found to be a factor in motivating relocation (Chevan 1995, Warnes & Ford 1995). For widows, an excess of space, that is the number of rooms above the minimum number required by the resident(s) of the household, has been found to have a negative influence on the likelihood of moving for the first few years of widowhood. This initially appears to be irrational in light of the increase in housing burdens presented by an excess of rooms, but it has been suggested that the rationality lies in the availability of extra room for guests to stay in (Chevan 1995).

Tenure has also been shown to be an important factor in relocation (Lawton 1980) and has been associated with particular types of moves. Although overall those who are renters are more likely to move than home owners (Speare & Meyer 1988, Clark & Davies 1990, Jackson et al. 1991, Bradsher et al. 1992, Sommers & Rowell 1992, Chevan 1995, Robison & Moen 1995), home owners are more likely to make a retirement or amenity move (Speare & Meyer 1988). Clark & White (1990) found that renters in the middle-level rent category were more likely to move than those in low-rent level or high-rent level categories. This may be due to the lack of opportunities for residential relocation for those at the lower end of the scale, and the higher quality of the properties and consequently greater satisfaction with the residence at the higher end of the scale (Clark & White 1990).

The lower likelihood of relocation by home owners may be associated with the difficulties in obtaining mortgage credit once retired, or reluctance on behalf of the home owner to change tenure. In the USA great importance is attached to having a home of one's own which it has been suggested is of importance to self-esteem (O'Bryant 1983, Baer 1976). Therefore, a negative effect on self-esteem would be expected if status was downgraded, that is if one had to assume the role of tenant or patient. Studies show that in both the USA and UK home owners were less likely than renters to be admitted to institutional care (Greene & Ondrich 1990, Grundy 1992) which may indicate a reluctance on behalf of home owners to lose their status, although the phenomenon could be due to other underlying variables.

In the United Kingdom the Governmental drive during the late 1980s to the 1990s has encourage private ownership of property. This has had the effect of producing a large polarisation between those who can afford to own property and those who cannot and may required state welfare support (Oldman 1990). The policy on encouraging privatisation coupled with the negative stigma attached to the receipt of state support may have resulted in the status of homeowner becoming as important in the United Kingdom as in the USA. However, as yet little importance has been attached to the effect of status in the research into relocation of elderly people in the United Kingdom. The role that the housing market plays in facilitating or impeding residential mobility will be addressed in Chapter 3.

The living standards of the different tenures (renter or homeowner) have been examined and data are beginning to highlight the significance of home ownership as a dimension of social inequality (Saunders 1990, Gibbs & Kemp 1993). The division between tenures is important in light of evidence that states that half of the households in which the head of household is aged 65 and over are home owners (Gibbs & Kemp 1993).

The availability of special forms of housing on the market that can meet the needs of older people may also influence the choice to move or 'stay put'. The choice regarding type of housing may be more limited for renters than home owners (Bookbinder 1991) although the number of properties available and therefore the range of choice for owner-occupiers has also been affected by the stagnation of the housing market due to problems with resale of properties by households with negative equity (see Chapter 3). Table 2.2 shows the forms of special housing for older people currently available in the United Kingdom.

Relocation to special forms of housing either specially built warden assisted homes, homes designed with wheel-chair access in mind, residential care or nursing homes could all be described as moves towards an environment that have increased support function. A study in a London Borough showed that those who moved into sheltered housing expressed the view that their previous housing presented them with problems (Sinclair et al. 1988). These moves will provide the person with an environment in which they can live within their 'zone of maximum comfort'. Filion et al. (1992) describe this view as 'maximisation of choice' perspective, where on the continuum of change, as environmental competence decreases there are options for supported environments to which the person can relocate (Figure 2.2).



**Table 2.2 Special housing options available for elderly people**

Type of housing	Features	Occupants level of dependency	Drawbacks
'Granny' flats	Annexe of family home or portakabin in garden. Close to family, self-contained with own cooking facilities, bathroom, TV, telephone etc.	Levels of help with personal care and activities of daily living need to be within the physical capabilities of relatives and fall within the time that they can allocate to these activities.	Not likely to work if the family and older person cannot agree on the amount of time spent together and amount of time spent alone.
Sheltered housing without a warden	Usually situated close to amenities such as shops and public transport. Purpose-built or converted with special design features such as wheel-chair access, grab rails in bathroom, waist high switches and sockets, walk-in showers etc. Available to rent or buy in some areas.	Suit fairly independent older people who may require a home designed with special access in mind. Help with personal care and activities of daily living would have to be provided by local authority or private care agencies as no on-site support provided.	With the advent of community care these properties are now becoming 'difficult to let' as people would prefer to receive support services in their own homes.
Sheltered housing with a warden	A service charge is paid for the assistance of the warden. Usually a complex containing several sheltered houses, flats or bungalows. Special features as above, may also have laundry, communal living room and guest room. Warden may pay daily visits if required to check on residents, may organise help if required from care agencies, available in an emergency.	As above with the security of warden cover.	Very high demand, may be difficult to obtain. Sometimes very small, and limited storage space. Some complexes do not allow pets. There is no central agreement for funding for the services. No official guidelines for warden duties, therefore a 'successful' sheltered housing scheme depends on the quality of the warden.

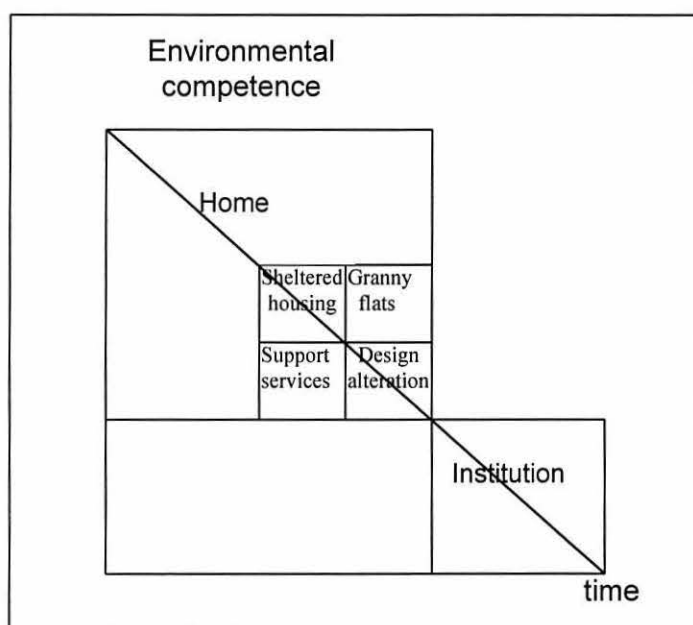
**Table 2.2 (continued)**

Type of housing	Features	Occupants level of dependency	Drawbacks
Very sheltered housing: care services provided	As sheltered housing but with on-site provision of care services.	For those that require a higher level of aid than is provide by sheltered housing, but that do not want to enter residential care.	Only a very small number available.
Abbeyfields: supportive housing	Over 1000 residences. House between 7 and 10 people in bedsits with their own furniture. Meals provided on site. Family type atmosphere, but can retain privacy.	Fairly active, independent people although 'extra-care' schemes are available with a higher level of care (more like residential care).	Higher charge than sheltered housing.
Almshouse: charitable housing	Rent-free from charity although service charge payable. Some have wardens. Provision varies.	Depends on level of service provided.	Almshouse tenants are beneficiaries of the governing charitable trust, therefore there are no secured tenancies.
Residential homes	Standards of care vary, but require registration if care for more than 3 people.	A high level of personal care required that cannot be provided in own home.	May have to move if require a greater level of nursing care. Loss of autonomy in some homes. Not a move of choice for a majority of older people.
Nursing homes	Around the clock nursing care and personal care. May be dual-registered, that is nursing home and residential care so that more (or less) care can be provided as needed.	24 hour nursing care.	Loss of autonomy in some homes.

**Table 2.2 (continued)**

Type of housing	Features	Occupants level of dependency	Drawbacks
Retirement villages	On-site facilities such as post office, restaurant, medical centre, care facilities. Specially designed housing (see sheltered housing). Some sites have advocates working with older people.	Try to provide multi-level care as and when needed. Meals, personal care and nursing care on site.	As yet very uncommon in UK, although increasing in number. Age segregation, isolating older people in one place. Method of funding (for example income support or housing benefit) through local government agreement only.

**Figure 2.2 The maximisation of choice perspective on housing**



*Source:* Filion, P., Wister, A., & Coblenz, E. J., 1992, Subjective dimensions of environmental adaptation among the elderly: A challenge to models of housing policy. *Journal of Housing for the Elderly*, 10(1/2), 3-32.

## **Socio-economic factors**

### **i) Income**

It would be expected that the economic viability of elderly people (Picchio 1992) or dependence on welfare support within the structural constraints of a capitalist society would be influential in determining housing movement. Research indicates that there is some disagreement as to the influence of income on relocation and housing.

It has been found that income has a fundamental influence on the housing consumption decision for the population as a whole (Boehm 1981, Henderson & Ioannides 1983, 1985, 1987, 1989, Rosenthal 1989). Some studies have found strong associations between income and relocation for the population of elderly people: older people with high incomes are more likely to move than those with low

incomes (Colsher & Wallace 1990); retirement and amenity movers are likely to be richer than other movers (Speare & Meyer 1988); accordingly, people on low incomes are more likely to expect to age in place (Robison & Moen 1995).

In the USA studies have found that poor older people mainly consist of minority groups or women living on their own, with one third of all elderly people living in housing that is considered to be sub-standard (Barberis 1981). Burkhauser et al. (1995) found that older people on low income in 'distressed' areas were even less likely to move than those with similar income in 'secure' areas. Similarly, lower rates of institutionalisation have been found in England and Wales for those living in 'areas of poor-quality housing in areas of economic decline' (Harrop & Grundy 1990).

Studies of widows in the United Kingdom by Warnes and Ford (1994) and in the USA by Speare and Meyer (1988) have found that income is reported as a reason for moving as frequently as declining health, and more often than bereavement. Some results have shown that the effects that income has on mobility for the population as a whole is the opposite of the effect it has on relocation for widows. Income decline, often made worse by widowhood (Holden et al. 1988) has found to be a trigger for moving (Chevan 1995, Speare & Meyer 1988) whereas a high income can result in the widow staying put (Chevan 1995). Alternatively, Teaford (1995) found no relationship between a change in financial situation and residential mobility in widowers. The relationship has also been disputed by Clark & White (1990) who discovered that the relationships between income and mobility produced a U-shaped curve. They found that as income increases for single person households mobility increases, whereas for households with two or more people mobility decreases with an increase in income.

Coupled with the effects of income, it is demonstrated in Chapter 3 that the British housing market markedly influences the possibilities for re-housing and migration. In the United Kingdom the migration rates for all age groups from 1980-81 was the lowest for 15 years. Since 1988 there has been a decline in the migration rate for all age groups due to the collapse of the private housing sector (Warnes 1994). In the USA where nearly three quarters of the elderly population are home owners it has been found that home equity accounts for a majority of their wealth (Baer 1976, Struyk & Soldo 1980, Merrill 1984). When collapses in the housing market occur people with investments tied up in property may be forced into remaining in their current housing situation, as there are no financially viable alternatives available to them. In North America there have been attempts to run programs, such as the Logirente program in Quebec Province that release the equity that older people have tied into their property (Scholen & Chen 1980). Elsewhere it has been found that the people who could potentially receive most benefit from reversed mortgage schemes, those with the lowest incomes, are the least likely to consider using the programs (Robison & Moen 1995).

Differences between levels of income for older people in different tenures show some startling differences. Results from analysis of the 1988 Family Expenditure Survey (FES) show that owner-occupiers had on average twice the weekly income of renters. The study also demonstrated that income decreased as households became older but the ratio of owner's to renter's income remained relatively constant at about 2:1 (Gibbs & Kemp 1993). Means tested housing benefit are specifically aimed at households with low income but the proportion of older people who received this benefit was altered considerably in 1988 when reforms were introduced by the Government. Table 2.3 shows that housing benefit was cut for approximately two thirds of pensioners, whereas only 14% gained from the changes (Gibbs & Kemp 1993).

The cuts in housing benefit have not helped to change the structure of income imbalance across tenure. Gibbs & Kemp (1993) point out that although approximately 60% of older renters were located in the three lowest income deciles, less than 10% of home owners had equivalent incomes. On the other hand 45% of older home owners were in the top three income deciles compared with less than 10% of renters. These figures demonstrate that there are large differences in income levels for the different tenures, specifically there are considerable differences between the proportion of home owners with high levels of income and the proportion of renters with low incomes.

**Table 2.3 Proportion of older people affected by the change in housing benefit allocation.**

	<b>Pensioners</b>	
	000s	%
Gainers	590	14
No change	780	18
Losers	2900	68
Total	4270	100

*Source:* Hansard, Written Answers, 18 December 1987, Cols. 917-918, quoted in Gibbs, I. and Kemp, P., 1993, Tenure differences in income and housing benefit in later life. *Social Policy and Administration*, 27(4), 341-353.

## ii) Social class

Out of all the socio-demographic factors, social class is the least represented in the research concerning older people's residential mobility. In Table 2.1 only one study (Grundy 1992) has used social class as a variable, and this is concerned with institutionalisation rather than residential relocation per se. This may be due to the difficulty in classifying women by social class although it is more likely that it

reflects the reluctance of researchers in the USA to use social class in their studies, where they tend to use income as an equivalent measure.

A study was conducted over twenty-five years ago in the UK, which explored the effects of social class on institutionalisation (Townsend 1965). The study found that institutionalised men were more likely to have previously been unskilled manual labourers, but institutionalised women were more likely to be from social class I or II (Townsend 1965). The latter finding is tentative as previously mentioned there are problems with classifying women by social class. Grundy (1992) has also looked at social class of those who were institutionalised in England and Wales. To avoid the problems of classifying women she restricted the analyses of the effect of social class to men only. She found that the highest rates of institutionalisation were for men aged under 75 in 'other or unclassified' social classes and for men over 75 years old in classes IV, V, and 'other and unclassified'. The higher rates of institutionalisation for men in the 'other and unclassified' groups is not surprising as this group contains people who are permanently disabled or who are unable to complete the census form.

## **Health factors**

### **i) Ability to manage activities of daily living**

Litwak and Longino (1987) ascribe the second type of move in old age to 'moderate disability'. Every day tasks become more difficult if the person becomes physically or mentally impaired, and this may precipitate a move towards relatives so that assistance is nearby. It is therefore important to include data on the inability to manage activities of daily living (ADLs) in analysis, if the characteristics of the people making these moves are to be explored.



It has been shown empirically that a change in residential location is related to an increase over time in the number of ADLs that cannot be managed without difficulty (Colsher & Wallace 1990, Jackson et al. 1991, Speare et al. 1991, Bradsher et al. 1992, Zimmerman 1993, Teaford 1995). In addition the interaction between the increase in number of ADLs that present difficulty and recent widowhood (Bradsher et al. 1992) or the lack of availability of home care (Zimmerman 1993) have also been shown to precipitate relocation. It has been estimated that the probability of moving, for those without carers, who also had an increase of three or more ADLs presenting difficulty, is more than twice as high as those who had someone available to provide care (Zimmerman 1993). Not surprisingly, an inability to manage ADLs has also been shown to be a predisposing factor that significantly influences the rates of admission to institutions (Greene & Ondrich 1990, Speare et al. 1991).

## **ii) Self-assessed health**

It has been postulated that a decline in health triggers residential mobility (Longino et al. 1989). On the other hand, it has also been suggested that as older people's functional ability decreases they are more likely to adjust their expectations for competence within their environment (Soldo & Longino 1988). The likelihood of personal adjustment must be remembered when using health variables that require self-assessment (Jackson et al. 1991).

Studies have found that there are significant relationships between poor functional status and moving (Colsher & Wallace 1990). This relationship also holds for widows, for whom it has been established that good health results in residential stability (Chevan 1995).

### **iii) Cognitive impairment**

Dementia has become a priority area for research in a range of countries (Jorm et al. 1988) as a result of the ageing of the world population and the accompanying fears in the developed countries that the numbers of those suffering from cognitive impairment will escalate (Plum 1979, Kramer 1980, Henderson 1983, 1986, Rocca et al. 1986, Ineichen 1987, Jorm et al. 1988). The proportions of people with dementia show an exponential increase in prevalence with age (Hagnell 1966, Sulkava et al. 1985, Rorsman et al. 1986, Brayne & Calloway 1989, O'Connor et al. 1989, Lobo et al. 1990, Morgan 1990, Rocca et al. 1990, Amaducci 1991, Hofman et al. 1991, Rocca et al. 1991).

It has been shown that institutionalisation can be precipitated by confusion (Sinclair et al. 1988, Spear et al. 1991) and cognitive impairment (Greene & Ondrich 1990). Nearly half of all people with dementia are cared for in residential care (Preston 1986, Engedal & Haugen 1993, Fratiglioni et al. 1994). Those in the community are on average less cognitively impaired than those in residential care, but some admissions to institutional care occur at comparable levels of impairment. It has also been found that residential relocation is related to higher levels of depression or anxiety (Colsher & Wallace 1990).

### **iv) Receipt of help and availability of kin**

The receipt of help and availability of kin are particularly important in the context of moves for assistance. Adult children have been identified as the key family members for most of those aged over 80 years (Johnson 1995).

Although inter-generational solidarity and the exchange of services can be maintained in spite of geographical distance (Silverstein & Litwak 1993), a Canadian study has shown that proximity is the most important predictor of all types of contact between parents and adult children (Frankel & DeWit 1989).

Research in the United States has shown that the majority of older Americans have a child living within 10 miles (Lin & Rogerson 1995). For those with more than one child the second-closest child is usually within 30 miles, although further away in rural areas. Research in the UK has also established that children are likely to live further away from their parents in rural areas (Wenger 1984).

Proximity has also been linked to the socio-economic and educational status of the children. Lin and Rogerson (1995) found that education and the number of children were the most important factors in predicting proximity. The physical distance between parents and their children was found to be related to the mobility of adult children. In addition children with a high socio-economic status are associated with families with greater dispersion, as they are likely to be more mobile than their parents especially over long distances. This results in the elderly parents of these children being geographically separated from their kin (Warnes et al. 1984, 1985, Warnes 1986, 1987).

There is evidence to indicate that older parents are more likely to have traditional family relationships due to their needs for assistance (Silverstein & Litwak 1993). This could indicate that parents and children move closer together towards the end of the life cycle. Alternatively it could mean that only parents with children nearby remain living in the community. Warnes and Ford (1995) found that one of the most common motives that older people gave for moving was to reduce the distance between themselves and other family members.

Although moving in with a family member appears to be an option open to older members of society in need of aid, it is important to bear in mind that this is not an option that is welcomed by a majority of older people. Overwhelming evidence points to the desire of older people to remain independent and not place a burden on the family (Robison & Moen 1995, Filion et al. 1992, Lawton 1980, Butler &

Lewis 1982, Lehr 1991, Thomae 1988, Oswald & Wahl 1995). This appears to be especially significant for those in industrialised societies (Shanas et al. 1968, Townsend 1957, Knipscheer & Bevers 1985, Moss & Moss 1992,).

It has been shown in the USA that up to 15 percent of daughters live with elderly parents during their lifetime (Weinick 1995). However, in the USA evidence shows that it is not usual for parents to move in with their children for support, with only 3% doing so (Pillemer & Suitor 1991). On the other hand it is far more likely that intergenerational households are a result of the permanent living situation, that is the children never moved out, or that children have moved in with their parents to receive support from them (Crimmins & Ingegneri 1990).

There appear to be gender differences in the household composition of single older people. Teaford (1995) found that older men were less likely to live with relatives (other than their spouse) than older women were. She suggests that older men may not have the skills required to reciprocate in the relationship, for example undertaking household tasks, and therefore will not be invited to stay with children. Other studies have attempted to control for factors, such as need for help and the availability of living children, and have found that under these controls older men have a higher probability of living with children than older women (Crimmins & Ingegneri 1990). The availability of children also appears to be significantly related to relocation. Older people who have more children are more likely to move than those who have fewer children (Jackson et al. 1991, Sommers & Rowell 1992, Teaford 1995). It has also been long established that childlessness is highly correlated with entering institutional care (Townsend 1965).

## ***THE STUDIES AND THEIR RELATIONSHIP TO MIGRATION THEORIES***

In synthesising the results of the studies presented in Table 2.1 it becomes clear that *some* of the characteristics of moves described by Litwak and Longino (1987) and Wiseman (1980) are identified in the analyses although others factors are mentioned that are not specified in either theory.

Overall, the studies show that an increase in age decreases the probability of moving (Speare & Meyer 1988, Clark & Davies 1990, Colsher & Wallace 1990, Burkhauser et al. 1995) but it has been demonstrated that if the rates of short distance moves are examined there is an upturn in the proportion of people moving at greater ages which is not observed in the rates of longer distance moves (Bartiaux 1986, Rees & Warnes 1986, Rogers 1988). The analyses shows that renters are more likely to move than homeowners (Spear & Meyer 1988, Jackson et al. 1991, Bradsher et al. 1992, Sommers & Rowell 1992) and that duration of residence is negatively correlated with residential mobility (Jackson et al. 1991, Bradsher et al. 1992, Sommers & Rowell 1992, Zimmerman et al. 1993).

Other analysis is more specific to the types of move described by Litwak & Longino (1987) and Wiseman (1980). The data suggests that there is a peak in long-distance moves at retirement age (approximately 65 years for men and slightly younger for women) (Karn 1977, Rogers 1988). The people that constitute this peak of movers are more likely to be, married couples who are home owners with higher incomes than other movers (Karn 1977, Speare & Meyer 1988). Karn (1977) found that people who made long distance retirement moves were more likely to be from social class I or II. These movers could be categorised as retirement movers in Litwak and Longino's (1987) classification, and long-distance amenity movers in Wiseman's (1980) typology.

The rates of short distance moves do not peak at retirement age, instead there is an upturn in the propensity to move as age increases (Bartiaux 1986, Rees & Warnes 1986, Rogers 1988, Speare & Meyer 1988, Warnes 1993). The results from the studies in Table 2.1 suggest that moves that are not identified as 'retirement moves' above, are more likely for people who never married or who are widowed, and for people in single person households (Speare & Meyer 1988, Warnes & Ford 1995). The probability of moving is correlated with increases in difficulties with activities of daily living and a decrease in health status (Bradsher et al. 1992, Zimmerman et al. 1993, Teaford 1995). A move for assistance may also be made by those people who are experiencing financial difficulties, that is those people with a low income (Speare & Meyer 1988). Short distance moves for assistance are also more likely for people without carers or family members living in the proximity, prior to the move (O'Bryant & Murray 1986, Zimmerman et al. 1993). These moves fit in with Litwak and Longino's (1987) description of a move for moderate disability and Wiseman's (1980) description of local moves for assistance.

Litwak and Longino (1987) state that chronic disability coupled with limited kin resources may precipitate a move into residential care. This type of move has often been assessed in isolation from other types of residential mobility. The results from the studies listed in Table 2.1 suggest that the likelihood of relocation into residential care increases with age (Green & Ondrich 1990, Speare et al. 1991, Grundy 1992, Warnes & Ford 1995). The move is most likely for people without a spouse (that is never married or widowed) and for people in single person households (Greene & Ondrich 1990, Speare et al. 1991, Grundy 1992). The studies also indicate that it is more likely that renters rather than home owners will move into residential care (Greene & Ondrich 1990, Grundy 1992). An increase in difficulties with ADLs and cognitive impairment, especially dementia, increases the probability of relocation into residential care (Sinclair et al. 1988, Colsher & Wallace 1990, Greene & Ondrich 1990, Jackson et al 1991, Speare et al. 1991). It

has also been established that childlessness, (which perhaps indicates the lack of a carer) and social isolation are associated with institutionalisation (Townsend 1965, Sinclair et al 1988).

Findings that described 'attachment to home' as a factor that either facilitates or impedes residential mobility are not included in the characteristics of moves in the developmental model (Litwak & Longino 1987). However, the balancing of the attributes of the home maps well onto the behavioural model of housing proposed by Wiseman (1980). Within the behavioural model the relative weights of 'cost' and 'benefit' are of primary importance to the potential for a move. For example, when the cost of maintenance or rent is low and comfort is high then there would be no desire for relocation. When the value attached to one or both of these factors were reversed then there would be a need to re-evaluate the situation to see if relocation would yield a more positive situation than the current one. O'Bryant's cost/benefit-of-home subscale (1983) assumes that all other factors are equal whereas Wiseman's (1980) model allows for more factors to come into play during the assessment of the situation and the weighing up of push and pull factors before deciding to relocate or not.

Although three types of move described above are supported by the findings of the studies, there is little indication as to other 'types' of move that may be made by older people. In most instance this is due to the nature of the analysis in these studies. Apart from the study by Speare and Meyer (1988), which classified movement types by identifying 'constellations' of reasons that older people had given for moving, many studies relied on cross-tabulation to identify correlations between moving and other factors, and logistic regression to identify the variables predicting moves. When logistic regression (or logit) is used the dependent variable has been either a move per se, or one of the moves that have already been characterised by the theories. Although this allows the researcher to determine the



factors predicting residential mobility, it does not allow them to explore the relationship between factors and their relative contributions to different types of moves.

## ***SUMMARY***

This chapter has highlighted some of the problems that have been encountered in analysis of residential relocation. These included; over-generalisation from small samples; the choice of inappropriate statistical techniques for analysis; and, the restrictions within which researchers may have to work, due to the limitations of data.

The results of twenty studies have been discussed in broad themes determined by the type of variables that were used in the analysis. It can be seen that a majority of models have assessed the relative importance of factors that facilitate or constrain residential relocation of older people. Although the motivation and factors affecting particular types of moves have been attended to, little attention has been given to the adequacy of the theories *as a whole*, that underpin much of the analyses. In other words, studies have not tested whether the classification of moves that are proposed in the theories adequately describe the types of relocation made by a study population. Although this thesis embraces the same methods used in previous studies, that is using logistic regression to identify the factors that are most likely to explain relocation, it extends the analysis to cover new ground. In addition to developing a typology of moves from respondents motives for relocation this thesis assesses the fit of two models of residential relocation (Litwak & Longino 1987, Wiseman 1980) to a sample of people in the Bangor Longitudinal Study of Ageing.



Prior to an exposition of the analysis and the results, further introduction is required to determine whether the findings from the studies in Table 2.1 that were conducted outside of the UK can be applied to Great Britain. Chapter 3 explains how the political and economic influences of housing policies throughout the study period (1979-1995) affected the availability of housing in specific tenures in the UK. The degree to which migration theories can be generalised cross-nationally is addressed, bearing in mind that the housing market is unlikely to be identical in other countries.

### **HOUSING POLICY IN THE UK: CAN MIGRATION THEORIES BE APPLIED CROSS-NATIONALLY?**

The twenty studies listed in Chapter 2, Table 2.1 did not specifically mention the housing market as a factor explaining migration but it can be regarded as an *overarching* theme. This chapter will explain how the political and economic influences of housing policies throughout the study period (1979-1995) affected the availability of housing in specific tenures thereby governing, to a certain extent, the housing choices and decisions made by older people. The essential components of the Government's housing reforms and their consequences are outlined in this chapter. In light of the impact that the UK housing market has had on residential mobility the final section of this chapter will discuss whether migration research conducted in the USA and the theories that have arisen from it can be generalised to the UK.

#### ***THE UK HOUSING MARKET***

In the United Kingdom during the 1980s to the 1990s the Government has encouraged private ownership of property. The World Bank (1992) have suggested that the objectives of privatisation are:

“To increase economic efficiency at the level of individual firms and markets; to raise revenue for government activities; and to promote distributional and political ends”.

In terms of the housing market the Government's policies appear to have focused on targeting subsidies at the most needy sector of the population whilst encouraging individuals to enter the housing market, thereby exercising their right for housing choice (Hills et al. 1990, Whitehead 1993). Prior to 1979 social housing was considered to be the responsibility of the government, that is, it was a duty to provide a home for those residents in the UK who could not afford other options (Linneman & Megbolugbe 1994). After the election of Prime Minister Thatcher in 1979, the direction taken by the Government on housing changed in order to pursue the goal of privatising as much of the sector as possible. Whereas housing policy prior to this period had been geared to providing housing for the 'social good' it was now for private gain (Malpass 1993, Whitehead 1993). Between 1981 and 1984 the Government sought to cut public expenditure by 48% and the main savings were to be made in housing (House of Commons 1980). These cuts were over-achieved with 58% in real terms cut from housing expenditure (Her Majesty's Stationery Office 1984, Malpass 1993).

In 1980 the Housing Act introduced the 'Right to Buy' which meant that local authority tenants were able to purchase their council houses with discounts of up to 60% on the price of the property, depending on their length of occupation. In the decade prior to 1979 there were approximately 2.5 million owner-occupiers, but between 1979 and 1990 this number increased by nearly 4 million (Whitehead 1993). This resulted in growth in home ownership in Britain from 55.3% in 1979 to 67.6% in 1990, while council housing declined from 31.5% to 22.4% over the same period (Her Majesty's Stationery Office 1991, Malpass 1994).

The policy resulted in a decline in the average quality of housing for rent as the better quality properties were sold off to tenants (Linneman & Megbolugbe 1994). Although the 'Right to Buy' was a mechanism for people to leave the rented sector, the 1980 Housing Act did not take into account reclamation of housing from the private sector back into the realm of social housing (Allen & Milne 1994).

Between 1983 and 1987 the Government focused on responding to problems that had emerged as a result of the sale of defective local authority housing along with an extension of 'Right to Buy' discounts (Malpass 1993). In 1986 unemployment peaked at over three million (Newton 1991). After re-election in 1987 the Conservative party remained dedicated to the primacy of the growth of home ownership, but recognised that there were some people for whom home ownership would not be possible and would need to rent accommodation (Cole & Furbey 1994). With this in mind the Housing Act 1988, adhering to the Government's view of *laissez-faire*, deregulated what was left of the rented properties. The deregulation reduced the role of local authorities as housing providers and sought to transfer what remained of local authority housing to 'independent' landlords, which were either private concerns or housing associations (Clapham et al. 1990, Malpass 1993, Lund 1994, Clapham 1996). In the private sector, rent controls were revoked and credence was given to the *genius of the market* for producing the much needed low-cost rented properties (Kennet 1992).

The Government expected housing associations to play a larger role than they had previously in the provision of social housing. As housing associations are essentially private organisations this could not be enforced by the Government but was encouraged by incentives, such as the tripling of the Housing Corporation's annual approved development programme by the mid 1990s. Housing associations could take advantage of this funding if they were prepared to meet the expectations of the Government (Randolph 1993).

The goal for the production of new low-cost rented properties was not achieved and the result was a continued decline in the availability of rented accommodation (Kemp 1988). Over a fourteen-year period from 1980 to 1994, the number of local authority and housing association dwellings in Britain had decreased from 6.8 million to 5.5 million (Wilcox 1995). In total over 1.5 million former council houses were sold to tenants, with the peak of the sales occurring in 1987 when 215,000 houses were removed from the public arena (Forrest & Murie 1990, Wilcox 1995). Housing associations were not able to match the rate of new dwellings that were erected annually by local authorities and the number of *new* units of social housing declined from 94,134 in 1980 to 31,564 in 1994 (Wilcox 1995). In addition to the reduction in production of new houses in the rented sector, between 1989 and 1993 the construction of new housing overall fell by 30 per cent and turnover stagnated (Allen & Milne 1994). This was due to a renewed recession in the economy.

In 1988, a fall in mortgage interest rates to below 10% produced a frenetic housing market. The rush to buy houses was in part fuelled by the Chancellor's budget announcement, that from August 1988 'double' mortgage interest relief<sup>12</sup> would be terminated but was also due to a drop in real terms in house prices (Malpass 1993).

The rush to buy houses was followed over the next 18 months with five increases in mortgage interest rates until it reached a level of 15.4% by February 1990.

Consequently many people accrued mortgage arrears and negative equity<sup>13</sup>. In 1991 there was an all-time high rate of repossessions of houses by mortgage lenders: 75,540 houses were repossessed which accounted for 0.77 of all households with a mortgage (Wilcox 1995, Clapham 1996). Allen & Milne (1994) developed a

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<sup>12</sup> 'Double' mortgage relief could be claimed on up to £30,000 and was available to each partner in non-married couples.

<sup>13</sup> Negative equity, is where the outstanding loan with the mortgage lender exceeds the current market valuation of the property.

structural model of arrears and repossessions which predicted that an extra 300,000 households would leave the market between 1990 and 1996. The effects of these exits from the housing market has produced a mismatch between housing demand and housing supply. Those people who had their houses repossessed required rented accommodation, or social housing for which the queues were growing, whilst simultaneously empty houses were remaining unsold in the owner-occupier sphere (Allen & Milne 1994).

Negative equity is regionally concentrated and affected the South East of England most severely. The Bank of England estimated that a total of 876,000 households were in negative equity and calculated a total shortfall between outstanding loans and current valuations of £5.9 billion (Bank of England 1992). UBS Phillips & Drew (1992) offered a higher estimate of 1.5 million households, which represents one in seven home owners with a mortgage. Other analysis of nearly one million mortgage records suggests that 11% of homebuyers had negative equity in October 1991 which rose to 21% a year later (Dorling et al.1992, Dorling 1993). A survey by Forrest & Kennet (1996) found that the most common response to negative equity was for home owners to remain in their properties and wait until price inflation lifted the property value back into a positive equity situation. The outcome of this reaction was that many people were trapped in houses which were unsuitable for them and were unable to undertake a residential move. This in turn affected the number of houses available to other potential buyers in the housing market.

Allen & Milne (1994) suggest that the recovery of the housing market may be uneven, with property price increases returning some households to a position of positive equity whereas others may not recoup their losses so quickly. They suggest that the households which may remain in negative equity longer than others could include small starter homes, studio flats and some ex-local authority houses (particularly flats).

“... price increase may lift the majority of borrowers out of negative equity but leave behind a rump of properties and people with the most intractable problems.”

(Allen & Milne 1994)

The fluctuations in the housing market, have had the effect of producing a large polarisation between those who can afford to own property and those who cannot and may require state welfare support (Oldman 1990). The affordability of rented accommodation for some people has also come under scrutiny. Following the 1988 Housing Act individual housing associations were permitted to set their own rent levels with no guidance given as to what constituted an appropriate level of rent. Fears were expressed about the freedom given to the housing associations. These fears encompassed issues such as the potential for housing associations to concentrate on renting to a particular sector of the population, that is by either setting rents at a level that could only be afforded by people with higher levels of income than the majority in receipt of welfare benefit, or by focussing on letting properties to people in receipt of housing benefit (National Federation of Housing Associations 1987, Randolph 1993). It appears that the latter fear was realised and that increases in rents by housing associations could only be afforded by those people for whom housing benefit covered the cost. Rents became unaffordable for many people in work and in receipt of low wages (Ford & Wilcox 1994).

Much of the literature about the housing market in the United Kingdom has explored how the effect of sales of social housing through the ‘Right to Buy’ and increases in rents by housing associations has led to residualisation of social housing (English 1982, Clapham & MacLennan 1983, Forrest & Murie 1983, Malpass 1983, Hamnett 1984, Hamnett & Randolph 1991, Wilmott & Murie 1987, Malpass 1990). The process of residualisation has involved decreasing the status

and increasing the stigma attached to public housing (Clapham et al. 1990). It was noted above that people occupying public housing tend to be economically less well off than others, and by virtue of this they are less likely to be able to alter their circumstances. Housing options in the public sector have been limited by government policy. Due to 'residualisation' of the public sector, public housing now,

“provides only a ‘safety net’ for those who for reasons of poverty, age or infirmity cannot obtain suitable accommodation in the private sector”

(Malpass & Murie 1982, quoted in Clapham et al. 1990)

### ***CAN MIGRATION THEORIES BE APPLIED CROSS-NATIONALLY?***

Given the evidence above regarding the fluctuations in the housing market over the course of the study, and the affect this had on the residential mobility of the population as a whole, it would perhaps seem logical to expect differences between countries in the rates and types of migration that are undertaken. It has been noted that in most countries governments are more involved in the housing market than any other product market (Smith et al. 1988). Therefore, it may seem reasonable to anticipate that results from research on migration would be dependent on the political and economic climate of the country.

Contrary to the suggestion above, the evidence suggests that industrialised countries display similar characteristics in several aspects of migration. A number of countries exhibit similar age-specific rates of migration (Rogers & Castro 1981, Rogers & Watkins 1987, Rogers 1988). For older people this is evident in the peak in long distance moves at, or around retirement age, whereas the propensity to move short distances increases with age (Warnes 1983, Bartiaux 1986, Rees & Warnes 1986, Rogers 1986, Rogers 1988).



Although the proportions of people who migrate and the proportions of older people undertaking a particular type of move will vary according to cultural and socio-economic factors, Rogers (1988) suggests that after controlling for these factors the two 'basic' types of move will be identified (that is long distance amenity moves, and short distance moves for assistance). Rogers (1988) notes that the peak age of making long-distance moves is dependent on the retirement age for each country, and that there may also be differences in the steepness of rise in rates of migration for older age groups undertaking short distance moves. However, the differentiation of moves in terms of long-distance and short-distance, are not clearly conceptualised for comparisons between countries (Rogers 1988).

Long distance moves are often referred to as 'migration' whereas short distance moves may be termed 'local mobility' or 'mobility' (Long et al. 1988(a)). Zelinsky (1971) describes migration as:

“... any permanent or semipermanent change of residence; more meaningfully, perhaps, it is a spatial transfer from one social unit or neighbourhood to another, which strains or ruptures previous social bonds.”

The operationalisation of the distance that separates migration from mobility is not clear. Petersen and Petersen (1986) define long distance movement, or migration as:

“the relatively permanent movement of persons over a significant distance.”

They point out that this definition is far from precise and does not explain the terms 'relatively permanent' and a 'significant distance'. Others have tackled the definition of 'significant distance' and have operationalised it in terms of practical commuting distance. Long et al. (1988(a)) give two examples:

‘Migration is a relocation or displacement that is too far to continue commuting to the same job under normal circumstances.’

(Clark 1986)

and,

‘The point at which commuting to work becomes so time-consuming and expensive as to require the substitution of a change of residence.’

(Shryock & Siegel 1971)

However, there appears to be a lack of empirical evidence establishing the distance at which commuting becomes impractical (Long et al. 1988(b)).

Although studies in the UK have classified long distance moves as those over thirty kilometres; inter-county moves; or inter-district moves (Davies 1994, Warnes 1994, Warnes & Ford 1995); in the Netherlands as interprovincial moves (Molen & Voogd 1992) and in the USA as in-state but not in-county; interstate moves; or moves over 75 miles (U.S. Bureau of the Census 1977, Biggar 1980, Wiseman 1980, O’Bryant & Murray 1986, Long et al. 1988(a), Speare & Meyer 1988, Colsher & Wallace 1990, Burkhauser et al. 1995); there does not appear to be a generally accepted distance for which to classify the phenomenon. The comparison of long-distance moves between countries and even within countries can therefore be problematic. For example, in the USA moves that are classified as intercounty are assumed to be long-distance moves. However, these moves may represent a range that encompasses those from the smallest county, which is approximately five square kilometres to moves across the boundaries of the largest county which is the size of the Netherlands (Long et al. 1988(a)).

In practice, the distance used to delineate long distance migration from shorter moves is often constrained by the data collected. Data considerations forced Long et al. (1988(a)) to define ‘migration’ as moves over 50 kilometres (31 miles) and ‘local mobility’ as moves less than 50 kilometres. Some of the results from the study, which compared migration rates in the USA and the UK, are presented in Table 3.1 and 3.2.

Table 3.1 shows that the rate of ‘migration’ in the USA between 1975 and 1976 was approximately three times higher than in the UK in 1980-1981. The rate of ‘local mobility’ was more similar with the rate in the USA 1.5 times the rate in the UK (Long et al. 1988(a)). Long et al. (1988(a)) suggest that the data may imply less difference between Britain and the U. S. in ‘local mobility’ than in ‘migration’. However, it should be noted that in the United Kingdom the migration rates for all age groups from 1980-81 was the lowest for 15 years (Warnes 1994). A more recent comparison between the rate of ‘migration’ and ‘local mobility’ in both countries may show more similarities, as the rates of residential relocation increased considerably in the UK between 1981 and 1988.

**Table 3.1 Rates of ‘migration’ and ‘local mobility’ in United States of America and the United Kingdom**

<b>Distance moved:</b>	<b>United States 1975-1976</b>	<b>United Kingdom 1980-1981</b>
Moves per 10,000 population	171	90
Moved under 50 kilometres	125	75
Moved 50 kilometres or more	46	15

**Source:** U.S. data were tabulated from microdata files of the March 1976 Current Population Survey. Data for Great Britain are from Office of Population Censuses and Surveys (1983), quoted in Long, L., Tucker, C. J. and Urton, W. L., 1988(a), Migration distances: An international comparison. *Demography*, **25**(4), 633-640.

Although the rates of ‘migration’ and ‘local mobility’ were found to be considerably different for the USA and UK as a whole, when the movement of people aged 65 and over is compared for the two countries a different picture emerges. Table 3.2 shows that whereas the rate of ‘migration’ for the population as a whole in the USA was three times greater than the rate in the UK, for people aged over 65 years it is only two and a half times greater than the UK rate. The rates of ‘local mobility’ for people aged 65 and over in the USA are nearly identical to the rates in the UK (Long et al. 1988(a)). Although the authors state that an explanation for this phenomenon was not evident, it is suggested that it may be due to the position that the countries occupy in terms of demographic transition and elderly mobility transition.

**Table 3.2 Measure of ‘migration’ and ‘local mobility’ of people aged 65 and over in the USA and UK.**

Distance moved	United States	Great Britain
<i>Allocation of moves by distance</i>		
% of movers moving less than 50 kilometres	72.8	85.0
% of movers moving 50 kilometres or more	27.2	15.0
<i>Rates of moving (movers per 10,000 population)</i>		
All moves	56	45
Under 50 kilometres	41	38
50 kilometres or more	15	6
<i>Ratio of British rate of moving to U.S. rate</i>		
All moves	0.80	
Under 50 kilometres	0.93	
50 kilometres or more	0.44	

**Source:** Long, L., Tucker, C. J. and Urton, W. L., 1988(a), Migration distances: An international comparison. *Demography*, 25(4), 633-640.

The demographic transition theory is based on the differences between traditional and modern societies in their levels of fertility, mortality and proportions of older people in the population. In traditional societies fertility and mortality rates are high, whereas in modern societies both fertility and mortality rates are low. The temporal change that occurs during the change from a traditional to a modern society can be seen to be due to the changes in fertility and mortality rates. The theory states that as the society undergoes urban and industrial transformation, mortality rates decrease. In the development of the new society traditional ideals are eroded, for example the need for a large family declines in the face of reductions in child mortality and/or a welfare system that will support people in old age. As the result of industrialisation and improvements in quality of life, the new ideal of a small family is developed, and consequently the fertility rates of the country begin to fall (Clarke, 1978, Warnes 1982).

Figure 3.1 shows that there are five distinct phases of demographic ageing which correspond with changes in types and magnitude of migration. The changes in migration over time and space are called the mobility transition (Zelinsky 1971). Zelinsky (1971) states that the mobility transition is:

“a highly idealised, flexible scheme that affords a general overview of a variety of places and periods.”

It does not indicate the scale of migration, nor does it offer predictions in terms of time elapsed for each phase.

In addition to the demographic transition and the mobility transition, it has been postulated that in tandem there is there is a third type of transition: the elderly mobility transition. The elderly mobility transition differs from the mobility transition of the whole population, as the primary motive for migration for the

younger population is to seek better occupational opportunities. However, the older population will rarely be moving for these motives, therefore the pattern of mobility will differ from the population at large. Law and Warnes (1982) suggest that there are three phases of the elderly mobility transition the first of which starts during Stage 2 of the demographic transition. Phase 2 and 3 of the elderly mobility transition are mapped at the bottom of Figure. 3.1 which indicates that the 'edges' of the phases do not entirely coincide with the stages of demographic transition.

### **Stage 1: The premodern traditional society**

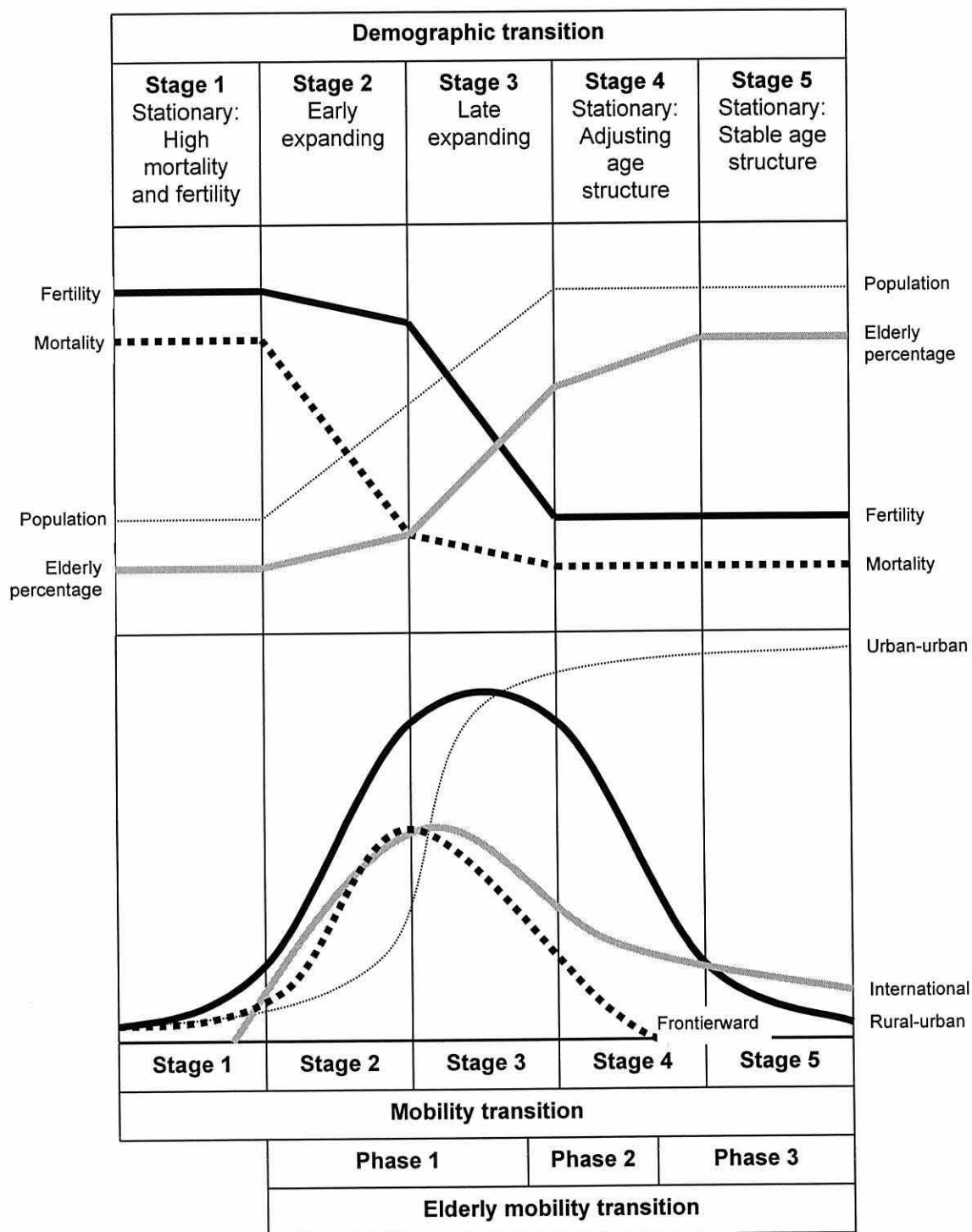
During stage one, the population displays high rates of fertility and mortality. As both these rates are approximately at the same average level, the population experiences very little growth. The proportions of older people in the population are low compared to younger age groups (Johnson & Falkingham 1992).

During this stage there is little mobility of the population across appreciable distances. This is because of the low levels of transportation and communication, the strength of social networks, and the lack of disposable income that could facilitate such moves. It would be expected that the majority of the population in countries at this stage of transition would live in the region of birth (Zelinsky 1971). This has been demonstrated by Davis (1951) who contrasted India with the USA in the proportions of people living outside the state of birth. He found that in 1931 only 3.5% of Indians lived outside the state of birth compared with 22.4% of people in the USA in 1940.

### **Stage 2: The early transitional society**

Stage 2 is offset by the commencement of industrialisation. In stage 2 the mortality rate begins to fall, but the fertility rate remains at a constant high level. The fall in mortality rate means the natural growth rate of the population begins to rise.

**Figure 3.1 The stages and phases of demographic transition, mobility transition and elderly mobility transition**



**Source:** The demographic transition adapted from: Warnes, A. M., 1982, *Geographical perspectives on the elderly*. John Wiley & Sons, Chichester. The mobility transition adapted from: Zelinsky, W., 1971, The hypothesis of the mobility transition. *The Geographical Review*, 61, 219-49

There is little change in the proportion of the population in the older age groups as the fall in mortality is mainly due to decreases in rates of infant mortality. As more people reach the age of reproduction whilst rates of fertility levels are still high, the population has a high proportion of younger people and a low proportion of older people (Johnson & Falkingham 1992).

During this stage there is a mass movement of people from the countryside to a variety of destinations. As noted above, in Stage 2 the population has begun to grow, and in addition rural areas experience changes in agricultural production. In the face of the increases in the rural population, there is perceived to be a lack of economic opportunities in the countryside. The most common way to overcome this problem is to migrate away from the area (Zelinsky 1971). Zelinsky (1971) identifies four possible destinations for out-migrants:

“cities in the native country; cities in alien lands with an expanding economy; rural settlement frontiers, if these are to be found in one’s own land; and the pioneer zone in a hospitable foreign country.”

The growth in all four types of mobility are represented at the bottom of Figure 3.1 by the steep rise in the curves at Stage 2. Stage 2 is a time of growth of urban settlements in the country of origin. The propensity to migrate is initiated in the most advanced of these settlements and gradually spreads to the less advanced and less accessible areas in the country (Zelinsky 1971). Historical records show that in southern England (which was more industrially advanced than northern areas) the peak of out-migration from rural areas occurred during 1870. However, the peak in northern areas of England were not achieved until ten years later (Cairncross 1949). This pattern coincides with the pattern of fertility rates for the two areas.



It has been suggested that the mobility of elderly people during this stage is very slight, and when it does occur it is not towards distinct regions and is limited in distance (Rogers et al. 1990). However, by the end of stage two, whilst there are increases in the rate of migration of younger members of the population towards urban destinations, older people who may have been former rural-urban migrants, begin to make retirement moves back to rural areas (Law & Warnes 1982, Rogers 1989, Rogers et al. 1990). This is described as Phase 1 of the elderly mobility transition.

### **Stage 3: The late transitional society**

In Stage 3 there is major decline in fertility which slows down as it reaches nearly the same level as the mortality rate. Johnson and Falkingham (1992) note that this is not necessarily due to the increase in medical knowledge and the availability of contraception, but may be due to new societal norms. The need for large families has declined partly because the rate of mortality has declined and more children will survive until old age, but also because welfare systems may be in place which mean that older people do not have to rely solely on financial and social support from children. Towards the end of Stage 3, as the fertility rate falls, the growth of the population also slows and the proportion of older people starts to increase.

During stage 3 the movement of people from rural to urban areas, to foreign countries or pioneering frontiers (if these were available) begins to abate. The most important difference in the migration patterns of Stage 3 compared to earlier Stages of transition, is the increase in intra-urban mobility (Zelinsky 1971).

At the end of Stage 3, as connections with rural areas wane, older people begin to undertake long-distance migrations to destinations chosen by virtue of the amenities or climatic advantages that they offer (Law & Warnes 1982, Rogers et al. 1990). This is the beginning of Phase 2 of the elderly mobility transition. As societies

move towards Stage 4, the advanced society, it has been noted that non-economic motives for migration will become more important, that is they become 'consumption-oriented' rather than 'production-oriented' (Kuznet 1964, Zelinsky 1971, Rogers et al. 1990). 'Consumption-oriented' migration is likely to be especially important to those people who are no longer involved in production, that is older people who have left the work force, and consequently do not need to live close to the place of work (Rogers 1989).

#### **Stage 4: The advanced society**

In stage 4 the decline in fertility and mortality rates has stopped and they reach equilibrium. Overall, population growth is low, but the proportion of elderly people in the population is still increasing although at a slower rate (Johnson & Falkingham 1992). The rural-urban exodus abates considerably. There is also unlikely to be any 'pioneering' land left for people to move to, so frontierward mobility halts. As with Stage 3 most mobility occurs within urban areas. Zelinsky (1971) notes:

“The nature and volume of residential transfers appear responsive to flux in economic conditions.”

Which is to say that residential movement fluctuates depending on the state of the housing market, and economic and political climate. He also states that it could be conceived that a person would spend a lifetime making residential moves for different reasons according to their stage in the life-cycle. Table 1.1 in Chapter 1, described the life-cycle approach to migration. As moves of this type are not envisaged before Stage 3 the life cycle model seems to be only applicable to countries at this stage of demographic transition. Another important aspect of migration at Stage 4 is the emergence of mobility that is not economically motivated (Zelinsky 1971).

The mobility of older people during Stage 4 is a continuation of the latter part of Stage 3 migration. In Phase 3 of the elderly mobility transition, although many older people continue to make long-distance amenity retirement moves there are a substantial number of older people who make moves that are shorter in distance and for whom the choice of destinations is more varied, including more inland and rural areas (Law & Warnes 1982, Rogers et al. 1990). Law & Warnes (1982) state that:

“...this concentrated phase [of long-distance amenity retirement moves to distinct destinations] ends when a renewed widening of the destination takes place. It is replaced... by more varied searches in inland, rural, more distant, and more remote areas.”

The search for new, more dispersed destinations for retirement is spurred on in part by the effect of the increases in proportions of older people in the destinations that have previously been significant ‘retirement’ areas. This may have had the effect of decreasing the attractiveness and increasing the prices of properties in these towns. Warnes and Law (1984) suggest that:

“The spread of public utilities, improved roads and telecommunications increases the attractiveness of rural and remote areas.”

Rogers et al. (1990) also suggest that moves toward inland regions maybe because older people wish to move nearer to younger members of the family, or they may be moving to areas that can supply adequate services to people requiring care in the community.

### **Stage 5: A future superadvanced society**

It is generally agreed that stage five in the demographic and mobility transition is an abstracted ideal. In most populations there will be too many fluctuations in mortality and fertility rates for it to be realised (Zelinsky 1971, Johnson & Falkingham 1992). However, Zelinsky (1971) predicts that if Stage 5 does come to fruition, non-economic considerations will play an even larger part in decisions to migrate.

### **Cross-national comparison of stages of demographic, mobility and elderly mobility transition**

A comparison of rates of migration above showed that there were differences in the proportions of older people undertaking long-distance moves in the UK and USA. It can be seen from the three conceptual models (demographic, mobility and elderly mobility transition) that the types of migration that older people might undertake will be dependent on the society's stage of transition. The evidence showed that the proportions of older people who were migrating in the UK were lower than in the USA. This may be because the UK has moved into the third phase of elderly mobility transition, and older people, in addition to moving to retirement areas, are seeking other rural or service-rich destinations that are closer to hand. Therefore, the stage of elderly mobility transition will be important in deciding whether a theory or typology of migration can be applied cross-nationally.

The types of move that are made by older people in countries at different stages of elderly mobility transition are illustrated in an international study by Rogers et al. (1990). The study looked at population redistribution of older people in four countries: Italy, Japan, United Kingdom; and the United States of America.

Rogers et al. (1990) found an uneven distribution and growth of the elderly population in all four of the countries studied, which was attributed to the spatial configuration of the elderly population through migration.

The elderly migrational flows that were found in Japan were mainly towards urban areas which reflected the mobility transition for the population as a whole. There was no evidence of specific amenity destinations for older people and no indication of a retirement peak in the age profiles of migration rates. The pension system in Japan was not as well developed as in Italy, the UK or USA and it has been noted that many older people did not receive any income from this source (Maeda 1980). In addition to, or indeed as a consequence of the inadequate pension system, family ties in Japan were very strong. Older people often co-resided with their families, as they were the major source of both financial and social support. Rogers et al. (1990) concluded that Japan was still in the first phase of elderly mobility transition.

An examination of the rates of elderly migration in Italy, and the destinations for these moves demonstrated that the country was in the second phase of elderly mobility transition. The age-profiles of migration rates showed that there were distinct retirement peaks. In addition there was evidence of long-distance elderly migration to specific areas. However, the rates of migration for older people in Italy were lower than in the UK and USA. This maybe because the pension system in Italy provided a level of income which was “barely enough for subsistence” (Florencia 1980) and consequently many older people may not have the economic resources required to relocate at retirement (Rogers et al. 1990).

The post-industrial status of the United States and the United Kingdom would suggest that both countries were at later stages of the elderly mobility transition than either Japan or Italy. In both the USA and the UK there were areas that could be identified as 'retirement regions'. There were also retirement peaks in the age profiles of migration rates (Law & Warnes 1982, Rogers & Watkins 1987, Rogers et al. 1990).

Law and Warnes (1982) stated that the UK was into the third phase of elderly mobility transition as there was evidence that older people were moving to more dispersed areas at retirement, as well as to the traditional retirement zones. Rogers et al. (1990) suggest that the USA was either at the end of the second phase or the beginning of the third phase of elderly mobility transition. Older people were beginning to relocate to regions other than Florida, California and Arizona, which had been the primary destinations of migration flows.

The ability of older people in the USA and UK to migrate has already been addressed in Chapter 1. It was noted that the drop in mortality rate has meant that the last years of life have become a time where plans can be made for enjoyment, rather than the expectations of previous generations that retirement would be a time to wind down whilst experiencing declining health. In addition, for the last forty to fifty years, older people in both countries have had the benefit of financial security through national pension schemes or social security payments (Bytheway 1980, Palmore 1980).

The comparisons between the countries at different stages of transition illustrates that typologies of migration may be applied cross-nationally if the stage of transition of the country is taken into consideration. It appears that neither Litwak & Longino (1987) nor Wiseman's (1980) typology would be of relevance to a country in the first stage of *demographic transition*, as it was noted above that most older

people would remain in the region of birth. Indeed, the first phase of the *elderly mobility transition* is characterised by very little migration of older people. At the end of Phase 1 older people may move from urban areas, where they relocated for employment, back to their rural origins. Once again, neither Litwak and Longino (1987) nor Wiseman's (1980) typologies are likely to be relevant. Although moves for assistance may be made during Phase 1, it is not until Phase 2 of the elderly mobility transition that the move for amenities emerges. This type of migration continues into Phase 3 when older people also choose to move to a wide variety of destinations in addition to the original 'retirement towns'. It appears from this evidence that it would be appropriate to apply the migration theories and their typologies discussed in Chapter 1 to countries which are in the second and third phases of the elderly migration transition.

## ***SUMMARY***

The first part of this chapter explained how the political and economic influences of housing policies throughout the study period of the BLSA (1979-1995) affected the availability of housing in different tenures, thereby governing to a certain extent the housing choices and decisions made by older people.

Given the effect that the housing market has had on the residential mobility of people in the UK during the sixteen years of the study (that is, options to move have been constrained by the reduction in local authority houses in the public sector and a stagnation of the private market) the remainder of the chapter discussed whether migration research conducted in the USA and the theories that have arisen from it can be generalised to the UK.

Although evidence shows that there are differences in elderly migration rates between countries, it was also shown that a number of countries exhibit similar age-specific rates of migration. For older people this is evident in the peak in long distance moves at or around retirement age, whereas the propensity to move shorter distances increase with age. The proportion of people who move, and the peak age of movement may vary from country to country according to cultural and socio-economic factors, but looking on a global scale there are patterns and regularities in elderly migration that can be plotted.

These patterns of elderly mobility have been discussed with reference to the stages of demographic transition and mobility transition that the countries occupy. It is recognised that locally the housing market effects the immediate viability of mobility in the elderly population, but on a wider, global scale the types of move that will be made are dependent on the phase of elderly mobility transition. For example, a slump in the housing market in the UK may temporarily restrict residential mobility, but the individual's desire to make an amenity move at retirement may remain. This is fuelled by cultural norms and expectations which have developed over time and throughout the course of industrialisation. Retirees are in better health, and have more financial independence than previous cohorts of older people. In addition, having left the work force, the demands of the labour market are no longer relevant, and motives for moving have become consumption-oriented rather than production-oriented. However, consumption-oriented moves can only be realised by older people with adequate economic resources. Older people who are financially constrained may age in place or move towards family members for assistance.

It is concluded that the *proportions* of older people making particular *types of move* may vary from country to country according to the state of the housing market and economic climate, but the types of move that can be potentially



realised are dependent on the phase of elderly mobility transition that the country is in. Therefore, it is suggested that the theories of migration and the typologies that are tested in thesis may be applied cross-nationally to countries in both the second and third phases of elderly mobility transition.

This chapter concludes Part I which has introduced the theories of migration, examined some of the factors that effect migration and discussed whether migration theories can be applied cross-nationally. Part II moves away from the theoretical framework of migration to focus on the methodology and analysis of data from the Bangor Longitudinal Study of Ageing. In the next chapter the background to the BLSA is examined with particular reference to the social and economic status of rural communities in Wales.

## PART II

### CHAPTER 4

#### **BACKGROUND TO THE BANGOR LONGITUDINAL STUDY OF AGEING: THE SOCIAL AND ECONOMIC STATUS OF RURAL COMMUNITIES IN WALES**

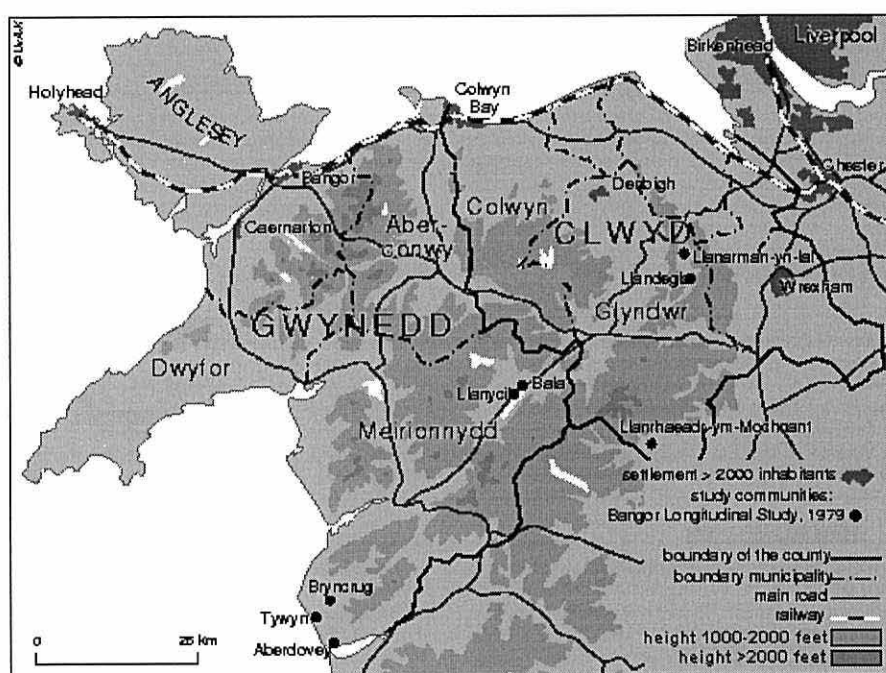
##### ***THE STUDY AREA***

The data used in this study are taken from the Bangor Longitudinal Study of Ageing (BLSA). The sample for the BLSA (funded by initially DoH 1978-86, DoH/ESRC 1986-1995 and DoH 1989-1999) was drawn in 1979 from a cross-section of rural communities located in Glyndwr in Clwyd and Meirionnydd in Gwynedd, North Wales. The original purpose of the BLSA was to conduct the first study of rural older people in the United Kingdom (Wenger 1984). Previous studies had focused on older people in urban localities (Hunt 1978, Abrams 1978, 1980) and the research was intended to provide the contrast which would highlight any particular difficulties encountered by older people living in rural areas.

Although the relocation of older people living in rural communities has been given some attention in the USA (Earhart & Weber 1992) much of the debate has focused on the risk of institutionalisation (Dwyer et al. 1994, Jett et al. 1996). Studies in the USA and the Netherlands have looked at rural locations as the destination of elderly people moving from metropolitan areas to more attractive living environments (Golant 1987, Molen & Voogd 1992). Although one study has looked at the retired migrant in North Wales (Davies & Davies 1983) and others have looked at service provision, social support networks and the availability of kin (Wenger 1990(a), Wenger & Shahtahmasebi 1991) as yet there has not been a focus on the residential mobility of older people in rural areas of the United Kingdom.

The sample for the BLSA consisted of people aged 65 and over in 1979, living in eight communities representing different rural settlement types. The communities from which the participants were drawn included the small towns of Bala, Tywyn and Aberdovey (including rural hinterland), the village and rural hinterlands of Bryncrug, Llanarmon-yn-Ial, Llanrhaeadr-ym-Mochnant and Llandegla, and the scattered community of Llanycil, adjacent to Bala.

**Figure 4.1 Map of communities in Bangor Longitudinal Study of Ageing**



**Source:** Adapted from: Thissen, F., Wenger, G. C. and Scharf, T., 1995, Community structure and support network variation in rural areas: A United Kingdom-Netherlands comparison in, Scharf, T. and Wenger, G. C., *International perspectives on community care for older people*. Avebury, Aldershot.

There is some variation in the definition of rural areas. The Housing Act in 1980 defined 'specially designated rural areas' in order to restrict the resale of public housing in regions where planning regulations constrained the erection of new dwellings. With the exception of the Brecon Beacons, the Housing Act designations were predominantly West Coast settlements (Tai Cymru 1990).

The Centre for Urban and Regional Development Studies (CURDS) have defined 281 local labour-market areas (LLMAs) in Britain primarily by function of the area and its dependence on the principal urban centres (Coombes et al 1982). The principal urban centres are known as the ‘metropolitan dominants’, and the areas linked to them by commuting ties are called ‘metropolitan subdominants’. The metropolitan areas also contain a small number of ‘metropolitan rural areas’ which are linked to the ‘metropolitan dominants’ or ‘subdominants’ by commuting flows, but the settlement is below the critical threshold size. The parts of Britain that are not classified as metropolitan ‘dominants’, ‘subdominants’ or ‘rural’ are independent of these main areas and have been called ‘freestanding’ areas. ‘Freestanding’ areas are subdivided into ‘urban’ and ‘rural’ areas according to the size of their main settlement (Champion 1994).

In a report for Tai Cymru<sup>14</sup> on the demand for social housing in Wales, The Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth used a definition of rurality based on a range of social economic, demographic and housing criteria (Tai Cymru 1990). The areas were defined as rural, intermediate and urban regions. The area that the ‘rural regions’ covered were more extensive than those covered by the Housing Act 1980 and included seventeen districts: Aberconwy, Arfon, Brecknock, Carmarthen, Ceredigion, Colwyn, Delyn, Dinefwr, Dwyfor, Glyndwr, Meirionnydd, Monmouth, Montgomeryshire, Preseli Pembrokeshire, Radnorshire, South Pembrokeshire and Ynys Môn. Using this criteria, the areas that the sample was drawn from for the BLSA (Glyndwr and Meirionnydd) were both defined as ‘rural regions’. This definition was similar to

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<sup>14</sup> *Translation:* Welsh Housing. Tai Cymru is a federation of housing associations. It recognised that: “The housing problems of rural Wales needed particular attention. A series of pilot housing schemes were launched in selected rural areas during 1989/90 and alongside this direct intervention Tai Cymru also recognised the need for quality information regarding the housing problems of rural Wales... As a consequence two important research projects were commissioned by Tai Cymru in 1989, the results of which together with feedback from the pilot schemes will help from Tai Cymru’s future investment strategy for rural Wales... One project looks at ‘The housing aspirations of young people in rural Wales’, whilst the other concentrated on ‘The demand for social housing in rural Wales.’” (Tai Cymru 1990)

the definition of rural Wales which has been used in other studies (Cloke 1977, Phillips & Williams 1984, Cloke & Edward 1986, Institute of Welsh Affairs 1988).

The districts included in the BLSA are defined differently according to the classification used. Under the Housing Act 1980 Meirionnydd is classified as a rural locality whereas Glyndwr is not. According to the labelling of LLMA's Meirionnydd is defined as 'Freestanding Rural' area and Glyndwr is defined as a 'Freestanding Urban' area. In the wider definition use by Tai Cymru and others, both Meirionnydd and Glyndwr are defined as rural districts. Unless otherwise stated, the term rural areas will refer to those mentioned in the latter study.

## **Bala**

Bala is a small town adjacent to the Snowdonia National Park and is situated on the main North Wales to Aberystwyth route. Bala was formerly an important rail link for transport of slate from the surrounding areas, especially Blaenau Ffestiniog. Bala's station opened in 1882, and the railway transported passengers, whisky from the nearby Grongoch distillery and slate products. The end of the nineteenth century saw a decline in the use and mining of slate. The rail-borne traffic of slate and tourists ceased in 1961 (Southern & Jones 1995). Now Bala is a tourist centre in the summer, but is primarily a market town for the surrounding hinterland. The sample of older people from Bala included the highest proportion of Welsh speakers (Wenger & St. Leger 1992). In 1981 Bala had a population of 1,852.

The private housing stock in Bala mainly consists of eighteenth and nineteenth century housing. These are interspersed with some semi-detached inter-war building and on the outskirts of the town there are a few Victorian villas. During the course of the study there was limited building of private housing, which consisted of a new estate of older people's bungalows and several small houses. The new

estate of older people's bungalows particularly attracted the in-migration of retirees from other areas.

In 1997/98<sup>15</sup> the local authority provided 202 units of social housing in Bala, most of which had already been built by 1979. Although not quantified by Gwynedd county council, a proportion of the local authority housing stock was sold following the Governments 'Right to Buy' policy. The 202 units of social housing which remained in 1997/98 consisted of 2-bed bungalows (18), 2-bed flats (20), 3-bed houses (118), 4-bed houses (14) and sheltered accommodation (32). In 1979 the housing association, Cymdeithas Tai Clwyd<sup>16</sup>, did not have any properties in Bala. By 1995 they had built ten new flats for older people, and refurbished five others. They also had under their control fifteen flats for general needs and fifteen 3- and 2-bedroom houses.

Bala has one registered private residential care home: Tirionfa. It can accommodate twelve people in eight single rooms and two double rooms. It provides long- and short-stay accommodation, respite and day care (Elderly Accommodation Council 1998).

## **Tywyn**

In the mid-nineteenth century the only seaside resorts in Wales that could compare to the vacation areas that were already established elsewhere in the United Kingdom were Aberystwyth and Tenby. By 1911 this had changed and Tywyn rated 109th in the population size of seaside resorts in England and Wales. Expansion of North Wales resorts, such as Llandudno and Rhyl, had been prompted by the demand for holidays by the working class. As Tywyn is located further away

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<sup>15</sup> Due to boundary changes in the local authorities it was not possible to ascertain the number houses that were provided by the local authority in 1979. The Meirionnydd branch of Gwynedd County Council Department of Housing and Environment are unaware of the location of previous records.

<sup>16</sup> *Translation:* Clwyd Housing Association. Cymdeithas Tai Clwyd is a member of the Federation of Welsh Housing Associations, that is *Aelod o Ffederasiwn Cymdeithasau Tai Cymru*.

from the industrial urban areas, such as Liverpool and Manchester, its visitors were far fewer and growth was not as rapid (Walton 1983). Tywyn is situated at the end of the former Cambrian railway line and it has been documented that the railways made it easier for fishing villages to improve their economies by catering for holiday makers as well (Walton 1983). However, there are no major roads connecting to Tywyn. Nowadays, Tywyn has several amenities relating to the holiday industry including a swimming pool, promenade and a proliferation of boarding houses and small hotels. The recreational amenities and the historical reputation of Tywyn as a health resort attracts amenity-seeking retirees. Due to the in-migration of retirees from elsewhere in the United Kingdom, less than one third of the sample from Tywyn were Welsh speakers (Thissen et al. 1995).

In Tywyn, in the 1970s, there was a period of expansion in the private housing sector. This consisted mainly of newly built estates of bungalows. There was a continuation of new building throughout the study period, although not of such magnitude. These new estates were advertised in the Midlands and led to an influx of retirement migrants. The in-migration of retirees was on a greater scale than experienced in Bala.

In 1981 Tywyn had a population of 2,364. The number of units of local authority housing provided in 1997/98<sup>17</sup> in Tywyn was lower than in Bala: 149 units in Tywyn compared to 202 in Bala.

In 1997/98 the local authority housing comprised of 1-bed bungalows (11), 2-bed bungalows (37), 1-bed flats (3), 2-bed flats (10), 2-bed maisonette (1), 2-bed houses (7), 3-bed houses (50), 4-bed houses (10) and sheltered homes (20). Although there were no housing association houses in Tywyn in 1979, by 1995 Cymdeithas Tai

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<sup>17</sup> Due to boundary changes in the local authorities it was not possible to ascertain the number of houses that were provided by the local authority in 1979. The Meirionnydd branch of Gwynedd County Council Department of Housing and Environment are unaware of the location of previous records.



Clwyd provided twenty-five general needs units. These were a mixture of 2/3 bedroom houses throughout the town. These consisted of a combination of new build and existing stock.

There were three residential care homes in Tywyn all of which opened during the study period: Bryn Tirion, Morannedd and Trydyddan. Bryn Tirion accommodates ten people in eight single rooms and one double room. It provides long- and short-stay accommodation, respite care and day care. Morannedd houses twenty-one people in seven single rooms and seven double rooms. In addition to providing long- and short-stay accommodation, respite and day care, Morannedd also provides care for terminally ill people. Trydyddan accommodates eleven older people in three single rooms and four double rooms. It provides long and short-stay accommodation, and care for terminally ill people (Elderly Accommodation Council 1998).

In addition to the three residential care homes, there were also two nursing homes in Tywyn: The Alexandra and The Bay Nursing Home. The Alexandra provides nursing care for twenty-one people in nine single rooms and six double rooms, on a long- or short-stay basis. It also provides respite, day and terminal care. The Bay Nursing Home provides accommodation for thirty people in fourteen single rooms and eight double rooms. The Bay Nursing Home provides the same range of care as the Alexandra, excluding day care provision (Elderly Accommodation Council 1998).

### **Aberdovey**

Aberdovey is also situated on the former Cambrian railway line and is not connected to any major road routes. The sample for the study were drawn from Aberdovey itself and the hamlet of Cwrt which is situated in the rural hinterland of Aberdovey.



Aberdovey was in a similar situation to Tywyn with regard to its development and growth as a seaside resort. In 1834 it was a small fishing village, which slowly developed a shipbuilding industry. By 1882 a jetty and wharf had been built for both the export of slate from the surrounding quarries and the import of grain (from Canada and Australia) and cement. The wharf and jetty were linked to the railway which had opened in 1864 (Lewis 1989). The arrival of the railway hailed a decline in the shipbuilding industry but it facilitated holiday visits especially from the Midlands. By 1911 Aberdovey was rated 126th in population size of seaside resorts in England and Wales (Walton 1983). As in Tywyn, the recreational amenities and the historical reputation as a health resort attracts amenity-seeking retirees. Consequently, although nearly half of the sample of inhabitants in Aberdovey speak Welsh, only one-third were born within 15 miles of the community (Thissen et al. 1995) In 1981, Aberdovey had a population of 1,843.

The private housing stock in Aberdovey is similar to that in Bala and mainly consists of eighteenth and nineteenth century housing. These are interspersed with some semi-detached inter-war building and a few Victorian villas.

In 1997/98<sup>18</sup> the local authority provided thirty units of social housing in Aberdovey. The stock of local authority housing had been considerably reduced throughout the study period due to the 'Right to Buy' policy, but the actual proportion which had been sold could not be quantified by Gwynedd County Council. In 1997/98 the local authority stock comprised of: 1-bed bungalows (6), 2-bed bungalows (12), 2-bed houses (3), 3-bed houses (9), but no sheltered accommodation. Cymdeithas Tai Clwyd did not provide any housing in Aberdovey in 1979. However, by August 1995 they had completed a new development, Rhos Ddyfi which consisted of twelve units. This was comprised of six flats for older

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<sup>18</sup> Due to boundary changes in the local authorities it was not possible to ascertain the number houses that were provided by the local authority in 1979. The Meirionnydd branch of Gwynedd County Council Department of Housing and Environment are unaware of the location of previous records.

people which contained two bedrooms in each suitable for the occupancy of three people, and six general needs houses each containing three bedrooms suitable for five occupants.

Throughout the course of the study there were no residential or nursing homes in Aberdovey. The nearest community for people to access these facilities was Tywyn, which is within five miles of Aberdovey.

### **Bryncrug**

In 1981 Bryncrug had a population of 325 comprised of the inhabitants of the village and rural surroundings. Seventy-nine percent of the sample in the study were Welsh speakers. The town is approximately two miles inland on a main bus route. It is a satellite town to Tywyn but is not affected by the tourist element to the same extent as the coastal town (Wenger & St. Leger 1992). Although the community attract retirement migrants, these people tended to be Welsh speakers returning to Wales (Thissen et al. 1995).

The private housing stock in Bryncrug mainly consists of eighteenth and nineteenth century housing. However, there were new private bungalows built during the course of the study which attracted retirees.

Although the population of Bryncrug was much lower than Tywyn the provision of social housing in 1997/98<sup>19</sup> was very similar with the local authority providing twenty-nine units. These comprised of 2-bed bungalows (12), 2-bed houses (2), 3-bed houses (11) and 4-bed houses (4). There were not any housing association properties in Bryncrug throughout the course of the study.

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<sup>19</sup> Due to boundary changes in the local authorities it was not possible to ascertain the number houses that were provided by the local authority in 1979. The Meirionnydd branch of Gwynedd County Council Department of Housing and Environment are unaware of the location of previous records.

There were no residential or nursing homes in Brynchrug. The nearest community for people to access these facilities was Tywyn, which is approximately two miles from Brynchrug.

### **Llanarmon-yn-Ial**

The population of Llanarmon-yn-Ial in 1981 was 966. This included the village of Llanarmon itself, a smaller neighbouring village of Eryrys and a nearby hamlet, Graianrhyd. Homes and farms are also dispersed throughout the surrounding countryside. The community is not on a main road but is within commuting distance of Mold (then the county town of Clwyd) and Wrexham which is an industrial area. Llanarmon was once a quarrying area but by 1979 was a favourite location for second homes for people from the north-west and the Midlands (Wenger & St. Leger 1992). Less than half of the inhabitants in Llanarmon were Welsh speakers (Thissen et al. 1995).

A majority of the private housing stock in Llanarmon was built during the eighteenth and nineteenth century. During the course of the study there was some private new build. This was a small new estate which contained bungalows and a few houses.

In 1979, fourteen 'general' houses and eight bungalows (specially designed for older people with 'Lifeline' alarms), were provided by the local authority. By 1997 although all eight bungalows remained in the possession of the local authority, only six general houses were still in their possession. During the course of the study over half of the 1979 stock of 'general' social housing had moved into the private sector through the sale of houses to council tenants. There were no housing association properties available in Llanarmon in 1979. However, in 1990 Cymdeithas Tai Clwyd built two new general needs houses (one bedroom/two person).

There were no residential care homes in Llanarmon, but the nearest, Valley Lodge, was situated in Llanferres, which is approximately six kilometres (3.5 miles) away. Valley Lodge provides accommodation for fourteen residents in eight single rooms and six double rooms. It accommodates long and short stay residents and provides respite, day and domiciliary care (Elderly Accommodation Council 1998).

### **Llanrhaeadr-ym-Mochnant**

Llanrhaeadr is not on a major road but is the focal point for many small villages and dispersed houses and farms. Although Llanrhaeadr is a nucleated village the community covers a wide area which takes in Llangedwyn and Bwlchyddar. The community had a population of 735 in 1981. Forty of these inhabitants lived in the hamlet of Llanarmon-Mynydd-Mawr which is included in Llanrhaeadr's hinterland. The sample taken from Llanrhaeadr had the second highest proportion of Welsh speakers (80%) compared with other communities in the BLSA, although it is close to the English border. The nearest large town is Oswestry, situated approximately twenty-five miles away.

The private housing stock in Llanrhaeadr consisted mainly of eighteenth and nineteenth century housing.

In 1979 the local authority provided fifty units of social housing, comprising: ground-floor flats (2), first floor flats (2), 1-bed houses (3), 2-bed houses (7), 3-bed houses (22) and fourteen bungalows for older people with 'Lifeline' alarms. By 1997 only 88% of the stock that they had in 1979 remained in local authority possession. The forty-four properties controlled by the local authority were: ground floor flats (2), first floor flats (2), 1-bed houses (3), 2-bed houses (2), 3-bed houses (21) and fourteen bungalows (with 'Lifeline' alarms) for older people. Cymdeithas Tai Clwyd had no properties in Llanrhaeadr in 1979. By September 1992 they had completed the development of twelve houses, six of which were for rent and six for

shared ownership. These properties were general needs housing suitable for five people occupying three bedrooms.

By the end of the study there was one residential care home in Llanrhaeadr which provides accommodation for twenty-eight residents in twelve single rooms and eight double rooms. The home caters for both long and short stay residents (Elderly Accommodation Council 1998).

### **Llandegla**

Llandegla is comprised of a small village and a wide agricultural area of scattered farms. The village is not on a main road but it is easily accessible from the main routes from Wrexham, Mold and Llangollen. It had a population of 458 in 1981. Over half (59%) of the sample were Welsh speakers (Thissen et al. 1995).

In 1979 the local authority provided fourteen units of social housing. This stock comprised of six 'general' houses and eight bungalows designed for older people with 'Lifeline' alarms installed. By 1997, as in Llanarmon, fifty percent of the 'general' housing stock had become privately owned, with only three houses remaining under local authority control. Cymdeithas Tai Clwyd did not replenish the stock of social housing although they refurbished two houses which were taken under their control in 1990. These houses were for general needs with two bedrooms, suitable for occupancy by three people.

There were no residential care homes in Llandegla. The nearest home was in Llanferres, which is approximately six miles away. A description of the accommodation provided by Valley Lodge is provided in the account of Llanarmon.

## Llanycil

Llanycil was the most widely dispersed community in the study. In 1981 there was a population of 458. The community consists of three very small settlements in the Snowdonia National Park; Parc, Rhyduchaf and Llidiardau, and a large upland area. The inhabitants live in a sheep farming area, scattered along the north shore of Bala Lake in the uplands. Over three-quarters (78%) of the sample drawn from Llanycil were Welsh speakers. There were no local authority housing in Llanycil nor were there any housing association properties. The nearest town is Bala, which has both social housing and a residential care home (see above).

**Table 4.1 North Wales communities used in the Bangor Longitudinal Study of Ageing. Populations from 1981 census<sup>20</sup> data.**

Communities	Population	Percent of pensionable age <sup>21</sup>
Tywyn	2364	28
Bala	1852	24
Aberdovey	1843	39
Llanarmon	966	17
Llanrhaeadr	736	19
Llandegla	458	11
Llanycil	458	14
Bryncrug	326	25

**Source:** Adapted from Thissen, F., Wenger, G. C. and Scharf, T., 1995, Community structure and support network variation in rural areas: A United Kingdom-Netherlands comparison in, Scharf, T. and Wenger, G. C., *International perspectives on community care for older people*. Avebury, Aldershot.

<sup>20</sup> Census 1981 OPCS Monitor CEN 81 WCP 47, March 1984 "Ward and Community Monitor, Clwyd" or Gwynedd County Council 1981 enumeration district data

<sup>21</sup> Men 65+; Women 60+

Table 4.1 shows that (with the exception of Bryncreug) older people tended to be concentrated in the small towns, that is those communities in the BLSA with the largest populations.

### ***SOCIAL AND ECONOMIC FACTORS SPECIFIC TO RURAL AREAS***

There are a variety of factors at play that will affect an older person's decision to relocate to a rural area (from elsewhere), relocate within the area, or stay put. These factors often differ considerably from the role they may play in an urban context.

#### **The rural economy and employment**

The economy in rural Wales has traditionally been dominated by agriculture, but between 1921 and 1981 the number of people employed in agriculture has fallen dramatically from 106,835 to 52,750 (53%) (Tai Cymru 1990). In addition, the quarrying areas of North Wales have experienced economic decline and the associated social consequences since the early 1900's (Roberts 1926, Roberts 1929, Morgan 1981). A report on a study conducted in ex-quarrying communities in Arfon, Gwynedd, stated that; housing conditions of those aged 60 and over were of a lower standard than those of younger people and 12% of the homes of older people were considered to be in a poor state of repair; income was lower than for the UK as a whole; and unemployment was twice the national average (McAllister 1990).

The out-migration of younger people from rural areas to urban areas in search of employment opportunities and the in-migration of older people from urban areas seeking tranquillity in the country has led to population imbalances in many communities (McAllister 1990, Tai Cymru 1990, Midmore et al 1996). The influx of more affluent people from elsewhere in the UK also artificially raises the estimated Gross Domestic Product (GDP) per head, thereby obscuring the poorer

income levels of the indigenous population (Asby & Midmore 1996). In addition, the numbers of people that are registered as unemployed in rural areas does not reflect the number of people that have left the area or have entered the black economy (Asby & Midmore 1996). Midmore et al. (1996) note that in order for small communities to be sustainable in the long-term, there has to be a demographic balance.

In the context of elderly households' retirement and relocation decisions in North Wales, agricultural employment plays an important part. Table 4.2 demonstrates that people aged over 65 years make up a larger proportion of the agricultural labour force (6.8%) compared with the proportion of older people employed in other enterprises (2.5%). Proportionally twice as many Welsh speakers (10.9%) over the age of 65 are engaged in agricultural activities compared with non-Welsh speakers (5.5%) (Hughes et al. 1996). It appears that Welsh farmers are more likely to carry on working after the age of 65 than non-Welsh speaking people and those employed in non-agricultural jobs. In this respect the farming household is in a similar position to that of other self-employed families (Keating & Marshall 1980).

To ensure continuity of farming the transfer of duties and property to the next generation has to be achieved (Goodman 1989, St Cyr et al. 1994). Whereas employees are usually legally obliged to leave the workplace at the age of 60 or 65 there is no such obligation for the self-employed. Retiring farmers may move through gradual phases from full-involvement in the farming process to little or no involvement, which may culminate in a move from the farmhouse (Keating & Marshall 1980).



There is evidence from a Eurostat (1991) survey that older farmers have a different attitude towards retirement than others, with 22.3% of UK farmers aged over 65 (who were still farming) having no intention of retiring. There is a tendency for those without children to remain farming for longer (Naylor 1982, Czwojdrak et al. 1984). The norms for retirement from farming appear to be changing over time, with a progressive decrease in the numbers that retain full control of their farms until their death (Gasson 1969) and an increase in the number of farmers who expect to retire at the same age as others in the work force (Hine & Houston 1973, Errington & Tranter 1991).

**Table 4.2 Welsh and non-Welsh speakers in employment by age, Wales, 1991.**

<b>Persons in employment (%)</b>	<b>16-29</b>	<b>30-44</b>	<b>45-60/65</b>	<b>60/65+</b>
<i>Non-Welsh speakers</i>				
Total in employment	29.2	38.5	29.6	2.7
Managers/proprietors in agriculture & services	19.5	37.3	37.7	5.5
All other occupations	30.0	38.6	28.9	2.4
<i>Welsh Speakers</i>				
Total in employment	26.8	36.6	32.6	4.0
managers/proprietors in agriculture & services	16.2	33.6	39.3	10.9
All other occupations	28.2	37.0	31.7	3.0
<i>All employed persons</i>				
Total in employment	28.8	38.2	30.1	2.9
Managers/proprietors in agriculture & services	18.7	36.4	38.1	6.8
All other occupations	29.7	38.4	29.4	2.5

**Source:** Hughes, G., Midmore, P. and Sherwood, A-M., 1996, Language, farming and sustainability in rural Wales. In, Midmore, P. and Hughes, G., (Eds.) *Rural Wales: An economic and social perspective*. Welsh Institute of Rural Studies, Aberystwyth.

The European Community (EC) since the 1950's has recurrently encouraged farmers to retire with several schemes offering cash incentives (Gasson & Errington 1993). On the whole these have been judged to be unsuccessful (Gasson 1969, Hine & Houston 1973, Organisation for Economic Co-operation and Development 1995). The ineffectualness of the schemes may be due to economic factors but may also be due to psychological barriers, such as self-esteem and social status gained from farming (Commins 1973). The end result is that many farmers in rural communities are in employment longer than workers in urban areas, and consequently the timing of residential relocation will differ.

### **The housing market**

Chapter 3 outlined the fluctuations in the housing market over the study period for the UK as a whole. In the 1980s the affordability of local housing dominated rural housing debates as the Government's policies had particular effects on rural locations.

The rise in house prices between 1984 to 1989 in rural locations are displayed in Table 4.3. The average price of a semi-detached house in rural Wales rose by over 100% during five years. The same data source also indicated that the average price for semi-detached houses in the UK as a whole rose by 41.9%, from £44,480 to £63,147 over the same period (Nationwide Building Society 1985, Nationwide Anglia Building Society 1989, Tai Cymru 1990). However, house prices in Wales, although doubling in price, remained cheaper than in many other areas in the UK. Differences in property prices encouraged in-migration of people from elsewhere in the UK and the purchase of second homes. Gwynedd in particular had a high concentration of properties that had become second homes (Gilg 1978, Davies & O'Farrell 1981, Dyfed County Planning Department 1980, 1983, Prentice & Lewis 1988). It has been estimated that second homes or holiday homes account for one sixth of the housing stock in Meirionnydd (Welsh Office 1987, Tai Cymru 1990).

The competition for dwellings had the effect of raising property prices above the reach of many rural inhabitants (Tai Cymru 1990, Asby & Midmore 1996).

**Table 4.3 Average house price rise in rural Wales 1984 to 1989**

	1/1984 to 12/1984	9/1988 to 8/1989
	£	£
<b>Detached houses:</b>		
Dyfed	35,546	79,873
Clwyd	}	74,458
Powys/Gwynedd		81,125
<b>Semi-detached houses:</b>		
Dyfed	21,883	44,108
Clwyd	}	44,019
Powys/Gwynedd		43,936
<b>Terraced Houses:</b>		
Dyfed	20,846	38,293
Clwyd	}	33,536
Powys/Gwynedd		35,010

**Source:** Nationwide Building Society, 1985, *Local area housing statistics no. 6 Wales*, Nationwide Building Society, London; Nationwide Anglia Building Society, 1989, *Local housing statistics no. 9 Wales*, Nationwide Anglia Building Society, London. Quoted in Tai Cymru, 1990, *The demand for social housing in rural Wales*. Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth

Table 4.4 demonstrates that people living in rural Wales are on average poorer than people living in Wales as a whole. Other statistics show that people living in rural Wales are also poorer than those living elsewhere in Britain: in 1989 the level of household income in Wales was 42% less than the average for the South East of England (Tai Cymru 1990). The Tai Cymru survey (1990) pointed out that The

Council of Europe's 'decency threshold'<sup>22</sup> was £168 a week in 1989 and most manual workers and female employees in rural Wales earned less than this figure. It has been suggested that the low levels of wages leads to employed poverty (Midmore et al.1996). When this is put into context, competition for houses between those on low incomes in rural Wales versus in-migrants with considerably higher incomes leads to an increase in property prices which is above the reach of many rural inhabitants (Cloke & Davies 1992).

**Table 4.4 Distribution of average gross weekly earning of all full time employees in rural Wales on adult rates whose earnings were not affected by absence: April 1989.**

County:	Percentage earning less than:			
	£120	£150	£160	£170
Clwyd (West)	20.1	35.6	38.5	43.9
Dyfed (excluding Llanelli)	20.7	36.0	43.3	47.6
Gwynedd	18.6	31.2	38.8	43.1
Powys	13.6	25.8	32.3	37.4
Wales	13.8	28.5	34.2	38.9

*Source:* Tai Cymru, 1990, *The demand for social housing in rural Wales*. Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth

There is a higher proportion of homeowners and private renters<sup>23</sup> in rural Wales compared with other areas in the country. The proportion of homeowners and private renters rose from 77.7% of households in 1980 to 81.8% in 1988 (see Table 4.5). This would be expected in light of the political drive for private ownership of homes through the lowering of mortgage interest relief and the 'Right to Buy' policy.

<sup>22</sup> The Council of Europe's 'decency threshold' is set at 68% of mean earnings for both men and women.

<sup>23</sup> Tai Cymru (1990) state that figures for homeowners and private renters could not be disaggregated.

**Table 4.5 Percentage of owner occupied/privately rented, local authority and housing association dwellings and ratio of local authority new build to sales.**

District:	OO/PR		Housing association		Local authority		Ratio of LA new build/sales 1980-88
	1980	1988	1980	1988	1980	1988	
Glyndwr	75.5	80.5	0.0	1.4	24.5	18.1	1:4.6
Meirionnydd	82.4	86.5	0.0	0.5	17.6	13.0	1:4.7
Rural	77.7	81.8	0.3	1.1	22.0	17.1	1:3.7
Intermediate	68.7	74.2	0.8	1.6	30.4	24.2	1:4.2
Urban	68.5	73.6	0.8	2.4	30.6	24.0	1:4.2
All Wales	71.4	76.3	0.7	1.9	27.9	21.9	1:4.1

**Key:** OO = Owner occupied; PR = Privately rented; LA = Local authority.

**Source:** Adapted from Tai Cymru, 1990, *The demand for social housing in rural Wales*. Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth.

In rural areas concern was voiced over the effects that the 'Right to Buy' policy would have on the supply of social housing as there are strict restrictions on the building of new housing stock in designated rural areas. The building of new stock of housing in rural areas is tightly governed by the Town and Country Planning Act 1947. These planning regulations have meant that the amount of countryside that is taken for new housing has decreased from 25,000 hectares a year in the 1930s to 5,000 hectares per year in 1990 (Shucksmith 1990). Rogers (1976) aptly summarised the consequences of the Act for rural areas:

‘The planning machine which was set up from 1947 put a tight control on new housing in rural areas which has meant that, far from encouraging rural authorities and private enterprise to build houses as in the 1930s, there has been an active discouragement, particularly with regard to building in the open countryside, except where it can be proved that new housing is necessary for essential agricultural workers.’

In effect the Town and Country Planning Act has discouraged the building of any dwellings or erection of any developments that are not related to traditional rural-based activities. This was often imposed by a ‘village envelope’, which did not allow any buildings to be erected outside its limits (Blunden & Curry 1985). The ‘village envelope’ is rarely used now, but the restriction on development outside of designated areas is still tightly controlled (Derounian 1979, Shucksmith 1990). Newby (1980) has commented on the effect that the combination of strict planning controls and in-migration of wealthier people has had on rural communities:

‘As [property] prices inexorably rise, so the population which actually achieves its goal of a house in the country becomes more socially selective. Planning controls on rural housing have therefore become - in effect, if not in intent - instruments of social exclusivity.’

Fairlie (1996) has noted that the Town and Country Planning Act has worked on the assumption that all building is harmful to rural areas. He suggests that the classification of building developments as low- or high-impact and using these definitions in the restriction of building in rural areas may allow the building of dwellings outside of the village perimeters that are in harmony with the environment.

In light of the building controls in rural areas and in order to counter the potentially harmful effects of the 'Right to Buy' policy through the depletion of social housing, an alliance was formed between Rural Voice, Shelter, the National Farmers Union (NFU) and Plaid Cymru<sup>24</sup> which exerted pressure on the Government to introduce restrictions on the sale of rural local authority housing to tenants. The efforts of the pressure group resulted in the Government implementing restrictions on sales of social housing in national Parks, areas of outstanding natural beauty (AONBs) and specially designated rural areas. In the areas designated as 'rural' under section 19 of the Housing Act 1980 and Section 157 of the Housing Act 1985, the tenants' 'Right to Buy' remained intact, but local authorities were allowed either first refusal on resale during the first ten years or were allowed to put a covenant on the property which would restrict resale to people who lived and worked locally (Shucksmith 1990).

Gallent (1997) noted that protection of housing in designated rural areas has been difficult to implement. It has also been found that overall, sales of social housing to tenants has been higher in rural areas than in urban ones (Foulis 1985, Dunn et al. 1987, Williams & Sewel 1987). In Wales, despite the restriction on council house sales, the proportion of local authority housing in rural areas has fallen over the period between 1980 and 1988. There are lower levels of provision in rural districts than in other districts in Wales which have not been matched by an equivalent increase in housing association dwellings. Whereas the proportion of local authority dwellings in rural areas has decreased from 22% of all households in 1980 to 17% in 1988, housing association dwellings have only increased from 0.3% in 1980 to 1.1% of all households in 1988 (Tai Cymru 1990). In Glyndwr the proportion of local authority housing has fallen by 6.4 percentage points compared with 4.6 in Meirionnydd. This may reflect the difference in classification of the two districts under the Housing Act 1980. Whereas Meirionnydd was classified as a rural

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<sup>24</sup> *Translation:* Party of Wales (political party).

locality and consequently the sale of local authority housing was restricted, the sale of social housing in Glyndwr was not restricted.

Although the ratio of local authority new build to sales demonstrates that in rural Wales the provision of new social housing was increasing faster than the Welsh national average, this was not the case for Glyndwr and Meirionnydd. For every 4.6 or 4.7 houses sold from local authority stock in Glyndwr and Meirionnydd respectively, only one new house was built in the public sector.

Table 4.6 shows that in Glyndwr and Meirionnydd between 1980 and 1988 there has been approximately a 20% decrease in local authority housing which represents a larger proportion of social housing lost in these districts compared with all rural districts and Wales as a whole (-16%).

**Table 4.6 Percentage changes in the stock of dwellings 1980-88**

District	% increase in total stock	% Change in OO/PR stock	% change in LA stock
Glyndwr	12.5	14.9	-20.5
Meirionnydd	8.6	14.1	-19.9
Rural Districts	8.4	14.1	-15.8
Intermediate districts	7.5	15.1	-14.3
Urban districts	7.0	14.9	-16.0
All Wales	7.5	14.8	-15.7

**Key:** OO = Owner occupied; PR = Privately rented; LA = Local authority.

**Source:** Adapted from Tai Cymru, 1990, *The demand for social housing in rural Wales*. Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth.



Although the governmental drive during the 1980s was to encourage the sale of social housing to either tenants or to private landlords, such as housing associations, the transfer of housing to *housing associations* has not had a dramatic effect in Wales. Table 4.7 shows that in 1989 in Glyndwr and Meirionnydd only 2.3% and 3.7% of the social housing available were owned by housing associations. The local authority was still the major supplier of social housing for rural inhabitants in these two districts. It is therefore important to know how social housing was allocated by these local authorities.

**Table 4.7 Local Authority and Housing Association stock in Glyndwr and Meirionnydd in 1988/89**

District	LA stock 1988	HA stock 1989	HA % total of HA+LA
Glyndwr	3145	75	2.3
Meirionnydd	2153	83	3.7

*Key:* LA = Local authority; HA = Housing association

*Source:* Adapted from Tai Cymru, 1990, *The demand for social housing in rural Wales*. Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth.

The criteria for the allocation of local authority housing<sup>25</sup> are specified in the 1985 Housing Act. The Act states that priority should be given to the people who are:

- “i) Occupying insanitary or overcrowded houses
- ii) With large families
- iii) Living in unsatisfactory conditions
- iv) Found to be homeless or threatened with homelessness.”

(Tai Cymru 1990)

<sup>25</sup> Housing associations are expected, though not required, to offer nomination rights to local authorities. These are normally of the order of 50% of all allocations (Tai Cymru 1990)

Local authorities usually divide their waiting lists into categories which can be based on either house type (sought, or assessed to be required); household type (general or elderly); and location (where the applicant wishes to live). There have also been three methods used to determine who is allocated social housing: the point system, merit schemes and date order method. Either one, or a combination of methods can be employed by the local authority.

In Glyndwr the waiting list was categorised by the area preference. Housing was allocated using a combination of the points system and merit scheme. The allocation was decided on assessment of the house conditions, medical condition of the applicant and other considerations. The assessment specifically looked at: lack of amenities; shared accommodation; overcrowding; and medical reasons for relocation. Allocation was also decided by the length of time that the applicant had been on the waiting list and priority was given to locals (Tai Cymru 1990).

In Meirionnydd the waiting list was categorised by house type/household, area preference and current residence. There were separate lists created for applicants living within and outside Meirionnydd local authority area. Housing allocation was decided using a combination of the points system and the merit scheme. The following assessed items determined the allocation of social housing: repairs and fitness of the building; lack of amenities; shared accommodation; overcrowding; families living apart; dependent relative (single elderly parent); medical reasons. As in Glyndwr, allocation was also decided by the length of time that the applicant had been on the waiting list and priority was given to locals (Tai Cymru 1990).

Neither Glyndwr nor Meirionnydd had a time restriction for applicants for social housing; that is applicants did not have to remain on the waiting list for a specified period of time before being offered accommodation. In spite of this similarity, it is apparent from the different criteria that were used to assess the applicants for social housing, that local authority accommodation was not equally available to people in different districts with the same or comparable needs.

An examination of applications for social housing by age-group<sup>26</sup> showed that the predominant age group of people applying for social housing in rural Wales was those over 60 or 65 years old. Approximately 27% of applications came from people in this age group. The figure was slightly lower for Glyndwr and Meirionnydd where respectively 20.4% and 24.6% of applicants for social housing were over 65 years old. (Tai Cymru 1990). Although it has been noted above that neither district stipulated a length of time that an applicant *has* to remain on the housing list before being offered housing, it is interesting to note the actual length of time that applicants were registered before being offered housing, especially with regard to the differences that were apparent between age groups. Table 4.8 shows that a greater proportion of people in Meirionnydd had to wait longer than 5 years before being offered housing (13.1%) compared with people in Glyndwr (3.6%).

**Table 4.8 Length of time on local authority waiting lists - percentage of applicants**

District:	Number of years					
	<1	1-2	2-3	3-4	4-5	>5
Glyndwr	45.9	35.2	9.8	3.4	2.2	3.6
Meirionnydd	37.4	24.2	12.8	7.3	5.2	13.1

**Source:** Adapted from Tai Cymru, 1990, *The demand for social housing in rural Wales*. Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth.

<sup>26</sup> Age-groups used were <25, 26-35, 36-45, 46-55, 56-65 and >65 years of age (Tai Cymru 1990)

Although data were not available for break down by years of age *and* district it is apparent that a substantial number of older people were on local authority waiting lists for 4 years or more (see Table 4.9). Nearly 30% of applicants aged 65 and over had waited for over 4 years for social housing in rural areas of North Wales (Tai Cymru 1990). These data indicate that there may be a considerable number of older people in accommodation that is unsuitable for their needs, with no options open to them other than to remain on the local authority waiting list until offered another dwelling.

**Table 4.9 Length of time on waiting lists in Welsh rural regions by age of applicant – percentage of applicants by age group**

Age	Time on waiting lists (Years)					
	<1	1-2	2-3	3-4	4-5	>5
18-25	45.8	34.2	11.2	4.3	2.2	2.3
26-35	33.1	32.6	13.5	8.2	5.7	7.0
36-45	29.9	28.6	14.6	9.8	4.1	13.1
46-55	28.8	25.1	12.7	12.9	6.6	13.9
56-65	24.2	22.5	13.8	13.3	7.6	18.7
Over 65	21.4	20.9	16.3	12.1	9.0	20.4

*Source:* Tai Cymru, 1990, The demand for social housing in rural Wales. Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth.

Applicants for social housing have to state their first and sometimes second choice of location for accommodation. The demand for social housing in particular areas is often assessed by looking at the areas which appear most frequently as the preferred location for applicants. This method is flawed and may not accurately depict where applicants wish to live. It has been noted that people requiring social housing in a rural areas are usually aware of how many facilities there are in their village and neighbouring villages, and know the likelihood of these dwellings becoming

available. In order to increase their chances of being re-housed an application will be made stating the first choice in an area in which there is more available social housing, for example the nearest large town or village (Shucksmith 1990).

Although some people may choose to move nearer to better shopping facilities and other services, it may be that the availability of housing is reflected in the first choice areas for social housing in Glyndwr and Meirionnydd. In Glyndwr the most frequently requested destinations are (in order of proportions stating preferences): Denbigh; Llangollen; Ruthin; and Chirk. The areas of choice for social housing in Meirionnydd are; Blaenau Ffestiniog; Bala; Tywyn or Barmouth; Dolgellau; Penrhyndeudraeth; and Dyffryn Ardudwy (Tai Cymru 1990). These preferences do not necessarily reflect the choices of the applicants but rather the perceived availability of accommodation, and therefore it is unlikely that lists such as these reflect the true housing 'needs' of rural communities.

New housing developments, job creation and communication links have been concentrated in larger settlements. This has had the effect of polarising the allocation of resources away from rural communities that lie outside the commuting radius of the larger towns and may lead to lack of services, shopping facilities and transport links in small, remote communities (Asby & Midmore 1996).

High levels of poverty and deprivation dispersed through rural areas may not be perceived in the same light as concentrated pockets of poverty and deprivation in urban conurbations. Shaw (1979) identified three types of deprivation which may be found in rural areas. He defines these as household deprivation, opportunity deprivation and mobility deprivation. In context of North Wales rural communities, household deprivation may be applied to those people who are on low incomes and are unable to obtain suitable accommodation in their locality. Opportunity deprivation describes the loss of employment opportunities in wake of the decline in

traditional agricultural and quarrying industries, but also encompasses the lack of services and facilities in rural areas. Finally, mobility deprivation may apply to people who are unable to obtain employment or access services that have moved away from the locality. These problems are often cumulative for the people that they affect (Cloke & Davies 1992).

Although there are restricted housing opportunities, and limited access to facilities and services for people in rural communities with low incomes, it has been suggested that the perception of these problems by some people is affected by the 'compensation' of the benefits of rural life (Cloke et al. 1995). Fabes et al. (1983) aptly described this phenomenon:

“The rural idyll exacerbates poverty by maintaining rural deprivation because it is that very deprivation - lack of housing, transport, employment opportunities - which makes an area rural and so attractive to the urban dweller.”

To date, there have been no surveys in rural Wales to assess the housing needs of older people, nor are there current, comprehensive data on the suitability of the current housing, or proposed housing provision (Tai Cymru 1990). Cloke et al. (1995) suggest that this may be because:

“The broadly idyll-ized construction of rural areas as happy, healthy, self-supporting and close-to-nature has permitted a political interpretation that these are problem-free areas.”

However, it is suggested that an accurate, objective representation of 'need' and deprivation in rural communities may be warranted in light of the projected increase in the population aged 75 and over (Table 4.10).

**Table 4.10 Increases in elderly persons in Wales from 1979-1988 and projected for 2001.**

	Number in thousands				Increase 1985-2001	
	1979	1985	1988	2001	Number	Percentage
Population aged 65 and over	432	449	471	494	45	10
Population aged 75 and over	159	186	199	237	51	27
Population age 85 and over	29	34	41	60	26	76

*Source:* Tai Cymru, 1990, *The demand for social housing in rural Wales*. Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth

## ***SUMMARY***

This chapter has described the population and amenities in the communities in North Wales from which the sample for the BLSA was drawn. It has also looked at how the rurality of these communities is defined in both political and functional terms.

The social and economic factors that may be specific to rural areas have been examined. This has included reference to the effect that the decline in traditional rural industries has had both on the economy and demography of rural areas. In addition the role of the housing market has been heeded with particular regard to the competition for houses between those on low incomes in rural Wales and in-migrants with considerably higher incomes. The loss of social housing through a combination of the Government's 'Right to Buy' policy and restrictive building regulations in rural areas has also been addressed. In addition the disparity in allocation of social housing between districts has been considered.

Finally the problems that are inherent in assessing the ‘needs’ of rural inhabitants have been referred to with attention paid to the polarisation of services and facilities in larger settlements, and the effect of the rural ‘idyll’ on perceptions of poverty and deprivation in rural areas.

Having described the study area and social and economic factors specific to rural areas the next chapter focuses on methodological issues. Chapter 5 looks at the data collection, sample and coding of variables for the Bangor Longitudinal Study of Ageing.



## CHAPTER 5

### **BANGOR LONGITUDINAL STUDY OF AGEING: DATA COLLECTION, SAMPLE AND CODING OF VARIABLES USED IN ANALYSIS**

The BLSA spanned 16 years of funded research and collected a combination of qualitative and quantitative data. Each phase of the study built on the findings of the previous phase and therefore questionnaires were adapted in subsequent phases to focus on particular hypotheses that were being tested.

In 1978 a door-to-door census was conducted in the eight communities in order to trace *all* residents aged 65 or over. This method was employed to overcome the possibility of omitting people from the sample if it were drawn from those recorded on the electoral register or family practitioner records. A minimum data set was collected on all residents aged 60 and over. This included details of age, sex, marital status, household composition, place of birth, length of community residence and whether the respondent was Welsh speaking or not (Wenger 1984).

The 1979 sample was drawn from the information collected on the door-to-door census. It included one elderly person from each household that contained at least one person aged 65 or over in the communities with a population less than 1000, and from 50% of elderly households in the communities with a larger population. The sample was randomly selected and was representative of the data collected in the door-to-door census.

Interviewers undertook a one day training session conducted by the research team. This was to ensure inter-reliability of interviewer's recording techniques and their understanding and interpretation of the questionnaire schedules. Those respondents who wished to be interviewed in Welsh were approached by bilingual interviewers so that the interview could be conducted in the language of choice.

At Phase 1 the researcher was primarily interested in the informal support networks of the respondents. An administered questionnaire survey was conducted in the homes of the respondents in 1979. The questionnaire included questions on residence and migration; accommodation and facilities; household composition; contact with health and social services; morale; family, friends and neighbours; loneliness and isolation; health; mobility and dependency in personal care tasks; access to services; help with common problems and crises; help with household tasks; and income (Appendix I). Where possible the questions replicated earlier studies of older people (Hunt 1978, Abrams 1978, 1980).

In order to address some of the problems associated with using a positivist approach to data collection, a triangulated approach was taken. The survey questionnaire was designed to elicit data from a representative sample that would be numerically valid. In addition, in order allow the respondents to express their own views which may have differed from the coded responses that were on the questionnaires, verbatim comments were recorded. Interviewers were also asked to write a report on their perceptions of the subjects' situation, including noting any incidents or information that may be of relevance to the study. In order to effectively record relevant details, interviewers were made aware of the objectives of the study and met in groups to receive feedback from the researchers. Thus, both quantitative and qualitative data were recorded for the respondents (Wenger 1984).

On the basis of the information collected in 1979 it was possible to identify the size, composition and function of the members of the informal support networks, but not the stability of the networks (Wenger 1996(a)). In order to test the stability of support networks over time a further phase of the study was required.

In 1983 a follow-up study of respondents was conducted. The funding for Phase 2 of the study was limited to follow-up only those respondents who were aged 75 or over in 1979. The 1979 questionnaire was repeated with the addition of extra questions that were considered to be relevant. In addition to the questionnaire survey an intensive qualitative study was conducted with 30 respondents who were aged 79 or over. The qualitative study spanned 4 years in which respondents were visited 2 to 4 times a year, with the primary purpose of investigating the stability and change in support networks (Wenger 1996(a)).

The results of the quantitative survey in 1983 indicated stability and change in the size of support networks and their composition. In addition the qualitative data elicited information about the spatial distribution of network members, but also importantly indicated that none of the network members that had been identified in the intensive interviews had been excluded from the networks in the questionnaire survey. Phase 2 of the study culminated in the identification of five support network types from the qualitative data (Wenger 1996(a)) (Appendix II). These findings were based on the 30 intensive interviews and required validation with a larger sample.

Phase 3 of the study was conducted in 1987 and involved a follow-up of all surviving respondents from Phase 1 of the study. This phase of the study was jointly funded by the ESRC and DHSS which made it possible to also interview the respondents who had entered residential care. The Phase 3 questionnaire repeated the relevant questions from previous years with an additional section eliciting

information about decision-making (Appendix I). An adapted version of the questionnaire was administered in residential care facilities (Appendix I). Interviewers produced reports containing detailed descriptions of the respondents' situations. From the interviews and reports at Phase 3, trained assessors identified the support network type of each respondent. These data were used to examine the distribution of network types in the community.

In the years following Phase 3, a separate study funded by the DoH and the Joseph Rowntree Foundation developed an instrument for practitioner assessment of network type (PANT). The instrument is based on eight questions from which the respondent's network type can be assessed (Wenger 1996(a)) (Appendix III).

Phase 4 of the study was hindered by the lack of funding. The DoH felt that there would not be enough survivors to warrant a further phase of the study. The research team wished to test the PANT instrument on the BLSA sample. A limited dataset was collected for all survivors that could be traced, which included; questions on demographic details that may have altered; access to health and social services; and the eight questions required for assessment of network type. As the interview schedule was condensed, it was posted to any respondents that had moved away from the study area for self-completion. In this phase of the study a computer algorithm based on the PANT instrument was used to identify support networks.

By 1995 the BLSA had spanned 16 years. In Phase 5 the survivors, who were now at least 81 years old, were traced and a questionnaire was administered in the respondent's home. In this phase the author took part in interviewing the respondents. An attempt was made to visit all survivors, including those who had moved out of the study area or into residential care. Where this proved impractical the questions were asked over the telephone. The questionnaire repeated the relevant questions from previous years and an adapted version of the questionnaire

was administered in residential care facilities. In Phase 5, in addition to the necessary information required to examine further the stability and change in support networks, extra information was collected about the respondents' perceptions of successful ageing. These data were collected on a supplementary questionnaire which was only administered if the respondent indicated that they were willing to be questioned further. When requested, a separate interview was arranged to administer the supplementary questionnaire.

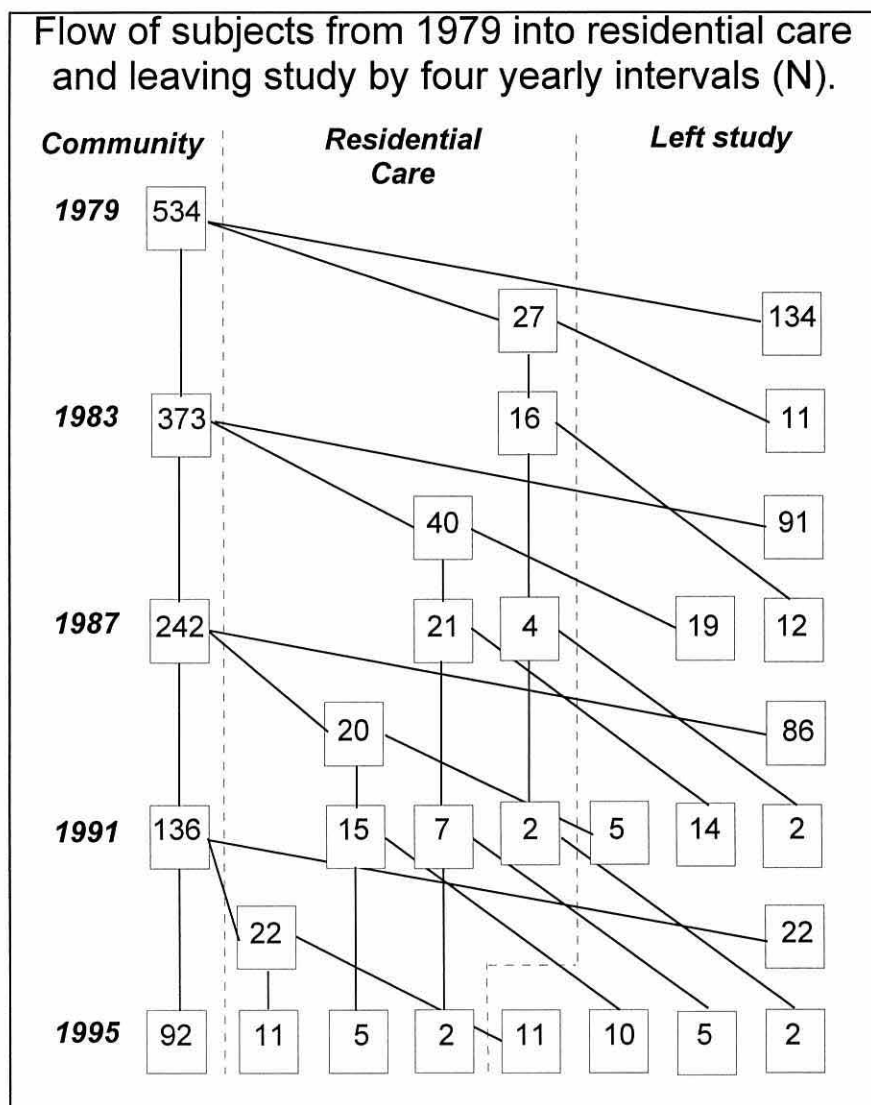
## ***SAMPLE***

The achieved sample in 1979 was 534 people who were representative of the region for community size and the age distribution of those aged 65 and over. Figure 5.1 shows the flow of people (65+ in 1979) into residential care and lost to the study (a majority of whom died) over the sixteen-year duration of the BLSA. Twenty percent of the sample (N=109) entered residential care during the study. These data were taken from trace variables taken at each four-year interval and do not represent the number of interviews at each stage. The trace variables recorded details of the person's address, whether they had moved house, distance moved or whether the move was into residential care and where applicable, the death of the person.

Figure 5.1 demonstrates how the sample size declined over the course of study but does not represent those who were interviewed at each phase of the study. In 1979, 534 people were interviewed. In 1983 the sample was restricted to those aged over 75 at Phase 1 and the achieved survivor sample was 105. In Phase 3 of the study (1987) the sample consisted of all survivors from Phase 1 and 194 respondents were interviewed in the community and a further 24 were interviewed in residential care. In 1991, the number of completed questionnaires were 127. By 1995 the sample was considerably reduced due to the death of many of the original respondents, all survivors were now aged 81 or over. The number of interviews completed at Phase

5 was 95, of which 77 were conducted in the community and 18 were administered in residential care many of which were proxy interviews (Wenger 1996(a)).

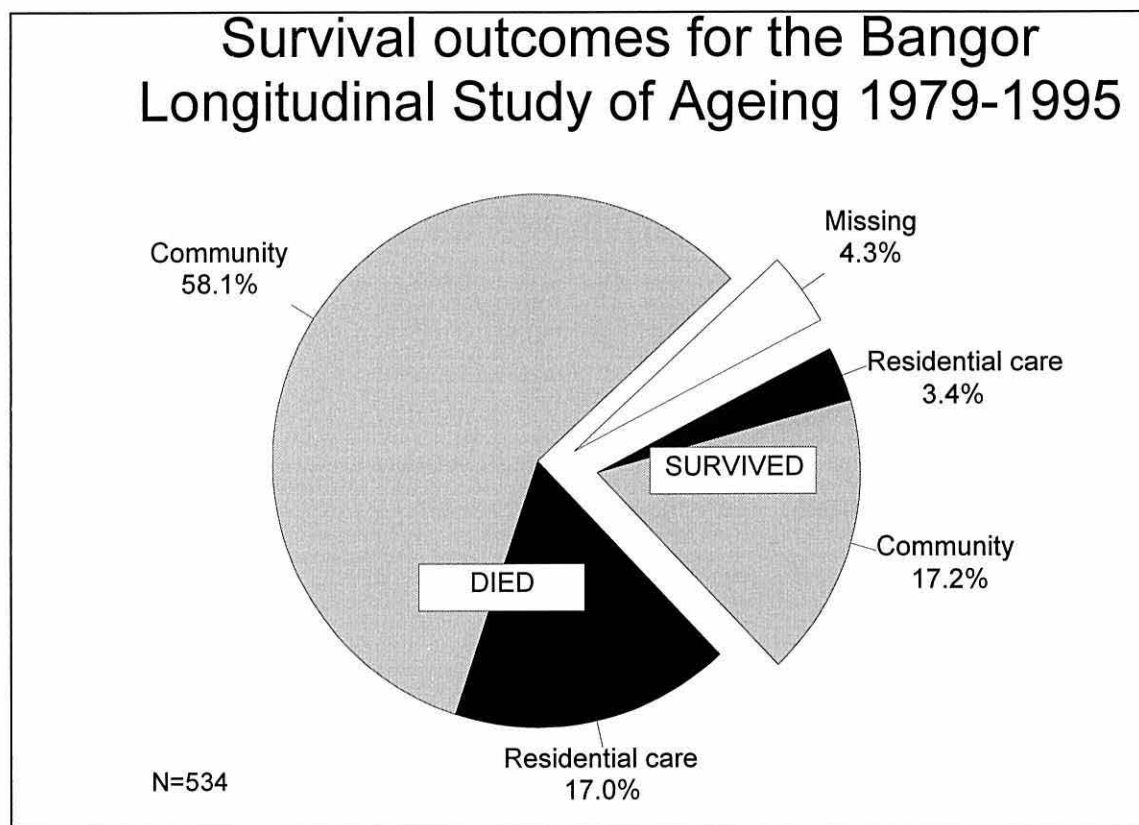
**Figure 5.1**



The samples used in the analyses are described in the methodology sections of the following chapters: the sample used in the logistic regression analysis is described in Chapter 6 and the sample used in latent class analysis is described in Chapter 7.

Figure 5.2 shows the survival outcomes for the respondents in the study. These data were also taken from trace variables taken at each four-year interval. Of those that entered residential care 83.5% subsequently died and 16.5% remained alive in residential care in 1995. For those that did not enter residential care 77% died before the final year of study leaving ninety-two subjects in the community in 1995.

**Figure 5.2.**



## ***VARIABLES***

The variables used in logistic regression and latent class analyses were restricted by the data that had been collected in each year. Due to funding constraints, the questionnaire in 1991 was very condensed and collected a minimum data set for each survivor. It was possible in many situations to add to the data collected in 1991 by looking at the respondent's previous status. For example the house type

remained the same as in 1987 if the person had not relocated. In addition the interviewers provided reports about the personal circumstances of each of the participants on completion of an interview. In a majority of cases if a person had relocated or their personal situation had changed the interviewer described the change and explained the reasons for this happening. Data were supplemented from this source where possible.

## **Relocation**

Data were collected at all five phases on residential relocation. This was an important variable for correlation with network type. It has been found that network type is related to length of residence in community and proximity of birthplace and therefore is related to migration history (Wenger & St. Leger 1992). For instance, locally integrated support networks are associated with long-term residence in a community, whereas wider community focused networks are associated with retirement migration and private restricted networks are more likely for those born overseas. Those respondents who have wider community focused network are more likely than others to have been born more than twenty miles away and hence those communities in the BLSA which are associated with retirement migration (Aberdovey, Tywyn and Llanarmon) have larger proportions of respondents with this network type than other communities (Wenger & St Leger 1992). Elsewhere analysis has shown that shifts in network type may occur from stronger to less independent network types and vice versa after residential relocation (Wenger 1990(b)).

Although in 1979 data were collected about relocation to the current residence, not all moves could be included in the analysis. It could not be assumed that some of the data collected in 1979 such as financial, marital status, self-assessed health would have been the same at the time of the move, if the move was not recent. As the interview phases were conducted at four yearly intervals, moves that were



undertaken in the four years prior to 1979 and all subsequent moves that occurred during the 16 years of the study were included in the analysis. Moves into residential care after 1979 were included in the analysis. As this analysis was looking at the characteristics of each person with potential to relocate it was decided that it would be inappropriate to include people once they had entered residential care, that is non-movers in residential care. There were no moves back into the community from long-term placement in residential care although some respondents did move between institutions. For the purpose of this thesis moves between institutions are not included in the analyses. The residential relocation career of respondents is defined as moves up to and including the first move into residential care.

Relocation was operationalised as three dichotomous variables. MOVE represented move versus not move. This variable included relocation in the community<sup>27</sup> and admission to residential care. Throughout the thesis, admission to residential care includes moves into nursing homes and other institutions. MOVEC represented relocation in the community only and therefore excluded moves into residential care. MOVERC represented move into residential care versus no move into residential care.

### **Reasons for moving**

Respondents were asked why they had moved. A maximum of three motives were recorded for each person. Twenty-one types of reasons for relocation in the community were given. Nine different types of reasons for admission to residential care were also given. The reasons were clustered into similar response types. This classification resulted in the identification of seven groups of motives; ill health/cannot cope alone/family cannot cope; improved housing/environment;

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<sup>27</sup> Relocation in the community is defined as either a move within the same community or to another community.

work; retirement/social; familial; enforced; and financial. As more than one reason for each move could be given, certain rules were maintained in allocating each observed move to a motive group:

- i) Enforced relocation overrides all others.
- ii) Reasons of ill health override others below. This category also included ill health of spouse given for reason to move. All the reasons that were given for entering residential care were subsumed under the category of ill health.<sup>28</sup>
- iii) Reasons to do with farming, relocation with employers or to a business premise override others below.
- iv) Retirement or giving the farm to a relative override other motives below (except when retirement is combined with a relative dying, and the move is to be near relatives when the motive was coded as familial).
- v) Cost overrides size of property.
- vi) In all other instances the group that encompasses the majority of motives that the respondent has given for relocation, defines the group that the respondent is to be allocated to.

The frequencies for each group are listed in Table 5.1. It can be seen that three groups only had very small numbers of respondents; work; enforced; and economic, these categories were amalgamated and called “Other”.

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<sup>28</sup> One person gave companionship as a reason to relocate into residential care. This person had difficulty with 10 out of the 13 activities of daily living so it appeared reasonable to classify this move along with the others as a move due to ill health.

**Table 5.1 Groups of motives for relocation and percentage identified in each group.**

Groups of motives	Motives for relocation	Percentage of movers N=236
1. Ill health/can't cope alone/ family can't cope	Ill health; medical reasons; unable to look after self; mobility; confused/senile dementia; carer ill, at work or unable to cope; falling; doctor's advice; unable to look after spouse.	29.2
2. Improved housing/environment	Size; convenient location; one storey; better house; problems with garden; previous bad housing; area	30.9
3. Work	Farming; moving with employers or to a new business premise	1.7
4. Retirement/social <sup>29</sup>	Retirement; near friends; gave farm to relative	10.6
5. Familial	Near relatives; relative died; marriage; moved with relatives.	19.9
6. Enforced	Enforced or eviction; tied house reverts to the possession of former employers.	1.7
7. Financial	Cost; inherited	1.3
8. Missing		4.7

The variable for reasons for move had the following categories:

- RMOVE1
1. Ill health
  2. Improved housing
  3. Retirement/social
  4. Familial
  5. Other

<sup>29</sup> The group of respondents who gave the motive to move as "near friends" was very small and needed to be grouped with other motives. This group of motives was termed retirement and social as the motives were grouped together on the basis of evidence that suggests that the destination of people making moves at retirement may be decided through choosing to relocate in the same area as friends (Wiseman & Roseman 1979, Wiseman 1980, Glasgow & Sofranko 1980).

## **Distance moved**

The distances moved by respondents were dichotomised to represent short-distance moves and long-distance moves. As discussed in Chapter 3, there does not appear to be a generally accepted distance which differentiates between long-and short-distance moves.

The variable for the distance that people moved was originally categorised as: within 5 miles of here; more than 5 but less than 15 miles; more than 15 but less than 50 miles; and more than 50 miles away. It was decided that for the purpose of this thesis that moves over 50 miles would be defined as long-distance as it was not possible to have a cut-off point between 15 and 50 miles. A move over 50 miles represents relocation over one hour in travelling time from the former residence. The dispersion of villages throughout rural Wales meant that a cut-off point of 15 miles was impractical. Potentially, people who moved to the next village could be classified as making long-distance moves. Due to the high levels of personal mobility through car ownership it was decided that the former community and social networks would still be fairly easily accessible for respondents who moved under 50 miles, but more difficult to access for those who moved further afield. Although data considerations forced the use of 50 miles for defining long distance moves, this distance does not seem unreasonable. For those respondents that had relocated the distance moved was coded as:

- |       |                       |
|-------|-----------------------|
| DIST4 | 1. Less than 50 miles |
|       | 2. 50 miles or over   |

## Income

Information was collected on income in 1979, 1983, 1987 and 1995. There were two specific problems associated with this variable that had to be overcome in order to use income in the analysis.

i) Due to inflation and changes in pension rates, income was not directly comparable across the 16 years.

ii) There was a considerable amount of missing data. No information on income was collected in 1991. In addition, people often refused to state their income. The refusals were not consistent at each interview phase, for example the respondent may have indicated their level of income in 1979, 1987 and 1995 but refused to reveal it in 1983.

To achieve comparable income levels throughout the sixteen years, and to facilitate the imputation of missing data, it was decided to categorise income into three bands; low, average and high. The normal weekly disposable household income for retired households mainly dependent on state pensions<sup>30</sup> was established for 1979, 1983, 1987 and 1995. This amount was different for single people and cohabiting men and women. It was originally conceived that this could represent the average income, with those receiving less than this amount being banded as low income, and those receiving more classified as high income. Table 5.2 shows that this was

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<sup>30</sup> The normal weekly disposable household income is defined as “gross weekly cash income less the statutory deductions of income tax (taking refunds into account) and national insurance contributions”. Retired households mainly dependent on state pensions are defined as “one in which at least three-quarters of the total income of the household is derived from national insurance retirement and similar pensions, including benefits paid in supplement to or instead of such pensions. All male heads of household are 65 years of age or more; all female heads of household are 60 years of age or more. The term “national insurance and similar pensions” includes national insurance disablement and war disability pensions and supplementary benefit in conjunction with these disability payments; in a small number of cases it also covers unemployment, sickness and industrial injury benefits paid to men and women over retirement age. A small proportion of persons in these households may be working a few hours a week” (Department of Employment 1980).

impracticable as the spread of income calculated at these levels would be skewed. Therefore, it was also decided to calculate the median level of income separately for single people and those cohabiting. This was used in addition to the normal weekly disposable household income for retired households as the average band.

In 1979 for single and cohabiting people, in 1987 for single people and in 1995 for those cohabiting, both the median level of income and the normal retired household income were calculated as the same band. In the remaining four situations there were differences but the median income level and the normal household income were always in adjacent income bands. It was decided that this produced an acceptable spread of income. Once the average income band was established anything that fell below this level was categorised as low, and high income was above the average cut off point.

In order to see if any missing values for income could be imputed the levels of income (low, average or high) were looked at over time for fluctuations. This was examined with regard to marital status as it was considered likely that income would be affected by changes such as marriage or widowhood.

It was found that income remained in the same band for a majority of people whose marital status remained constant but went up a level for 50% of those who were widowed. This was a surprising find which required further analysis. This revealed that the change in income level was dependent on the previous married income.

**Table 5.2 Definition of low, average and high incomes for 1979, 1983, 1987 and 1995.**

YEAR:	1979		1983		1987		1995	
Income per week:	One adult N=298 %	Couple N=160 %	One adult N=71 %	Couple N=17 %	One adult N=115 %	Couple N=54 %	One adult N=50 %	Couple N=15 %
0-19.99	27.2	1.9	5.6	0.0				
20-29.99	45.6*†	2.5	5.6	0.0				
30-39.99	10.7	37.5	69.0†	5.9				
40-49.99	5.4	22.5*†	5.6*	17.6				
50-59.99	5.7	13.1	7.0	23.5	47.8*†	20.4	12.0	0.0
60-69.99	2.3	12.5	1.4	23.5†				
70-79.99	0.0	0.0	1.4	11.8*				
80-89.99	3.0	10.0	0.0	0.0				
90-99.99			1.4	11.8	4.3	7.4*	18.0†	40.0
100-119.99			2.8	5.9	8.7	22.2	16.0	0.0
120-139.99							12.0	13.3*†
140-159.99							2.0	0.0
160-179.99							2.0	6.7
180-199.99							4.0	13.3
200+							4.0	26.7

\* Band containing the normal weekly disposable household income for retired household mainly dependent on state pensions (Department of Employment 1980, Department of Employment 1985, Department of Employment 1989, Central Statistical Office 1995)

† Band containing the median level of income

— Indicates the banded income at each year of interview

— Indicates cut off points for low, average and high income.

For 100% of those who were widowed and had a previously low income as a married couple, income rose to average. It must be noted that this was not a rise in real terms but is more a reflection of the lower levels of income experienced by a majority of single older adults in this sample. A scenario could be given as an example. A married couple had an income of £30.00 (*low*) in 1979. Between 1979 and 1983 the spouse died. In 1983 the income level of the widow was still £30.00. This is now classified as an *average* income for a single adult, due to the inclusion of the median level of income in calculating the bands, whereas the average income for a cohabiting couple now ranges from £60 to £79.99. Although the classification of the level of income has changed over time from low to average, the amount of income has not risen.

A majority of widows who had an average income when married continued to have an average income after widowhood. This was not the case for those who had high incomes whilst married; some incomes fell whilst others remained the same. By re-examining the original bands it was found that the respondents who had an income greater than £80 per week in 1979 whilst married, that is the uppermost band, were the only people that remained in the high income category after widowhood. If they had incomes in the high category but less than £80 per week whilst married, their income fell after widowhood to the average category.

From these findings it was possible to impute some of the missing data for income. Levels could only be imputed if at least one level of income had been given during the study and marital status had remained the same, or if at least one level of income had been given before widowhood. It was not possible to impute the level of income back in time from widowhood to married status, as there was only one example of this occurring for which there were valid data.



In the following analyses three income variables were used. The characteristics of the sample of movers and non-movers used in logistic regression in Chapter 6 are described using the variable INC:

- |     |            |
|-----|------------|
| INC | 1. High    |
|     | 2. Average |
|     | 3. Low     |

For the logistic regression analysis in Chapter 6 the variable INC2 was used, combining the two lower levels of incomes together. This was because cross tabulation of income (INC) by the variables indicating residential relocation (MOVE, MOVEC, MOVERC) showed that the differences between movers' and non-movers' income was primarily between those respondents with high income versus others. The variable INC2 was coded:

- |      |                   |
|------|-------------------|
| INC2 | 1. High           |
|      | 2. Average or low |

The third variable for income was also dichotomised and used in latent class analysis in Chapters 7 and 8. The characteristics of types of move are described by Litwak and Longino (1987) and Wiseman (1980) in terms of low income versus other groups, therefore the variable INC was recoded:

- |      |                    |
|------|--------------------|
| INC3 | 1. High or average |
|      | 2. Low             |

It must be noted that these levels of income (that is high, average and low) are not comparable with other younger people in the UK as a whole, or in North Wales, but represent the spread of income of the older people in the study. Table 4.4 in Chapter 4, showed the distribution of average gross weekly earnings of all full time employees in rural Wales for April 1989. Chapter 4 also noted that The Council of Europe's decency threshold was £168 per week in 1989. If this is compared to the income of older people in 1995<sup>31</sup>, it can be seen that whereas 34% of working people in rural Wales were earning less than the decency threshold, 90% of single older people and 53% of married older people were below this level of income. The significance of this in terms of older people's spending power and how this affects their ability to compete in the housing market are discussed in Chapter 12.

### **Activities of daily living**

At each interview phase in the community and in residential care, with the exception of 1991, data were recorded for difficulties with thirteen activities of daily living: bathing or washing all over, washing hands and face, putting on shoes and stockings, doing up buttons or zips, getting dressed (other than above), using the toilet, getting in or out of bed, feeding oneself, shaving or brushing hair, cutting toenails, getting up and down steps, getting around the home, and going out. The ability to manage the various tasks were coded as: can do without difficulty; can do on own with difficulty; only with helper; not at all. For the analysis on entry into residential care, in Chapter 10, this was re-coded with the first category versus all other categories, that is:

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<sup>31</sup> The data restricted the comparison to 1989 versus 1995. It would be expected that income levels in 1987 would be lower than 1989 therefore these data were not used in the comparison. Although data had been imputed for 1991 this was in terms of low, average or high levels of income with no actual monetary value attached to each level and could not be used in the comparison. The nearest data collection period (post 1987) was in 1995.

ADL ( <i>type of task</i> )	1. Can do without difficulty
	2. Cannot do without difficulty

## Health

It was important to have some health measure included in the analysis as it was likely that moves, especially admission to residential care would be affected by the respondent's health status. The variable for self-assessed health (HLTH1) was used for the analysis of admission into residential care and was coded:

HLTH1	1. Excellent
	2. Good or alright
	3. Fair
	4. Poor

5.3% (N=56) of the respondents in the sample for logistic regression had missing data for self-assessed health. The inclusion of the variable in the form as it had been collected would have resulted in an unacceptably large number of respondents being excluded from the logistic regression analysis. An examination of the data across time showed that it was not possible to predict health status from one interview phase to the next as it varied considerably over time. This may be because the self-assessment of health by older people has been shown to be affected by factors in addition to their functional or physiological well-being, such as; age; emotional and psychological well-being; type of humour; size of household; physical activity; educational level; socio-economic factors; gender; actual or perceived levels of social support; positive and negative life changes including bereavement; and ill health of spouse and care-giving (Ferraro 1980, Fenwick & Barresi 1981, Gallo 1982, Duckitt 1983, Satariano et al. 1984, Stoller 1984, Hale & Cochran 1986, Weinberger et al. 1986, Krause 1987, DeForge et al. 1989, Hall et

al. 1989, Simon 1990, Auslander & Litwin 1991, Tran 1992, Schulz et al. 1994, Mui 1995). Although self-assessed health could be interpreted as a multidimensional phenomenon (Jylha 1994) with respondents taking into account a wide range of factors, research indicates that it has acceptable validity (Agostino 1985, Thorsland & Norstrom 1993, Siu et al. 1993). It may have been beneficial to include an objective indicator of health, but the same problem was encountered as with subjective health status: approximately 5% of the sample had missing data for the variables that indicated whether the respondent was housebound or had any disability that limited their activities.

As the prediction of health status from previous phases of the study was not possible in order to overcome the problems of listwise deletion of missing data and consequently a loss in sample size, the findings from another study were utilised. A majority of studies examining the association between self-rated health and mortality have shown that more favourable self-ratings are associated with lower mortality rates (Mossey & Shapiro 1982, Kaplan & Camacho 1983, Kaplan et al. 1988, Idler et al. 1990, Lee & Markides 1990, Idler & Kasl 1991, Rakowski et al. 1991, Roos & Haven 1991, Wolinsky & Johnson 1992). Rakowski et al. (1994) found that non-response to questions regarding self-assessed health were associated with increased mortality rates. The authors concluded that non-responses by older persons can convey meaningful information. In light of the evidence presented by Rakowski et al. (1994) missing data for self-assessed health were recoded in the category indicating the poorest outcome as it appears that non-response can have as “negative” a meaning as a self-rating of “fair” or “poor” health. No research could be found that indicated whether it was appropriate to code the missing data for objective indicators of health in the same way as subjective measures, so it was excluded from the analysis.

For logistic regression analysis in Chapter 6 the variable representing self-assessed health was dichotomised:

- |       |                      |
|-------|----------------------|
| HLTH2 | 1. Excellent or good |
|       | 2. Fair or poor      |

### **Help with household tasks**

The receipt of help with nine household tasks was recorded. The tasks were shopping, cleaning, cooking, laundry, ironing, making fires, gardening, decorating and household repairs. The nine variables were dichotomous and indicated if the person received help with the task. These variables are used in the analysis regarding entry into residential care in Chapter 10.

- |                      |        |
|----------------------|--------|
| HELP ( <i>task</i> ) | 1. Yes |
|                      | 2. No  |

### **Home visits from health and social care practitioners**

Data were collected for home visits to those respondents living in the community from doctors, district or community nurses, chiropodists, local authority and private home helps, meals on wheels, social workers and clergymen. The nine variables were dichotomous in nature and showed whether the respondent had received a home visit from a practitioner in the six months prior to the interview. These variables are used in the analysis on entry into residential care in Chapter 10.

- |                              |        |
|------------------------------|--------|
| VISIT( <i>practitioner</i> ) | 1. Yes |
|                              | 2. No  |

## House type

The variable for house type is used in the description of the sample used in logistic regression in Chapter 6. House type was coded as:

HTYPE	1. Bungalow or other one storey house
	2. House with more than 1 storey
	3. Farm
	4. Upper floor flat
	5. Ground floor flat
	6. OAP without warden (specially designed housing for old people with no warden available)
	7. OAP with warden (specially designed housing for older people with a warden available)
	8. Residential care <sup>32</sup>
	9. Caravan

## Tenure

The variable for tenure is used in the description of the sample used in logistic regression in Chapter 6. The tenure variable was coded:

TENURE	1. Owned or mortgaged
	2. Rented (private or local authority)
	3. Living with relatives or friends
	4. Residential care
	5. Other

The category “other” included tied houses, or rent free accommodation in house of employer.

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<sup>32</sup> Includes nursing homes.

It was desirable to include TENURE in the latent class analysis as some of the characteristics of the people expected to make particular types of move were described in terms of home ownership or renting. The programme used in latent class analysis can only estimate probabilities for multidimensional contingency tables with a maximum of three hundred cells. It was necessary to collapse some of the variables to reduce the numbers of categories. For this purpose tenure (TENURE) and proximity of family (PFAM) were amalgamated, as they were the only two variables used in the latent class analysis that in combination would result in fewer categories.

Proximity of family (PFAM) had been operationalised as: i) nearest relative lives less than 50 miles away, and ii) nearest relative lives 50 miles away or further. Cross-tabulation with TENURE resulted in ten categories of which several were inappropriate or redundant. To characterise the types of move it was necessary to distinguish both between renters and home owners, and between those that lived within 50 miles of a relative, or further afield. It was not necessary to know the distance of the nearest relative if the person was living with family or a friend, in sheltered housing with a warden, or in residential care. As the purpose of moving to sheltered housing with a warden was most likely to be a need for assistance, it was decided to code people living in this type of accommodation with those that were living with family or friends. Those in residential care (including nursing homes and other institutions) were in a category on their own.

Home owners and renters were subdivided into two categories: less than 50 miles from the nearest relative; 50 miles or greater from nearest relative.

People that had been described as having “other” TENURE were coded into the most appropriate category. Those that were in tied houses or in rent-free property were included in with “renters” as their position was most likely to be more similar to this group with regards to their housing rights. People that were living rent-free with (previous) employers were put in the same category as those living with friends. An examination of interviewers’ reports revealed that the relationships had endured several years and living arrangements were no longer based on reciprocity for services, which justified this classification.

The ten original categories for the two variables TENURE and PFAM were reduced to six categories in the combined variable TENPFAM. The variable was coded:

TENPFAM	1. Home owner with nearest relative less than 50 miles away
	2. Home owner with nearest relative 50 miles or more away
	3. Renter with nearest relative less than 50 miles away
	4. Renter with nearest relative 50 miles or more away
	5. Living with family, friend/in assisted living accommodation
	6. In residential care

### **Household composition**

Household composition (HCOMP) describes the living arrangements of the respondent at the time of the interview. Therefore if a move had occurred in the previous four years HCOMP describes the living arrangement that the respondent had moved into. If the respondent lived with a spouse and other people the coding of this variable reflected the difference or similarity in generation of the respondent and the co-residents *other than* the spouse. Household composition was coded:



HCOMP	1. Alone
	2. With spouse only
	3. With younger generation
	4. With same or older generation
	5. In residential care

### **Marital status**

Wherever the term marital status is used in the following chapters, it refers to the marital status of a non-mover at the time of interview, or the marital status of a mover at the time of the move. It was necessary to determine the chronological order of events for the respondents who had moved in the four years prior to interview and had been widowed in the same period. The order of events could be determined from the data collected or from the interviewers' reports for a majority of the people. For the minority of people for whom the order of events could not be determined in this fashion a random selection of 50% of respondents was made using SPSS version 6.1 (SPSS 1994). The first 50% of respondents selected were assigned to widowed prior to move and the remaining 50% were categorised as married at move. Two variables are used in the analysis: marital status at move, or marital status at interview if the respondent had not relocated (MARSTM); and, marital status and duration widowed at move, or marital status and duration widowed at interview if respondent was a non-mover (MARSTWM). The duration widowed for MARSTWM was divided into two categories, that is: 5 years and less; and 6 or more years. This division was based on a study by Chevan (1995) who found that the probability of moving peaked during the first year of widowhood. This was followed by a fall in the probability of relocating in the ensuing 5 years of widowhood. After this period the probability of moving was similar to that prior to widowhood.

Divorce and separation were very not common occurrences for this sample, only 1.1% of respondents in 1979 were in this situation. As the group was so small it was decided to amalgamate it with another group. There is evidence to suggest that certain social characteristics of divorced or separated person are more similar to never married people than widowed people. Although widows tend to have strong family ties, those who were never married or who are divorced have stronger friendship ties (Goldberg et al. 1986, Keith 1986). Goldman et al. (1995) suggests that divorce does not have the same effect on older people as widowhood and it appears that both divorced and never married people create an environment that compensates for the absence of a spouse. Therefore, divorced and separated people were grouped with those that were never married.

The two variables used for marital status were coded:

MARSTM	1. Married
	2. Widowed
	3. Never married/divorced

MARSTWM	1. Married
	2. Widowed $\leq$ 5 years
	3. Widowed $>$ 5 years
	4. Never married/divorced

## Age

The variables for age indicate the age at interview, or the age at the time of relocation if a move had occurred in the four years prior to interview. Two different bandings of age groups are used in the analysis. AGEMB1 is used in the description of the sample used in logistic regression analysis in Chapter 6. The dichotomised variable dividing the respondents into agebands above and below 75 years of age is used in both logistic regression analysis in Chapter 6 and latent class analysis in Chapter 7 and 8. The two variables are coded:

AGEMB1	1. 65-69
	2. 70-79
	3. 80-89
	4. 90+

AGEMB2	1. 65-74
	2. 75+

## Social Class

Social class was determined according to the Registrar General's *Classification of Occupations, 1970* (Great Britain. Office of Population Censuses and Surveys 1970) at the 1979 interview and the same value was used at subsequent time-points. The occupation of the person was the main kind of work which he or she performed for the duration of their working life. Married women or formerly married women were classified according to the social class of their husband. Social class III is usually sub-divided into non-manual and manual occupations, but for the purpose of this analysis the group was collapsed to include both types of labour. Respondents who previously had been in the Armed Forces were assigned to a separate class. People for whom a social class could not be assigned or who had

never worked were assigned to a separate category. The classes were allocated as below:

SOC	1. Social class I. Professional, etc. occupations
	2. Social class II. Intermediate occupations
	3. Social class IIIN & IIIM Skilled occupations
	4. Social class IV. Partly skilled occupations
	5. Social class V. Unskilled occupations
	6. Armed Forces
	7. Unable to assign class/ Never worked

### **Ethnicity**

It was necessary to have a classification that distinguished whether respondents considered themselves to be Welsh or not in order to identify whether people moving long-distances were migrating from elsewhere in the UK. In 1979 a question asked: Do you think of yourself as English or Welsh or some other nationality? The original responses were coded: English; Welsh; Half-half; British; and other. It was decided to dichotomise the variable, and for this purpose those people who defined themselves as 'Welsh' were coded thus whilst all other responses were coded as 'not entirely Welsh'. Therefore the variable for ethnicity was coded as:

ETHNIC	1. Welsh
	2. Not entirely Welsh

## ***SUMMARY***

This chapter has described the phases of the BLSA and the methods that were employed to obtain data. The sampling procedure and the attrition of the sample over the course of the study has been discussed. The variables that are used in the analysis have been described, including where appropriate the construction of the variable and its coding. The pooling of the samples and methodology used for each specific piece of analysis will be discussed in greater detail at the beginning of the Chapters 6 and 7.

## **RELOCATION IN THE COMMUNITY AND ADMISSION TO RESIDENTIAL CARE: LOGISTIC REGRESSION, IDENTIFYING FACTORS EXPLAINING RESIDENTIAL MOBILITY**

Logistic regression is frequently used as the analytical tool to model the probability of a move taking place. The purpose of logistic regression is to find the best fitting, parsimonious model which can describe a dichotomous outcome in terms of other variables. In linear regression the parameters of a model are estimated using the method of least squares, but in logistic regression where the model has a dichotomous outcome the estimated parameters do not have the same statistical properties. In a logistic regression model the method of maximum likelihood is used to achieve the least squares function, if it is assumed that error terms are normally distributed (Hosmer & Lemeshow 1989). Variables are included in the model if their coefficients make the model most 'likely' (Norušis 1990).

### ***METHOD***

The sample for logistic regression consisted of pooled data from the five interview phases of BLSA. At each phase, data were included for those respondents who had no missing values for the variables used in the analysis. This meant that if a respondent had survived the 16 years of the study they may be incorporated into the data set five times. As the data was only collected at four yearly intervals, if a person had moved more than once during this period then only one move would be recorded, thereby potentially excluding some of the moves made by people in the sample. The pooled sample consisted of 'movers' and 'non-movers' categorised as such at each four yearly interval. The pooled sample only included those respondents who moved into residential care during the previous four years but did

not include those respondents who had entered residential care at the previous phase. Due to the four year interval between interview phases, the data may underrepresent those people who moved into residential care in the last months of life. These people would be excluded from the analysis as data were not collected for the variables used in logistic regression after their move, and prior to their death.

Table 6.1 shows the socio-demographic features of the respondents that were included in the analyses at each phase of the study. The final pooled sample used for analyses is shown in the column at the far right of the table.

The sample in 1979 comprised of 38.5% males and 61.5% females. The pooled sample contained a smaller percentage of males (35.8%) and a greater percentage of females (64.2%). The proportions of respondents in each age band in the pooled sample are more like the distribution of males and females in Glyndwr, Clwyd and Meirionnydd, Gwynedd in 1981 who are aged 75 and over (33.8% males vs. 66.2% females) than for the population aged 65 and over (39.6% males vs. 60.4% females) (Office of Population Censuses and Surveys 1982(a), Office of Population Censuses and Surveys 1982(b)). The decrease in the percentage of men in the pooled sample would be expected considering that the study spanned sixteen years and it is well documented that the mortality rate for males is higher than for females in developed countries (Harrison 1978, Meinecke 1981, Bowling 1989, Nathanson 1984, Koskenvuo et al. 1986, Bowling & Windsor 1995, Kouzis et al. 1995).

The pooled sample is older than the sample in 1979 with fewer people under 80 in the pooled sample. Whereas the 1979 sample had proportionally twice as many people in the 65-69 ageband than the pooled sample, the situation was reversed for the older age bands. In the pooled sample there were proportionally over twice as many people in the 80-89 and 90+ agebands than there were in the 1979 sample.

**Table 6.1 Characteristics of sample used in logistic regression**

Year of Interview:		1979 N=480 %	1983 N=112 %	1987 N=225 %	1991 N=150 %	1995 N=83 %	ALL N=1050 %
SEX:							
	Male	38.5	29.5	34.7	36.0	31.3	35.8
	Female	61.5	70.5	65.3	64.0	68.7	64.2
AGEBAND:							
	65-69	28.1	0	0	0	0	12.9
	70-79	50.2	28.6	48.9	24.7	0	40.0
	80-89	18.5	56.3	44.0	65.3	77.1	39.3
	90+	3.1	15.2	7.1	10.0	22.9	8.0
MARITAL STATUS:							
	Married	37.5	19.6	29.8	28.0	20.5	31.2
	Widowed	43.8	61.6	50.2	56.0	65.1	50.5
	Never married/Divorced	18.8	18.8	20.0	16.0	14.5	18.3
HOUSEHOLD COMPOSITION:							
	Alone	43.5	44.6	46.2	44.0	57.8	45.4
	With spouse only	29.6	17.9	24.4	23.3	19.3	25.5
	With younger generation	21.6	26.8	14.7	17.3	10.8	19.2
	With same/older generation	5.2	5.4	5.3	6.0	1.2	5.0
	Residential care	0.0	5.4	9.3	9.3	10.8	4.8
HOUSE TYPE:							
	Bungalow/one storey house	25.2	17.0	20.9	24.0	24.1	23.1
	House, more than 1 storey	52.7	47.3	44.9	44.0	44.6	48.6
	Farm	9.0	11.6	8.0	6.7	8.0	8.4
	Upper floor flat	2.1	0.9	1.8	1.3	0.0	1.6
	Ground floor flat	2.3	3.6	2.7	3.3	2.4	2.7
	OAP without warden	7.5	12.5	9.3	7.3	8.4	8.5
	OAP with warden	1.3	0.9	3.1	3.3	4.8	2.2
	Residential care	0.0	5.4	9.3	9.3	10.8	4.8
	Caravan	0.0	0.9	0.0	0.7	0.0	0.2
TENURE:							
	Owned	56.9	53.6	58.2	63.4	55.4	57.6
	Rented	34.2	27.6	25.8	20.7	21.7	28.7
	With relatives/friends	7.5	11.6	5.3	5.3	8.4	7.2
	Residential care	0.0	5.4	9.3	9.3	10.8	4.8
	Other <sup>33</sup>	1.5	1.8	1.3	1.3	3.6	1.6
INCOME:							
	High	29.8	22.3	27.6	37.3	38.6	30.3
	Average	37.7	54.5	45.8	42.7	44.6	42.5
	Low	32.5	23.2	26.7	20.0	16.9	27.2
SOCIAL CLASS:							
	I	5.2	5.4	6.7	7.3	9.6	6.2
	II	34.0	38.4	38.7	38.7	38.6	36.5
	III	35.5	35.7	30.2	34.7	36.1	34.3
	IV	20.0	18.8	18.7	14.7	14.5	18.5
	V	0.4	0.0	0.0	0.0	0.0	0.2
	Military	2.3	0.9	3.6	2.7	1.2	2.4
	Never worked/missing	2.5	0.9	1.7	1.9	0.0	2.0
HLTH2:							
	Excellent/good	79.2	69.6	63.1	78.0	84.3	75.0
	Fair/poor	20.8	30.4	36.9	22.0	15.7	25.0

<sup>33</sup> Includes people for example in tied houses, or living rent free in house of current or previous employer.



As would be expected, there is a greater percentage of people widowed in the pooled sample, than the sample in 1979 (50.5% vs. 43.8%) and fewer were married (31.2% vs. 37.5%). This is not a dramatic difference as a large proportion of the sample in 1979 were already widowed. The percentage of those never married or divorced did not show any notable differences between the samples.

There is not much variation in household composition, house type or tenure between the sample in 1979 and the pooled sample. The most marked difference for all three variables is the greater percentage of people in residential care in the pooled sample. Data collected in 1979 were for people living in the community only whereas in subsequent years data were recorded for respondents who had entered residential care. 4.8% of the pooled sample were in residential care. This is slightly higher than the Welsh Office (1994) statistics for 1993 which state that 3.47% of the population who were over 65 in Clwyd and Gwynedd were living in institutions. Although the age profile of the pooled sample indicates that the sample was skewed towards the older age group, the overall sample does not reflect the housing status of the over 75 population of whom 6.9% were in residential care in 1993 (Welsh Office 1994). This is because the final proportion of the sample in residential care has been influenced by the exclusion of people in residential care in 1979.

Income levels show little change between the 1979 sample and the pooled data; slightly more people received average incomes and less received low incomes in the pooled sample than in the 1979 sample. There were also slight differences in the distribution of social classes between the samples. There is a slightly higher percentage of people in Class I and II, and a lower percentage of those in Classes III, IV and V in the pooled sample compared with the 1979 sample. This is in the direction that would be expected as studies have demonstrated that the risk of

mortality is higher for people in lower social classes (Heinemann 1985, Samuelsson & Dehlin 1993, Samuelsson et al. 1994).

Self-assessed health showed little variation between the 1979 and pooled sample with 79.2% in 1979, and 75% in the pooled sample assessing their health as excellent or good. However, there was variation between the phases. In 1983 and 1987 a larger proportion of the respondents considered that their health was fair or poor than in previous and later years. In 1995, when the respondents in the sample were all aged 81 or over, the largest proportion assessed their health positively, with 84.3% indicating that their health was excellent or good. Other research has found that although people who are aged 75 and over may report more health related problems than people aged 65-74, they are more likely to assess their health positively (Ferraro 1980, Staats et al. 1983). In addition, the larger proportion of positive self-assessed health ratings in 1995, may demonstrate the link between health optimism and mortality. Studies have found that positive self-assessments of health are related to lower mortality rates (Kaplan et al. 1988, Schoenfeld et al. 1994, Borawski et al. 1996). Therefore, those people that rated their health negatively in earlier phases of the study, were less likely to have survived until 1995.

Overall the pooled sample appears to have similar characteristics to the sample that was drawn in 1979, which was representative of the region, with negligible differences in social class, income, house type, tenure and household composition. The gender distribution of the pooled sample was similar to the distribution of those aged 75 and over living in the Clwyd and Gwynedd in 1993. The greatest difference was the age structure of the pooled sample.

SPSS for Windows Release 6.1, Logistic Regression procedure was used for the model fitting (SPSS 1994). Logistic regression models were used to determine the most likely variables to explain three outcomes: residential relocation per se (MOVE); relocation within the community only (MOVEC); and relocation into residential care (MOVERC). The term 'mover' is used as shorthand for an observation of a person who moved in the four-year period prior to interview, and the term 'non-mover' is used for a person who did not move in the four-year period.

Table 6.2 displays the characteristics of all movers within the community and into residential care compared with non-movers (MOVE). Cross-tabulation of the variables in Table 6.2 with the variable MOVE resulted in income and self-assessed health variables showing significant differences between the groups using the Pearson chi-square test at the 5% level of significance. For the following three tables (6.2, 6.3 and 6.4) the cells where expected frequencies are less than five are indicated with the following symbol: †. The cross-tabulation indicated that respondents with high income levels were least likely to move, only 15.7% relocated. The cross-tabulation for self-assessed health showed that respondents who indicated that their health was fair or poor were more likely to move than those people who indicated that their health was excellent or good (30% vs. 17.4% respectively). It is expected that both income and self-assessed health will be included in the logistic regression model to explain residential relocation in this sample.

Table 6.3 displays the characteristics of all those observed to move within the community only compared with those who did not relocate (MOVEC). The results of cross-tabulation were somewhat different for moves within the community than for relocation per se. Pearson chi-square test indicated that there were significant differences at the 5% level between movers and non-movers in their ages, marital status and income. Those respondents who were aged between 65 and 69 years old were most likely to move (movers: 23.7%), whilst those least likely to move were

**Table 6.2 Characteristics of all movers versus non-movers in the sample used in logistic regression. (MOVE)**

		Non-movers N=834 % <sup>1</sup>	Movers N=216 % <sup>1</sup>	p-value <sup>2</sup>	d.f.
SEX:	Male	79.8 (36.0)	20.2 (35.2)	.8299	1
	Female	79.2 (64.0)	20.8 (64.8)		
AGEBAND:	65-69	76.3 (12.4)	23.7 (14.8)	.4411	3
	70-79	80.0 (40.3)	20.0 (38.9)		
	80-89	80.9 (40.0)	19.1 (36.6)		
	90+	74.4 (7.3)	25.6 (9.7)		
MARITAL STATUS:	Married	79.0 (31.1)	21.0 (31.9)	.8811	2
	Widowed	79.2 (50.4)	20.8 (50.9)		
	Never married/Divorced	80.7 (18.6)	19.3 (17.1)		
INCOME:	High	84.3 (32.1)	15.7 (23.1)	.0347	2
	Average	77.8 (41.6)	22.2 (45.8)		
	Low	76.6 (26.3)	23.4 (31.0)		
SOCIAL CLASS:	I	87.7 (6.8)	12.3 (3.7)	.4002	6
	II	31.2 (37.3)	18.8 (33.3)		
	III	76.9 (33.2)	23.1 (38.4)		
	IV	77.8 (18.1)	22.2 (19.9)		
	V	50.0 <sup>†</sup> (0.1)	50.0 <sup>†</sup> (0.5)		
	Military	80.0 (2.4)	20.0 (2.3)		
	Never worked/missing	81.0 (2.0)	19.0 (1.9)		
HLTH2:	Excellent/good	82.6 (77.9)	17.4 (63.4)	<.0001	1
	Fair/poor	70.0 (22.1)	30.0 (36.6)		

<sup>1</sup> Row percents shown without brackets. Column percents shown with brackets.

<sup>2</sup> Pearson chi-square test

<sup>†</sup> Expected number of respondents in cell is less than 5

**Table 6.3 Characteristics of movers versus non-movers in the sample used in logistic regression. (MOVEC)**

		Non-movers N=834 % <sup>1</sup>	Movers N=166 % <sup>1</sup>	p-value <sup>2</sup>	d.f.
SEX:	Male	82.9 (36.0)	17.1 (38.3)	.7358	1
	Female	83.7 (64.0)	16.3 (62.7)		
AGEBAND:	65-69	76.3 (12.4)	23.7 (19.3)	.0070	3
	70-79	81.4 (40.3)	18.6 (46.4)		
	80-89	86.8 (40.0)	13.2 (30.7)		
	90+	91.0 (7.3)	9.0 (3.6)		
MARITAL STATUS:	Married	79.0 (31.1)	21.0 (41.6)	.0220	2
	Widowed	84.8 (50.4)	15.2 (45.2)		
	Never married/Divorced	87.6 (18.6)	12.4 (13.3)		
INCOME:	High	87.3 (32.1)	12.7 (23.5)	.0360	2
	Average	83.2 (41.6)	16.8 (42.2)		
	Low	79.3 (26.3)	20.7 (34.3)		
SOCIAL CLASS:	I	89.1 (6.8)	10.9 (4.2)	.2759	6
	II	85.7 (37.3)	14.3 (31.3)		
	III	80.1 (33.2)	19.9 (41.6)		
	IV	83.0 (18.1)	17.0 (18.7)		
	V	50.0 <sup>†</sup> (0.1)	50.0 <sup>†</sup> (0.6)		
	Military	87.0 (2.4)	13.0 <sup>†</sup> (1.8)		
	Never worked/missing	85.0 (2.0)	15.0 <sup>†</sup> (1.8)		
HLTH2:	Excellent/good	84.5 (77.9)	15.5 (71.7)	.0810	1
	Fair/poor	79.7 (22.1)	20.3 (28.3)		

<sup>1</sup> Row percents shown without brackets. Column percents shown with brackets.

<sup>2</sup> Pearson chi-square test

<sup>†</sup> Expected number of respondents in cell is less than 5

**Table 6.4 Characteristics of movers into residential care versus those who did not move into residential care in the sample used in logistic regression.**

**(MOVERC)**

		Non-movers N=1000 % <sup>1</sup>	Movers N=50 % <sup>1</sup>	p-value <sup>2</sup>	d.f.
SEX:	Male	96.3 (36.2)	3.7 (28.0)	.2379	1
	Female	94.7 (63.8)	5.3 (72.0)		
AGEBAND:	65-69	100.0 (13.5)	0.0 (0.0)	<.0001	3
	70-79	98.3 (41.3)	1.7 (14.0)		
	80-89	93.2 (38.5)	6.5 (56.0)		
	90+	81.7 (6.7)	18.3 <sup>†</sup> (30.0)		
MARITAL STATUS:	Married	100.0 (32.8)	0.0 (0.0)	<.0001	2
	Widowed	93.4 (49.5)	6.6 (70.0)		
	Never married/Divorced	92.2 (17.7)	7.8 (30.0)		
INCOME:	High	96.5 (30.7)	3.5 (22.0)	.0751	2
	Average	93.5 (41.7)	6.5 (58.0)		
	Low	96.5 (27.6)	3.5 (20.0)		
SOCIAL CLASS:	I	98.5 (6.4)	1.5 <sup>†</sup> (2.0)	.7013	6
	II	94.8 (36.3)	5.2 (40.0)		
	III	96.1 (34.6)	3.9 (28.0)		
	IV	93.8 (18.2)	6.2 (24.0)		
	V	100.0 <sup>†</sup> (0.2)	0.0 <sup>†</sup> (0.0)		
	Military	92.0 (2.3)	8.0 <sup>†</sup> (4.0)		
	Never worked/missing	95.2 (2.0)	4.8 <sup>†</sup> (2.0)		
HLTH2:	Excellent/good	97.7 (76.9)	2.3 (36.0)	<.0001	1
	Fair/poor	87.8 (23.1)	12.2 (64.0)		

<sup>1</sup> Row percents shown without brackets. Column percents shown with brackets.

<sup>2</sup> Pearson chi-square test

<sup>†</sup> Expected number of respondents in cell is less than 5

between the ages of 80 and 89 (non-movers: 86.8%). People who were married were also more likely to move than others with 21% relocating compared with only 15.2% and 12.4% respectively of those people who were widowed or never married/divorced. From these results it would be likely that age, marital status and income would be included as explanatory variables in the logistic regression model.

Table 6.4 displays the characteristics of the people who moved into residential care compared to those who did not (MOVERC). Cross-tabulation produced significant differences between movers and non-movers in this sample that were unlike those found for relocation in the community. The respondents in the older agebands (80-89 and 90+) were most likely to move into residential care. Those respondents who were widowed or never married/divorced were more likely to be institutionalised than married couples. Those respondents who assessed their health as fair or poor were also more likely to move into residential care than those who rated their health as excellent or good (12.2% vs. 2.3% respectively). It would be expected that age, marital status and health will be included in the model explaining moves into residential care.

Only respondents without missing data for any of the variables could be used in the logistic regression analysis. This gave samples of N=1050 observations for the models that were explaining all moves (MOVE) and moves into residential care (MOVERC), and N=1000 observations for moves in the community (MOVEC).

There are several methods of selecting which variables are most likely to explain the model. In this analysis a forward stepwise selection was employed. The variables were selected using the likelihood-ratio test (LR). The initial model includes only the constant, in subsequent steps the variable with the highest significance level for the score statistic is entered. Each new variable in the model

is checked to see if it meets the criteria for removal. The LR test examines the change in the log likelihood between the model with and without the variable (and each subsequent variable that is entered);  $-2\log LR$ ; and the observed significance. If the inclusion of the variable represents a significant improvement in the model then it is not removed.

The logistic coefficients for variables measured on an interval scale can be interpreted as the increase in log odds of an event happening with a unit change in the value of each variable. Categorical variables are treated differently. The logistic coefficients for categorical data can either represent the change in log odds of a category compared to a reference category or compared to the average effect of all the categories. For this analysis the logistic coefficients indicate the change in log odds of the category compared to a reference category. The reference category was selected as the first category of each variable. The logistic regression procedure for SPSS (6.1) requires that categorical variables are dichotomous, therefore a four level variable such as marital status and duration widowed (MARSTWM; married; widowed  $\leq 5$  years; widowed  $> 5$  years; never married/divorced) can be re-coded into three dummy or indicator variables, i.e. married is the reference category and is represented by a code of 0, MARSTWM-1, a code of one indicates widowed  $\leq 5$  years and a code of nought indicates not; MARSTWM-2 a code of one indicates widowed  $> 5$  years and a code of nought indicates not; MARSTWM-3 a code of one indicates never married or divorced and a code of nought indicates not. The same variables were used in each analysis and all were categorical in nature. The variables that could be selected for the final models are shown in Table 6.5 with the indicator or dummy variables represented by bracketed numbers.



**Table 6.5 Variables used in logistic regression analysis**

VARIABLES
CONSTANT
AGEMB2
(reference category) 65-74
(1) 75+
INC2
(reference category) High
(1) Average/low
MARSTWM
(reference category) Married
(1) Widowed =<5 years
(2) Widowed >5 years
(3) Never married/divorced
HLTH2
(reference category) Excellent/good
(1) Fair/poor
SOC
(reference category) Class I
(1) Class II
(2) Class III
(3) Class IV
(4) Class V
(5) Military
(6) Never worked/missing

## **RESULTS**

### **Explanatory model for all moves (MOVE)**

The odds for moving can be estimated as:

$$\text{Odds} = \frac{\text{probability(event)}}{\text{probability(no event)}}$$

Where the probability of the event occurring is:

$$\frac{\text{number of times event observed}}{\text{number of observations}}$$

and the probability of no event is:

$$\frac{\text{number of times event not observed}}{\text{number of observations}}$$

Substituting the observed events and sample sizes the following equation is produced:

$$\text{Odds} = \frac{216/1050}{834/1050} = \frac{0.2057}{0.7943} = 0.26$$

The odds for moving for this sample is 0.26 which means that in a 4 year period people were approximately four times as likely to stay put as to move. The odds can take any positive value between 0 (if there were no moves) and infinity (if every observation was a move). A linear regression model requires that the dependent variable can take all positive and negative values. This is achieved by taking the natural logarithm of the odds, which is negative for odds less than 1 and positive for odds greater than one. The model predicts the value of the log odds, Z as a linear expression of the variable  $X_1, X_2, \dots, X_p$ :

$$Z = B_0 + B_1X_1 + B_2X_2 + \dots B_pX_p$$

where  $B_0$  and  $B_1$  are coefficients estimated from the data (Norusis 1990).

Therefore, the odds for moving are:

$$\exp(Z)$$

In order to determine which variables may explain the moves the logistic regression procedure was run. The final model included the constant, and the explanatory variables age (AGEMB2), income (INC2) and health (HLTH2). Table 6.6 shows the coefficients (B) in the fitted model with their standard errors.

**Table 6.6 Variables in the model for MOVE**

Variable	Level	B	S.E.	df	Sig	Exp(B)
AGEMB2(1)	=>75	-.4223	.1638	1	.0099	.6555
INC2(1)	Average/low	.3783	.1811	1	.0367	1.4599
HLTH2(1)	Fair/poor	.6800	.1667	1	.0000	1.9740
Constant		-1.5350	.1869	1	.0000	

The model can be tested for goodness of fit using -2 times the log of the likelihood (-2LL). -2LL has a chi-square distribution with  $N-p$  degrees of freedom under the null hypothesis that the model fits perfectly.  $N$  represents the number of cases and  $p$  represents the number of estimated parameters. The significance level for -2LL was calculated using Minitab for Windows 10.51 Xtra (Minitab Inc. 1995). The procedure to calculate the chi-square value of the cumulative probability achieves a value for:

$$P(X \leq x)$$

The  $p$  value is then calculated as:

$$1 - P(X \leq x)$$

The  $p$  value for the logistic regression model for MOVE was calculated as 0.559.

The large observed significance level indicates that the model does not differ significantly from the “perfect” model, and can be considered to be a good fit for the data.

Hosmer and Lemeshow’s (1980) goodness of fit test also leads to a similar conclusion. It has been shown that the fit of a model can be tested by looking at the distribution of estimated and observed frequencies for groups based on predicted probabilities (Hosmer & Lemeshow 1980, Lemeshow & Hosmer 1982). Table 6.7 shows groups based on predicted probabilities of moving with the expected and observed frequencies for those people who moved and those who did not. It can be seen that there are no large discrepancies between the observed and expected frequencies in each group. The Hosmer-Lemeshow goodness of fit statistic, computed from the frequencies in Table 6.7, is 5.1512 and the corresponding  $p$  value computed from the chi-square distribution with 4 degrees of freedom is 0.2721. This indicates that the model fits well and does not differ significantly from the “perfect” model.

**Table 6.7 Hosmer and Lemeshow's (1980) goodness of fit test: Observed and estimated expected frequencies within each group of predicted probabilities for moving, for each outcome of not moving and moving, using the fitted logistic regression model for MOVE**

Group: Predicted probabilities for moving	No Move		Move		Total
	Observed	Expected	Observed	Expected	
1: 0.12375	159	160.353	24	22.647	183
2: 0.17093	308	300.951	55	62.049	363
3: 0.17726 - 0.21801	95	94.997	22	22.003	117
4: 0.23927	112	117.913	43	37.087	155
5: 0.28926	109	114.429	52	46.571	161
6: 0.29839 - 0.38305	51	45.328	20	25.672	71

As the formula above demonstrates, with categorical data it is possible to calculate the odds for movement for each group, that is how much more or less likely it is for a person in that group to move compared to other groups. The estimated coefficients for the parameter represent the change in log odds of the category compared to the reference category. The coefficient for the parameter of the variable that is not displayed (the reference category) is zero. The variables in the fitted model define eight groups to calculate the odds for moving. The odds for moving are displayed in Table 6.8.

i) under 75 with a high income in excellent/good health

$$\exp(-1.5350 + 0 + 0 + 0) = \exp(-1.5350) = 0.22$$

ii) under 75 with a high income in fair/poor health

$$\exp(-1.5350 + 0 + 0 + 0.6800) = \exp(-0.8550) = 0.43$$

iii) under 75 with a low or average income in excellent/good health

$$\exp(-1.5350 + 0 + 0.3783 + 0) = \exp(-1.1567) = 0.31$$

iv) under 75 with a low or average income in fair/poor health

$$\exp(-1.5350 + 0 + 0.3783 + 0.6800) = \exp(-0.4767) = 0.62$$

v) 75 or over with a high income in excellent/good health

$$\exp(-1.5350 - 0.4223 + 0 + 0) = \exp(-1.9573) = 0.14$$

vi) 75 or over with a high income in fair/poor health

$$\exp(-1.5350 - 0.4223 + 0 + 0.6800) = \exp(-1.2773) = 0.28$$

vii) 75 or over with a low or average income in excellent/good health

$$\exp(-1.5350 - 0.4223 + 0.3783 + 0) = \exp(-1.5790) = 0.21$$

viii) 75 or over with a low or average income in fair/poor health

$$\exp(-1.5350 - 0.4223 + 0.3783 + 0.6800) = \exp(0.8990) = 0.41$$

**Table 6.8 Odds for moving in each category of independent variables in model for MOVE**

Variables		Income: High	Income: Low or average
<b>Controlling for Age: =&lt;74</b>			
Health:	Excellent/good	.22	.31
	Fair/poor	.43	.62
<b>Controlling for Age: =&gt;75</b>			
Health:	Excellent/good	.14	.21
	Fair/poor	.28	.41

Table 6.8 demonstrates that controlling for age and health, people with low or average incomes were more likely to move than those with high incomes.

Controlling for income and age, those people with fair/poor health had odds for moving that were twice that of those with good/excellent health. The odds for moving overall had previously been calculated as 0.26. The cells that display most

difference from the overall odds are for people *under 75 in fair/poor health with a low income* (odds for moving = 0.62). The people that display the lowest odds for moving are those aged *75 or over in excellent/good health with a high income* (odds for moving = 0.14). The people under 75 in fair/poor health with a low or average income had odds for moving that were nearly four times higher than people aged 75 or over in excellent/good health with a high income.

The probability of an event occurring is:

$$\text{Prob(event)} = \frac{\exp(Z)}{1 + \exp(Z)}$$

The probability of moving per se was calculated as 0.26. Three groups had a probability of moving higher than this:

- i) under 75 with a high income in fair/poor health (probability of moving = 0.3)
- ii) under 75 with a low or average income in fair/poor health (probability of moving = 0.38)
- iii) 75 or over with a low or average income in fair/poor health (probability of moving = 0.29)

### **Explanatory model for moves in the community (MOVEC)**

The sample for this model included all movers and non-movers who were in the community. Those who entered residential care were excluded from the analysis. It was expected that the explanatory factors for residential relocation for this group of people would differ from those for entering residential care. The odds ratio for moving in the community was 0.199.

$$\text{Odds} = \frac{166/1000}{834/1000} = \frac{0.166}{0.834} = 0.199$$

The logistic model included the constant and explanatory variables age (AGEMB2), income (INC2), and marital status (MARSTWM). Table 6.9 shows the coefficients (B) for the fitted model and their standard errors.

**Table 6.9 Variables in the model for MOVEC**

Variable	Level	B	S.E.	df	Sig	Exp(B)
AGEMB2 (1)	=>75	-.6805	.1822	1	.0002	.5063
INC2 (1)	Average/low	.4798	.2012	1	.0171	1.6157
MARSTWM				3	.0166	
MARSTWM (1)	Widowed =<5years	.2579	.2604	1	.3220	1.2942
MARSTWM (2)	Widowed >5 years	-.4489	.2165	1	.0381	.6383
MARSTWM (3)	Never married/ divorced	-.5052	.2691	1	.0605	.6034
Constant		-1.3314	.2152	1	.0000	

The  $-2LL$  was 863.55 with 995 degrees of freedom. The  $p$  value for the logistic regression model for MOVEC was calculated as 0.9989. This indicates that the model provides an almost “perfect” fit to the data. Hosmer and Lemeshow’s goodness of fit statistic (5.0413, d.f. 7) had a corresponding  $p$  value of .6549, which although demonstrating that the model fits the data well, suggests that there are some differences between the observed and expected frequencies. The model for moves in the community only, provides a better fit to the data than the model for all moves (MOVE). Table 6.10 shows the observed and estimated expected frequencies for each group of predicted probabilities for moving.



**Table 6.10 Hosmer and Lemeshow's (1980) goodness of fit test: Observed and estimated expected frequencies within each group of predicted probabilities for moving, for each outcome of not moving and moving, using the fitted logistic regression model for MOVEC**

Group: Predicted probabilities for moving	No Move		Move		Total
	Observed	Expected	Observed	Expected	
1: 0.07467 - 0.07865	118	118.112	10	9.888	128
2: 0.11534	65	69.004	13	8.996	78
3: 0.11796	46	47.630	8	6.370	54
4: 0.12121	208	204.759	25	28.241	233
5: 0.13746 - 0.14754	54	52.271	7	8.729	61
6: 0.17768	104	100.323	18	21.677	122
7: 0.20476 - 0.20893	67	65.796	16	17.204	83
8: 0.21408 - 0.21853	73	76.785	25	21.215	98
9: 0.25474 - 0.35578	99	99.321	44	43.679	143

The variables in the fitted model define sixteen groups to calculate the odds for moving. The resulting odds for moving are displayed in Table 6.11.

i) under 75, married with a high income

$$\exp(-1.3314 + 0 + 0 + 0) = \exp(-1.3314) = 0.26$$

ii) under 75, married with an average or low income

$$\exp(-1.3314 + 0 + 0 + 0.4798) = \exp(-0.8516) = 0.43$$

iii) under 75, widowed =< 5 years with a high income

$$\exp(-1.3314 + 0 + 0.2579 + 0) = \exp(-1.0735) = 0.34$$

iv) under 75, widowed =< 5 years with an average or low income

$$\exp(-1.3314 + 0 + 0.2579 + 0.4798) = \exp(-0.5937) = 0.55$$

v) under 75, widowed >5 years with a high income

$$\exp(-1.3314 + 0 - 0.4489 + 0) = \exp(-1.7803) = 0.17$$

vi) under 75, widowed >5 years with an average or low income

$$\exp(-1.3314 + 0 - 0.4489 + 0.4798) = \exp(-1.3005) = 0.27$$

vii) under 75, never married or divorced with a high income

$$\exp(-1.3314 + 0 - 0.5052 + 0) = \exp(-1.8366) = 0.16$$

viii) under 75, never married or divorced with an average or low income.

$$\exp(-1.3314 + 0 - 0.5052 + 0.4798) = \exp(-1.3568) = 0.26$$

ix) 75 or over, married with a high income

$$\exp(-1.3314 - 0.6805 + 0 + 0) = \exp(-2.0119) = 0.13$$

x) 75 or over, married with an average or low income

$$\exp(-1.3314 - 0.6805 + 0 + 0.4798) = \exp(-1.5321) = 0.22$$

xi) 75 or over, widowed =< 5 years with a high income

$$\exp(-1.3314 - 0.6805 + 0.2579 + 0) = \exp(-1.754) = 0.17$$

xii) 75 or over, widowed =< 5 years with an average or low income

$$\exp(-1.3314 - 0.6805 + 0.2579 + 0.4798) = \exp(-1.2742) = 0.28$$

xiii) 75 or over, widowed >5 years with a high income

$$\exp(-1.3314 - 0.6805 - 0.4489 + 0) = \exp(-2.4608) = 0.09$$

xiv) 75 or over, widowed >5 years with an average or low income

$$\exp(-1.3314 - 0.6805 - 0.4489 + 0.4798) = \exp(-1.981) = 0.14$$

xv) 75 or over, never married or divorced with a high income

$$\exp(-1.3314 - 0.6805 - 0.5052 + 0) = \exp(-2.5171) = 0.08$$

xvi) 75 or over, never married or divorced with an average or low income.

$$\exp(-1.3314 - 0.6805 - 0.5052 + 0.4798) = \exp(-2.0373) = 0.13$$

**Table 6.11 Odds for moving in each category of independent variables in the model for MOVEC**

Variables	Income: High	Income: Low or average
<b>Controlling for Age: &lt;75</b>		
Married	.26	.43
Widowed =< 5 years	.34	.55
Widowed >5 years	.17	.27
Never married or divorced	.16	.26
<b>Controlling for Age: =&gt;75</b>		
Married	.13	.22
Widowed =< 5 years	.17	.28
Widowed >5 years	.09	.14
Never married or divorced	.08	.13

The odds for moving within the community for this sample had been calculated as .199. Table 6.11 shows that several combinations of the variables in the equation had higher odds for moving. The most noticeable difference is between the age groups. It can be seen that the odds for moving were twice as high for those under 75 than their equivalent groups who were over 75. For example the odds for a married person, who was over 75 in the low or average income bracket is only half the odds (.22) for a married person with the same level of income but who is under 75 (.43). The only groups whose were aged under 75 that had *lower* odds for moving than the whole sample were people with high incomes who were widowed more than 6 years, or never married/divorced. In the over 75 age group the only categories that had *higher* odds for moving than the sample as a whole were those who had low or average income and were married or widowed less than 5 years.

When controlling for age and income, there are similarities between those people who had been widowed more than 5 years and those who were never married or divorced and also between the groups of people who are married and those who were widowed more recently. The biggest contrast in odds for moving can be seen between those in the high income bracket who were widowed more than 6 years, divorced or never married who had 0.09 and 0.08 odds for moving respectively, and those who had low or average incomes and were married, or widowed less than five years who had odds for moving of 0.43 and 0.55 respectively. The latter groups had odds for moving approximately 5 times higher than the former.

The probability of moving in the community was calculated as 0.3. Two groups had a probability of moving equal or greater than this:

- i) under 75, married with an average or low income (probability of moving = 0.30)
- ii) under 75, widowed  $\leq$  5 years with an average or low income (probability of moving = 0.36)

Although the model for moves in the community included some different explanatory variables than the model for all moves, that is it included marital status but not self-assessed health, it showed similarities in the variables that were the included in both models. Those who were under 75 with low and average incomes were more likely to move than a majority of the other groups.

### **Explanatory model for moves into residential care (MOVERC)**

A observed 'move' for this model was only classified if it was into residential care. All other observations of respondents who remained the community (even if moving within the community) were classified as 'non-moves'. It was expected that the explanatory variables for residential relocation for this group of people would differ from the characteristics of those moving in the community. The odds for moving into residential care was 0.05.

$$\text{Odds} = \frac{50/1050}{1000/1050} = \frac{0.048}{0.952} = 0.05$$

The logistic model included the constant and explanatory variables age (AGEMB2), health (HLTH2), and marital status (MARSTWM). Table 6.12 shows the coefficients (B) for the fitted model and their standard errors.

**Table 6.12 Variables in the model for MOVERC**

Variable	Level	B	S.E.	df	Sig	Exp(B)
AGEMB2 (1)	=>75	1.9259	.7345	1	.0087	6.8611
HLTH2 (1)	Fair/poor	1.7423	.3118	1	.0000	5.7103
MARSTWM				3	.6770	
MARSTWM (1)	Widowed=<5 years	7.9694	13.9512	1	.5678	2891.254
MARSTWM (2)	Widowed >5 years	8.0489	13.9469	1	.5639	3130.496
MARSTWM (3)	Never married/ divorced	8.3940	13.9482	1	.5473	4420.457
Constant		-13.1838	13.9613	1	.3450	

It appears from Table 6.12 that the variable for marital status should not have entered the model. Examination of the steps of the model fitting show that the variable was entered on the second step (after self-assessed health). It had a score statistic of 24.6 and significance level of <0.0001. The criterion for removal in the models was the likelihood-ratio. The significance level for the log likelihood of the model if the variable is removed is greater than the cut-off value for remaining in the model (0.1) and therefore marital status was not eligible for removal.

The significance level for -2LL (315.948, d.f.1045) was calculated as  $>0.9999$ . This suggests that the model fits the data almost perfectly. Differences between the expected and observed frequencies in the groups of predicted probabilities for moving in the model for MOVEC was reflected in the significance level for Hosmer and Lemeshow's (1980) goodness of fit test which was lower than the  $p$  value for -2LL. The significance level for Hosmer and Lemeshow's (1980) goodness of fit test for the model MOVERC is very similar to that for -2LL. The goodness of fit statistic (0.6753, d.f.6) had a corresponding  $p$  value of 0.995. Table 6.13 shows that the observed and estimated expected frequencies within each group of predicted probabilities for moving differed very little. This model provides an extremely good fit to the data.

**Table 6.13 Hosmer and Lemeshow's (1980) goodness of fit test: Observed and estimated expected frequencies within each group of predicted probabilities for moving, for each outcome of not moving and moving, using the fitted logistic regression model for MOVERC**

Group: Predicted probabilities for moving	No Move		Move		Total
	Observed	Expected	Observed	Expected	
1: $<0.00001$	114	114.000	0	0.000	114
2: $0.000011$	38	38.000	0	0.000	38
3: $0.000013$	139	138.998	0	0.002	139
4: $0.00007 - 0.00585$	116	115.550	0	0.450	116
5: $0.00825 - 0.03597$	126	125.796	3	3.204	129
6: $0.03883$	240	241.254	11	9.746	251
7: $0.04532 - 0.05396$	102	102.241	6	5.759	108
8: $0.17563 - 0.24570$	125	124.156	30	30.844	155

The variables in the fitted model define sixteen groups to calculate the odds for moving. The resulting odds for moving are displayed in Table 6.14.

i) under 75, in excellent or good health and married

$$\exp(-13.1838 + 0 + 0 + 0) = \exp(-13.1838) = <.01$$

ii) under 75, in excellent or good health and widowed  $\leq 5$  years

$$\exp(-13.1838 + 0 + 0 + 7.9694) = \exp(-5.2144) = .01$$

iii) under 75, in excellent or good health and widowed  $> 5$  years

$$\exp(-13.1838 + 0 + 0 + 8.0489) = \exp(-5.1349) = .01$$

iv) under 75, in excellent or good health and never married or divorced

$$\exp(-13.1838 + 0 + 0 + 8.3940) = \exp(-4.7898) = .01$$

v) under 75, in fair or poor health and married

$$\exp(-13.1838 + 0 + 1.7423 + 0) = \exp(-11.4415) = <.01$$

vi) under 75, in fair or poor health and widowed  $\leq 5$  years

$$\exp(-13.1838 + 0 + 1.7423 + 7.9694) = \exp(-3.4721) = .03$$

vii) under 75, in fair or poor health and widowed  $> 5$  years

$$\exp(-13.1838 + 0 + 1.7423 + 8.0489) = \exp(-3.3926) = .03$$

viii) under 75, in fair or poor health and never married or divorced

$$\exp(-13.1838 + 0 + 1.7423 + 8.3940) = \exp(-3.0475) = .05$$

ix) 75 or over, in excellent or good health and married

$$\exp(-13.1838 + 1.9259 + 0 + 0) = \exp(-11.2579) = <.01$$

x) 75 or over, in excellent or good health and widowed  $\leq 5$  years

$$\exp(-13.1838 + 1.9259 + 0 + 7.9694) = \exp(-3.2885) = .04$$

xi) 75 or over, in excellent or good health and widowed  $> 5$  years

$$\exp(-13.1838 + 1.9259 + 0 + 8.0489) = \exp(-3.209) = .04$$

xii) 75 or over, in excellent or good health and never married or divorced

$$\exp(-13.1838 + 1.9259 + 0 + 8.3940) = \exp(-2.8639) = .06$$

xiii) 75 or over, in fair or poor health and married

$$\exp(-13.1838 + 1.9259 + 1.7423 + 0) = \exp(-9.5156) = <.01$$

xiv) 75 or over, in fair or poor health and widowed =< 5 years

$$\exp(-13.1838 + 1.9259 + 1.7423 + 7.9694) = \exp(-1.5462) = .21$$

xv) 75 or over, in fair or poor health and widowed >5 years

$$\exp(-13.1838 + 1.9259 + 1.7423 + 8.0489) = \exp(-1.4667) = .23$$

xvi) 75 or over, in fair or poor health and never married or divorced

$$\exp(-13.1838 + 1.9259 + 1.7423 + 8.3940) = \exp(-1.1216) = .33$$

**Table 6.14 Odds for moving in each category of independent variables in the model for MOVERC**

Variables	Health: Excellent/good	Health: Fair/poor
<b>Controlling for Age: &lt;75</b>		
Married	<.01	<.01
Widowed =< 5 years	.01	.03
Widowed >5 years	.01	.03
Never married or divorced	.01	.05
<b>Controlling for Age: =&gt;75</b>		
Married	<.01	<.01
Widowed =< 5 years	.04	.21
Widowed >5 years	.04	.23
Never married or divorced	.06	.33



Table 6.14 shows that the odds for entering residential care for this sample are very low ( $< 0.01$ ) for those who are married, regardless of age or health status. The odds for moving are also low for those under 75 in excellent or good health. The most pronounced difference for those under 75, is found for never married/divorced people for whom fair or poor health increases the odds for moving into residential care five-fold. Excluding those who are married and controlling for marital status and age the odds for moving are higher for those in fair or poor health than those in excellent or good health.

The highest odds for moving into residential care are for those who are over 75, without a spouse (that is, either widowed or never married/divorced) and in fair or poor health. Even when married people were aged over 75 and in fair to poor health, the odds for moving into residential care for respondents without spouses were twenty times higher, which highlights the importance of spouse care-givers in old age. The odds for entering residential care are especially high (0.33) for those over 75 who are divorced or never married and in fair or poor health.

The overall probability of respondent in the BLSA moving into residential care was 0.15. Three groups had a probability of moving greater than this:

- i) 75 or over, in fair or poor health and widowed  $\leq 5$  years (probability of moving = 0.18)
- ii) 75 or over, in fair or poor health and widowed  $> 5$  years (probability of moving = 0.19)
- iii) 75 or over, in fair or poor health and never married or divorced (probability of moving = 0.25)

As expected the factors associated with moving into residential care differed from those associated with moving in the community. Income was not statistically associated with moving into residential care, but age, marital status and health were. Whereas moves in the community were most likely for the younger age group (<75) who were married or widowed for less than 5 years, with low or average incomes, moves into residential care were most likely for the oldest age group (≥75) in fair or poor health, who had no spouse, especially by those who were divorced or never married.

## ***SUMMARY***

The logistic regression analysis produced three models which show association between the explanatory variables and the probability of moving and provide a good fit to the data. Therefore, it can be documented which people in the BLSA were most likely to move per se, move in the community, or move into residential care. Cross-tabulation of the three samples of movers and non-movers with other variables indicated which factors were expected to be included in the models. These expectations were realised in the final models with the exception of age in the model for all moves (although this was included as an explanatory variable in the logistic regression model for all moves, it did not show significant differences between groups using the Pearson chi-square test at the 5% level of significance). The tables representing the observed and expected frequencies for groups of predicted probabilities of moving, the -2LL and Hosmer and Lemeshow's (1980) goodness of fit statistic indicate that the models *strongly* explain the movement of respondents in the BLSA. The groups of people that had the highest odds for relocating in each model are summarised here.

Relocation per se was most likely for those people under 75 with low or average incomes who were married, or widowed for less than five years. When the analysis was restricted to moves in the community, age and income, plus health instead of marital status were included as explanatory variables. The respondents with the highest odds for moving in the community only were; under 75 in fair to poor health with either high, or average to low incomes; and 75 or over in fair or poor health with low or average incomes. The explanatory variables for entry into residential care were age, health and marital status, and as would be expected were different from the characteristics of those most likely to move in the community. The probability of entering residential care was highest for respondents who were aged 75 years or over, in fair or poor health and with no spouse, that is widowed, never married or divorced.

## **A TYPOLOGY OF MIGRATION DEVELOPED FROM MOTIVES FOR RELOCATION: EXPLORATORY LATENT CLASS ANALYSIS**

### ***BACKGROUND***

The majority of models discussed predicting the mobility of older people have assessed the relative importance of factors that facilitate or constrain residential relocation. If the analysis in this thesis had been restricted to logistic regression analysis in the previous chapter, it would have replicated aspects of previous studies, although its application would be to a different geographical area. Little attention has been given by other studies to the adequacy of the theory that underpins much of the analyses. Only one of the studies listed in Table 2.1 made an attempt to organise empirical data into a typology of moves (Speare & Meyer 1988).

Speare and Meyer (1988) classified movement types by identifying ‘constellations’ of reasons that older people had given for moving. Four types of move were identified; ‘amenity’, ‘retirement’, ‘kinship’ and ‘widowed’. The results from logit regression showed that for all types of mobility an increase in age decreased the likelihood of moving however, this was less pronounced for ‘kinship’ and ‘widowed’ moves. ‘Retirement’ and ‘amenity’ moves were most likely for married couples and ‘kinship’ and ‘widowed’ moves were most likely for people who were not married. All types of mobility were more likely if the respondent was a renter although less pronounced for ‘amenity’ and ‘retirement’ moves. Only weak relationships between high income and ‘amenity’ and ‘retirement moves’, and low income and ‘kinship’ and ‘widowed’ moves were found. The study stopped short of

analysing whether the identified types of move could sufficiently explain a majority of moves undertaken by older people. It would have been informative if the variables that were produced by the logit as characteristic of the types of moves could have been used in further analysis. This could determine if the relationships between the variables were adequate to accurately allocate people into the type of move they had undertaken. A method that can be employed to test the fit of proposed types of move to a population of older movers is latent class analysis.

Factor analysis has been used for some time to reduce observed continuous or dichotomous variables into latent factors but until recently categorical data could not be analysed in a similar fashion. As a majority of social survey data is collected as categorical data (Clogg 1979) and cannot be assumed to have continuity of measurement there has not been an appropriate technique to use. Latent class analysis (also referred to as categorical data analogue to factor analysis) can be used to categorise unobservable variables using the structure of relationships of observable variables (McCutcheon 1987).

Latent class analysis (LCA) can be used in an exploratory fashion when there is no explicit hypotheses. If no restrictions are placed on the conditional probabilities<sup>34</sup> for each variable that is assumed to form relationships to a latent variable, they are free to vary across the classes. Classes may be added to the model one at a time and assessed with the likelihood ratio chi-square to see if they improve the fit of the model to the data.

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<sup>34</sup> The measure of the degree of association between the observed variable and the latent class.

This analysis presumes that a latent variable, in this instance a type of move can be categorised through the relationships of observed variables. Latent class analysis requires that assumptions are made regarding the set of observed variables and their relationship to the latent classes. Therefore the initial probabilities of a person falling in a certain class for each level of the observed variables must be estimated.

## ***METHOD***

The sample for LCA consisted of pooled data from the five interview phases of BLSA. At each phase, data were included for those respondents *who had moved in the previous four years* and who had no missing values for the variables used in the analysis (N = Number of observed moves=216). However, if the respondent had moved more than once in the previous four years then only the last move would be included, as the data recorded were relevant for the last move only.

The starting point for the exploratory latent class analysis was the five types of grouped motives for relocation. As assumptions had to be made regarding a set of observed variables that could be used to identify the latent variable (the type of move made), cross-tabulation of the groups of motivations for moves with other factors were carried out. Pearson chi-square test was used to assess significant differences between the characteristics of the grouped motivations. The characteristics that showed significant differences between categories in cross-tabulation were used to obtain an initial estimation of the latent categorical variables. For example cross-tabulation of types of motivations for moves with distance moved showed significant differences between the categories ( $p=0.001$ ). It showed that 88% of the moves due to ill health were less than 50 miles in distance. From this observation the initial conditional probabilities of falling into this class could be estimated for both levels of the variable representing distance. The initial conditional probability of people moving less than 50 miles in the category of

moves due to ill health was 0.9 and the initial conditional probability for those who moved greater than 50 miles was 0.1.

Not all variables that showed statistical differences between groups could be used in the analysis as there was a constraint on the number of cells that could be used in the analyses. The Maximum Likelihood Latent Structure Analysis (PROG MLLSA) module (Clogg 1990) of the Categorical Data Analysis System (CDAS) Version 3.5 (Eliason 1990) can only estimate for a maximum of three hundred cells. Initial computations were tried for a cross-tabulation with six variables and 17 values (see Table 7.1) producing two-hundred and eighty-eight response patterns ( $2 \times 6 \times 2 \times 2 \times 3 \times 2$ ). None of the models fitted well as the degrees of freedom were too great for the size of sample.

The variables were reconsidered to reduce the degrees of freedom. An examination of the final conditional probabilities for each variable showed that HLTH2 would be the most appropriate to omit as it was likely that marital status and age would suffice for allocation to latent classes. The start values for the remaining variables which were estimated from the cross-tabulation with grouped reasons for moves are shown in Table 7.2.

The original responses to the survey questions, encoded into several categories, were collapsed into five variables with a total of fifteen values for latent class analyses. A cross-tabulation of the scores resulted in one hundred and forty-four response patterns which were assigned to latent classes using PROG MLLSA. A description of the EM algorithm used in this programme is described elsewhere (Clogg 1977, McCutcheon 1987). There were no restrictions placed on these estimates so that they were free to vary across classes. In addition, even though the percentages of respondents in the groups defined as ill health and moves for improved housing/environment were proportionally bigger than the other groups,

the proportion of respondents falling into each class (latent class probabilities) were estimated as equal. This would mean an increase in the number of iterations to compute the maximum likelihood estimates for each class, but it was decided to be as non-committal as possible in these initial estimates.

**Table 7.1 Variables used in initial computation for latent class analysis.**

Variable	Level
DIST4	50+ miles
	<50 miles
TENPFAM	Own/family < 50 miles
	Own/family 50+ miles
	Rent/family < 50 miles
	Rent/family 50+ miles
	With family/friends/assist.
	living
HLTH2	Residential care
HLTH2	Good/excellent
	Fair/poor
AGEMB2	65-74
	75+
MARSTM	Married
	Widowed
	Never married/divorced
INC3	High/average
	Low



**Table 7.2 Start values for conditional probabilities for exploratory latent class model.**

Variable	Level	Class 1 Improve housing	Class 2 Ill health	Class 3 Familial	Class 4 Retirement /social	Class 5 Other
DIST4	50+ miles	.3	.1	.5	.3	.3
	<50 miles	.7	.9	.5	.7	.7
TENPFAM	Own/family < 50 miles	.2	.01	.35	.4	.23
	Own/family 50+ miles	.2	.01	.0	.25	.23
	Rent/family < 50 miles	.4	.01	.15	.25	.23
	Rent/family 50+ miles	.05	.01	.0	.1	.0
	With family/friends/assist. living	.15	.16	.5	.0	.31
	Residential care	.0	.8	.0	.0	.0
AGEMB2	65-74	.5	.05	.4	.7	.7
	75+	.5	.95	.6	.3	.3
MARSTM	Married	.3	.05	.38	.8	.5
	Widowed	.5	.7	.57	.15	.3
	Never married/divorced	.2	.25	.05	.05	.2
INC3	High/average	.6	.8	.6	.8	.3
	Low	.4	.2	.4	.2	.7
	Latent class probabilities	.2	.2	.2	.2	.2

Models using two to five latent classes were tested to see which was the most adequate. The goodness-of fit measures used were: the likelihood ratio chi-square statistic ( $L^2$ ), the Bayesian Information Criterion (BIC) statistic and the index of dissimilarity (ID). The  $L^2$  statistic shows if there is a statistical difference between the observed data and the theoretical model.  $p$ -values less than 0.05 show that there is a statistically significant difference between the data and the model and therefore

the fit is not good, whereas  $p$ -values greater than 0.05 suggest there is not a significant difference and signify a better fit. The BIC statistic is calculated:

$$L^2 - (df) \log N$$

where  $N$  is the total sample size. BIC is useful for selecting models that are being compared, with the lowest negative BIC the most preferable (Raftery 1986). In addition the ID shows the percentage of the sample that were misallocated by the theoretical model (Clogg 1995).

Table 7.3 shows the goodness of fit statistics for models with 1-5 classes. The model was chosen primarily on the  $L^2$   $p$ -value ( $>.05$ ) and then on the lowest BIC statistic. The one-class model (the complete independence model) was not accepted as a good fit to the data. If the independence model achieved a  $p$ -value greater than 0.5 it could be assumed that the observed variables are not interrelated and that a latent variable was not required to explain the relationship. As the complete independence model was rejected the fit of the model was tested at the addition of each new class. The  $p$ -values indicate that neither the two nor three-class models fit the data well. The process was repeated twice more by testing the addition of a fourth and then a fifth class. The four and five-class models had  $p$ -values greater than 0.05 with the five-class model appearing to be a better fit if using the  $p$ -value for  $L^2$  only. When the BIC statistic was taken into consideration it can be seen that the four-class model was a better fit for the data. It was not necessary to test the addition of any more classes as the BIC statistic increases with the addition of each class and would not improve the fit of the new model compared to the four-class model. Therefore the four-class model was accepted as the one that fitted the data most adequately.

**Table 7.3 Latent class models of relocation types using five indicators.**

<b>Model size</b>	<b>L<sup>2</sup></b>	<b>df</b>	<b>p</b>	<b>BIC</b>	<b>ID</b>
One class	270.06	143	<0.0001		
Two classes	130.47	124	<0.0001	-536	.247
Three classes	114.09	116	<0.0001	-509	.237
Four classes	94.95	107	0.79	-480	.206
Five classes	81.07	102	0.94	-467	.177

## ***RESULTS***

The final conditional probabilities of membership in each of the four classes are shown in Table 7.4. The final conditional probabilities indicate the probability that a person who has moved will score a particular way on each of the observed measures for each type of move. Consequently, the characteristics of each of the classes can be interpreted from the final conditional probabilities. For example, the conditional probability .9952 for “DIST4 < 50 miles” in Class 1 indicates that it was estimated that a majority of the moves assigned to this class were less than fifty miles in distance. The final latent class probabilities show the estimated distribution of the respondents throughout the classes. However, it must be noted that the final conditional probabilities and the latent class probabilities are not a perfect representation of the ‘observed’ scores (Hagenaars 1993).

All of those in the sample who had relocated and did not have missing data for any of the variables used in latent class analysis (N=216) were assigned to one of four classes. Respondents with identical scores on the variables used in the analysis are assigned to the same latent class. Assignment of latent classes is carried out on a cell-by-cell basis from the original cross-tabulation of the scores. PROG MLLSA calculates the probability of inclusion in each of the classes in the model, for the

observations in each cell. Cell assignment to a latent class is made using the modal probability. Table 7.3 shows that approximately 20% of the sample in the four-class model may have been misallocated to latent classes. Consequently, the frequencies observed for the variables in each type of move do not correspond exactly with the final probabilities.

The following descriptions of each class are based on the relationships between the variables that are identified by the final conditional probabilities, rather than ‘observed’ scores for the respondents assigned to each class. The probabilities that are most important in characterising each class are shown bold print in Table 7.4. The ‘observed’ frequencies for each class are displayed in Table 7.5 and are examined with regard to their correspondence with the final conditional probabilities. As in Table 7.4 the frequencies that are most important in characterising each class are shown in bold print.

**Table 7.4 Final conditional probabilities, and latent class probabilities for a four-class latent model of relocation.**

<b>Variable</b>	<b>Level</b>	<b>Class 1 Improve housing</b>	<b>Class 2 Ill health</b>	<b>Class 3 Familial</b>	<b>Class 4 Retirement /social</b>
DIST4	50+ miles	.0048	.0638	<b>.6143</b>	<b>.6524</b>
	<50 miles	<b>.9952</b>	<b>.9362</b>	.3857	.3476
TENPFAM	Own/family < 50 miles	.3253	.0378	.2544	.2260
	Own/family 50+ miles	.0001	.0573	.0000	<b>.4475</b>
	Rent/family < 50 miles	<b>.5648</b>	.1165	.0863	.2469
	Rent/family 50+ miles	.0413	.0081	.0000	.0797
	With family/friends/assist. living	.0684	.2111	<b>.6593</b>	.0000
	Residential care	.0000	<b>.5692</b>	.0000	.0000
AGEMB2	65-74	.5614	.0414	.2466	<b>.9024</b>
	75+	.4386	<b>.9586</b>	<b>.7534</b>	.0976
MARSTM	Married	<b>.6790</b>	.0000	.2695	.5750
	Widowed	.1948	<b>.7310</b>	<b>.6864</b>	.3268
	Never married/divorced	.1262	.2690	.0441	.0982
INC3	High/average	.5259	<b>.8068</b>	<b>.6575</b>	<b>.6641</b>
	Low	.4741	.1932	.3425	.3359
Latent class probabilities		.2353	.4141	.1664	.1843

**Table 7.5 Observed frequencies for variables, and distribution of latent class  
for a four-class latent model of relocation.**

<b>Variable</b>	<b>Level</b>	<b>Class 1 Improve housing N=54 %</b>	<b>Class 2 Ill health N=98 %</b>	<b>Class 3 Familial N=30 %</b>	<b>Class 4 Retirement /social N=27 %</b>
DIST4	50+ miles	0.0	3.1	<b>80.0</b>	<b>79.4</b>
	<50 miles	<b>100.0</b>	<b>96.9</b>	20.0	20.6
TENPFAM	Own/family < 50 miles	37.0	6.1	20.0	17.6
	Own/family 50+ miles	0.0	5.1	0.0	<b>52.9</b>
	Rent/family < 50 miles	<b>55.6</b>	13.3	6.7	20.6
	Rent/family 50+ miles	3.7	1.0	0.0	8.8
	With family/friends/assist. living	3.7	22.4	<b>73.3</b>	0.0
	Residential care	0.0	<b>52.0</b>	0.0	0.0
AGEMB2	65-74	66.7	2.0	23.3	<b>94.1</b>
	75+	33.3	<b>98.0</b>	<b>76.7</b>	5.9
MARSTM	Married	<b>72.2</b>	0.0	30.0	55.9
	Widowed	16.7	<b>74.5</b>	<b>63.3</b>	35.3
	Never married/divorced	11.1	25.5	6.7	8.8
INC3	High/average	51.9	<b>80.6</b>	<b>66.7</b>	<b>64.7</b>
	Low	48.1	19.4	33.3	35.5
% of sample in each latent class		25.0	45.4	13.9	15.7

The characteristics of the classes can be interpreted from the final conditional probabilities as follows:

**(Class 1) Improve housing/environment**

The latent class probabilities estimated that 24% of all moves would be of this type. The frequencies show that 25% (N=54) of the sample were allocated to Class 1 moves. The final conditional probabilities for DIST4 and TENPFAM indicate that a majority of moves were short distance and most likely to be made by renters moving within 50 miles of their families. These characteristics were borne out by the observed frequencies which show that all of the Class 1 moves were less than 50 miles. In addition, 56% of moves to improve housing or environment were made by renters moving within 50 miles of their families, which was the highest proportion of people in this category out of all the latent classes.

The final conditional probabilities indicate that it is more likely that this type of move is made by married couples than people who are widowed or never married/divorced. The observed frequencies show that 72% of these moves were made by married couples.

Class 1 moves can be characterised by the distance moved, tenure and proximity to family, and the marital status of the mover, but the final conditional probabilities indicate that the people making moves to improve their housing are not differentiated well by income levels or age. Although the frequencies indicate that 66% of Class 1 movers were under 75 years, the final probabilities suggest that the move is only slightly more probable for those under 75 than for those over this age. The final probabilities for the level of income also suggests that the proportions of Class 1 movers with high/average or low incomes are very similar. Therefore, it would not be appropriate to characterise these moves in terms of age or income.

### **(Class 2) Ill health/high levels of dependency**

This type of move accounted for 45% (N=98) of all moves, although the latent class probabilities estimated fewer people allocated to this class (41%). The final conditional probabilities indicate that this move is most likely to be short distance, and indeed the frequencies show that 96% of these moves were less than 50 miles.

The probabilities for TENPFAM indicate that the destination for the move is most likely to be residential care, with next highest probability indicating that moves may be made in with family (although this is not as likely as in Class 3 'familial/lower level of dependency' moves in which a majority of the moves are in with family members). The frequencies show that 52% of the moves were into residential care and 22% were in with other members of the family. All of the respondents who had moved into residential care were assigned to Class 2.

The final conditional probabilities indicate that Class 2 moves are most likely to be made by widowed people, and the frequencies show that approximately 75% of movers were in this category. The remaining 25% of these movers consisted of divorced people or those who were never married as it was estimated that none of the Class 2 moves would be made by married couples.

Both the conditional probabilities and the observed frequencies show that moves for ill health/high levels of dependency are almost entirely made by those over 75 (98%). They also indicate that the movers in this class are most likely to have a high/average income (81%).



### **(Class 3) Familial/lower level of dependency**

Although the latent class probabilities estimated that approximately 17% of moves were assigned to this class, the frequencies show that only 14% (N=30) of the movers were classified as making this type of move. The final conditional probabilities indicate that a majority of these moves were long distance, and the observed frequencies showed that 80% of the movers relocated over 50 miles.

The probabilities and frequencies for TENPFAM show that the destination for most people assigned to this class were in with family members (73%), although the move may also be made by home owners to within 50 miles of the nearest family member (25%). There were proportionally more people moving in with family members in this Class of move than any other. It was estimated that three quarters of this class were over 75 years old, and an inspection of the frequencies verifies that nearly 77% of the movers were in this age group.

The final conditional probabilities estimated that over two-thirds of people making “familial” moves were widowed and approximately one quarter were married. This was substantiated by the observed frequencies which demonstrated that 63% of Class 3 moves were made by people who were widowed and 30% by married couples. Estimates revealed that it was more likely that Class 3 moves would be made by people with high/average incomes, and indeed this was the case for 67% of the movers.

#### **(Class 4) Retirement/social**

Sixteen percent (N=27) of all moves were classified in this group, although it was estimated that a larger proportion of the sample would be assigned to Class 4 moves. The final conditional probabilities indicate that a majority of these moves were long-distance, although the proportion of observed long distance moves was greater than expected (79% vs. 65%). The estimated distribution of the Class 4 moves throughout the variable TENPFAM showed that a majority of the moves were made by home owners to destinations over 50 miles away from their nearest family member, and that proportionally half as many movers were home owners and renters moving within 50 miles of their families. This was corroborated by the observed frequencies, which demonstrated that 53% of the moves were made by home owners relocating over 50 miles away from their families; and 18% and 21% of the class was comprised of home owners and renters respectively both of whom moved within 50 miles of their families. There were no moves into residential care or in with family members.

Class 4 moves were most likely to be made by people under 75 years old (94%). The final probabilities for MARSTM showed that a majority of movers in this class were married couples, although it was estimated that approximately one third of the class was comprised of widowed people. The observed frequencies showed a slight variation from the probabilities but demonstrated that a majority of people moving in this Class were married (56%). Just over a third (35%) of people making retirement/social moves were widowed.

The final conditional probabilities estimated that two-thirds of movers making a retirement/social move had a high or average income. The observed frequencies substantiated the probabilities as approximately 65% of Class 4 movers had high or average incomes.

## ***SUMMARY***

Using the respondents' reasons for moving as a starting point, exploratory latent class analysis revealed that a four-class model of moves fitted the BLSA sample most adequately. The four types of move could be described according to the final conditional probabilities for variables within each class and in terms of the reasons that had originally been given for the moves:

- i) A short distance move to improve housing or environment. Movers are most likely to be renters moving within 50 miles of their families, and married couples.
- ii) A short distance move due to ill health made by people with a high levels of dependency, most likely to be into residential care. Movers are most likely to be over 75; widowed; and with a high or average income.
- iii) A long distance move made by people with lower levels of dependency, most likely to be in with family. Movers are likely to be over 75 years or age; widowed; and with a high or average income.
- iv) A long distance retirement move, most likely for home owners relocating over 50 miles away from their nearest family member. Movers are most likely to be under 75 years; married; and with high or average income.

Although this exploratory model of moves fits the data well, further analysis is required in order to test the adequacy of Litwak and Longino's' (1987) and Wiseman's (1980) typology of moves. Chapter 8 pursues this theme using confirmatory latent class analysis.

**TESTING LITWAK & LONGINO'S (1987) AND WISEMAN'S  
(1980) TYPOLOGY OF MOVES: CONFIRMATORY LATENT  
CLASS ANALYSIS**

***BACKGROUND***

It has been demonstrated in Chapter 2 that although several studies identify precipitating factors for a type of move e.g. institutionalisation (Sinclair et al. 1988, Harrop & Grundy 1991, Grundy 1992, Bear 1993), none of the frequently cited analyses in the arena of elderly residential mobility make attempts to analytically justify *all* of the types of moves proposed in either Litwak and Longino's (1987) or Wiseman's (1980) models.

In order to test the adequacy of Litwak and Longino's (1987), and Wiseman's (1980) typologies of moves in old age, confirmatory latent class analysis was undertaken. As with the exploratory latent class analyses, a set of observed variables are assumed to form a relationship that will categorise a latent variable. When latent class analysis is used in a confirmatory fashion restrictions are placed on the conditional probabilities of each variable or on the latent class probabilities in order to test a hypothesis. For example, to test Litwak and Longino's (1987) theory that the class of moves which is due to major chronic disability will only be into institutions, the conditional probabilities of the variable pertaining to house type (TENPFAM) would have to be restricted to include only those entering residential care, in the class that represented institutionalisation. TENPFAM would also be restricted in the other classes to exclude anyone that entered residential care. In this analysis the same variables and sample were used as in the exploratory latent class analysis.

## ***METHOD***

Table 8.1 indicates the characteristics that could be associated with each type of move as described by Litwak and Longino (1987) and Wiseman (1980).

**Table 8.1 Characteristics of each type of move as described by Litwak and Longino (1987) and Wiseman (1980)**

<b>Reference</b>	<b>TYPE OF MOVE</b>	<b>CHARACTERISTICS</b>
Litwak & Longino (1987)	Retirement	Intact marriage, healthy, 'enough' retirement income
	Moderate disability	Moderate disabilities that make activities of daily living difficult. Compounded by widowhood. Move towards children.
	Chronic disability	Move to institutional care. Limited kin resources, i.e.: Moderate disability and no children to care for them, or severe disability that overwhelms the carer.
Wiseman (1980)	Long distance amenity	Trigger: desire to change lifestyle to leisure oriented. High income. Married couples.
	Long distance assistance	Trigger: Need for aid from kin. Likely to be from rural areas towards metropolitan areas where kin are more likely to live (for employment).
	Long distance return migration	Not a clear distinction between this type of move and long distance amenity/assistance moves.
	Local amenity	Trigger: maybe a desire to change lifestyle to leisure oriented, or better housing, neighbourhood. Similar to long distance amenity but amenities available locally.
	Local environmental stress	Trigger: environmental push. Lower income than local amenity mover.
	Local assistance	Trigger: Need for assistance. Low income. Poor health, widowhood. May be a move into or close to kin, or into assisted or institutional setting.
	Local chronic	Trigger: Lifestyle of moving frequently. Renters.
	Local forced	Trigger: Eviction or crises such as flood, fire or unsafe housing. Low income.

The initial conditional probabilities for each level of the variables describing the latent classes were estimated from the descriptions of the types of moves given by the authors as follows:

**Initial conditional probabilities estimated for distance moved (DIST4) in Litwak & Longino's (1987) typology**

Litwak and Longino's (1987) retirement move is referred to as a long-distance retirement move, therefore it follows that the variable representing distance moved should have a higher probability of including those people who have moved further than 50 miles than those who have moved under 50 miles. The initial conditional probabilities for this variable were estimated to be 0.8 for those moving over 50 miles and 0.2 for those people moving under 50 miles. The remaining two types of moves (moves due to moderate and chronic disability) are not characterised by distance moved therefore the initial conditional probabilities are estimated as equal (0.5), that is there is a fifty per cent chance of the movers having moved under or over 50 miles in both classes.

**Initial conditional probabilities estimated for tenure and proximity of family (TENPFAM) in Litwak & Longino's (1987) typology**

The description of Litwak and Longino's (1987) typology in Chapter 1 indicates that the retirement move does not have to be to the proximity of the family although this does not preclude the possibility that this may occur. The retirement move will not be in with family, into sheltered accommodation or into residential care therefore the initial conditional probabilities for the categories of TENPFAM which represented these moves were estimated to be zero. Specific value constraints (conditional probability restrictions) were also imposed on these conditional probabilities to ensure that respondents in these categories would be excluded from this type of move. Litwak and Longino state that the retirement move is more likely to be made by home owners than renters. The initial conditional probabilities for the

remaining categories of variable TENPFAM reflect this distinction and were estimated at 0.3 for both categories of home owners and 0.2 for both categories of renters.

The move for moderate disability is assumed to be a move to the proximity of the family, therefore initial conditional probabilities were evenly<sup>35</sup> distributed between: home owners within 50 miles of their nearest family member; renters within 50 miles of their nearest family member; and living with family or in sheltered accommodation. All other categories were set at zero. Specific value constraints were imposed on the probability of entering residential care to ensure that all respondents who were admitted to residential care were only included in the third class of moves due to chronic disability.

As previously mentioned Litwak and Longino (1987) proposed that moves due to chronic disability would be into residential care. The initial conditional probabilities for this class of moves were set at zero for all categories of TENPFAM except the one which represented the respondents in residential care, which was set at one. Specific value constraints were imposed on the probability of entering residential care. This restriction, along with the restrictions in the other classes (which restricted the probability of a move into residential care to zero) ensured that all respondents who entered residential care would be assigned to moves due to chronic disability and were therefore mutually excluded from other types of move.

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<sup>35</sup> The probability of living with family or in sheltered accommodation is 0.01 higher than the categories of home owners within 50 miles of the nearest family member, and renters within 50 miles of the nearest family member, as the sum of the probabilities across the variable must equal one.

### **Initial conditional probabilities estimated for age (AGEMB2) in Litwak & Longino's (1987) typology**

It was estimated that people making retirement moves were more likely to be in the younger age category as Litwak and Longino (1987) proposed that the move is likely to take place at, or shortly after retirement. The initial conditional probabilities were estimated to be 0.8 for the people under 75 years old and 0.2 for the people who were aged 75 years of age. Litwak & Longino (1987) did not characterise moves due to moderate and chronic disability by age, therefore the initial conditional probabilities are estimated as equal (0.5), that is there is a fifty per cent chance of the movers being either under or over the age of 75.

### **Initial conditional probabilities estimated for marital status (MARSTM) in Litwak & Longino's (1987) typology**

Litwak and Longino (1987) proposed that retirement movers were most likely to be married. The initial conditional probabilities for MARSTM for retirement moves were estimated at 0.8 for those people who were currently married, with lower probabilities estimated to be 0.1 for those people who were widowed or never married/divorced.

Litwak and Longino (1987) suggested that moderate disabilities can be compounded by widowhood, it was therefore estimated that probability of people making moves due to moderate disability would be higher for those who were widowed than for married people. Although never married and divorced people do not have a spouse to help with household tasks, Litwak and Longino (1987) do not specify the likelihood of this group of people making moves due to moderate disability. In order to address this omission an assumption was drawn from other literature that suggests that people who have never married or who are divorced have stronger network ties than widowed people (Goldberg et al. 1986, Keith 1986). Therefore, it was assumed that people who were never married/divorced would



have a lower likelihood of moving due to moderate disability than those who were widowed. The probability of people who were married moving due to moderate disability would be lower than both the aforementioned categories. The initial conditional probabilities for moving due to moderate disability were estimated as 0.2, 0.5, and 0.3 respectively for married, widowed and never married/divorced people.

Litwak and Longino (1987) suggest that a move due to major chronic disability (into institutional care) happens when an older person is severely physically or mentally impaired and there are limited kin resources. It has been suggested that spouses provide the most comprehensive and least stressful support (Johnson 1983), for on average a longer duration overall than other family members, and for a greater number of hours per day (Montgomery & Kosloski 1994). Therefore, it was assumed that the probability of entering residential care would be highest for people without spouses, that is those people who were widowed or never married/divorced. The initial probabilities for both of these categories were estimated at 0.45, whereas the initial conditional probability of entering residential care for a married person was estimated at 0.1.

### **Initial conditional probabilities estimated for level of income (INC3) in Litwak & Longino's (1987) typology**

Litwak and Longino's (1987) retirement move is characteristically made by people who have "enough" income to undertake the move. It was estimated that the people undertaking this move would have a higher probability of a high or average income (0.8) than a low income (0.2). The remaining two types of moves (moves due to moderate and chronic disability) are not characterised by a particular level of income. The initial conditional probabilities are estimated as equal, that is there is a fifty per cent chance of the movers having either a high/average or low income

### **Latent class probabilities estimated for Litwak & Longino's (1987) typology**

Litwak and Longino (1987) did not estimate the proportions of people making each type of move, therefore the proportion of respondents falling into each class (latent class probabilities) were estimated as equal<sup>36</sup>. There were no equality restrictions placed on any of the latent class probabilities. The initial conditional and latent class probabilities for Litwak and Longino's (1987) typology are displayed in Table 8.2.

### **Problems with estimating the initial conditional probabilities for Wiseman's (1980) typology**

There were some problems encountered estimating the conditional probabilities for *all* of the moves defined by Wiseman (1980). Two of the moves could not be included in the analysis. Wiseman (1980) does not make a clear distinction between the long distance return migration move, and long distance amenity/assistance moves therefore it was not possible to calculate initial conditional probabilities. Long distance return migration would be classified as long distance amenity moves. Secondly, to define the local chronic move the analysis would need to include a variable that identified the residential career of the respondent. As data were not collected for residential careers prior to 1979, such a variable could not be constructed.

Examination of the data for repeated relocation during the 16 years of the study showed that 27 respondents had moved twice or more. Twenty-five respondents in this sub-group of movers had relocated due to increased frailty or need for assistance, that is they had moved to accommodation that was more suitably designed for accessibility with their level of physical ability (from a upper floor flat to a bungalow), in with family members, into sheltered housing, or into residential

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<sup>36</sup> The initial latent class probability for moves due to chronic disability is 0.0001 higher than the other classes as the sum of the probabilities across the classes must equal one.

**Table 8.2 Start values for conditional probabilities and latent class probabilities estimated from characteristics of Litwak & Longino's (1987) types of moves**

Variable	Level	Retirement	Moderate disability	Chronic disability
DIST4	50+ miles	.8	.5	.5
	<50 miles	.2	.5	.5
TENPFAM	Own/family < 50 miles	.3	.33	.0
	Own/family 50+ miles	.3	.0	.0
	Rent/family < 50 miles	.2	.33	.0
	Rent/family 50+ miles	.2	.0	.0
	With family/friends/assist. living	.0*	.34	.0
	Residential care	.0*	.0*	1.0*
AGEMB2	65-74	.8	.5	.5
	75+	.2	.5	.5
MARSTM	Married	.8	.2	.1
	Widowed	.1	.5	.45
	Never married/divorced	.1	.3	.45
INC3	High/average	.8	.5	.5
	Low	.2	.5	.5
Latent class probabilities		.3333	.3333	.3334

\* Restricted conditional probabilities.

care. Only two respondents in the sub-group may have been chronic movers. One of the respondents had moved in 1979 and 1987 to improve their housing situation, and another respondent had moved four times; three times to improve housing and finally into residential care. Although there may be a group of people that could be defined as 'chronic movers', which may have been identified by the inclusion of a variable indicating the residential career of the respondent, it appears that the number of people that this would apply to are very small in this sample, and relocation may be aptly subsumed under other types of moves.

It was decided to test a reduced version of Wiseman's (1980) typology using a six-class model, excluding 'chronic moves' and 'return migration'. The initial conditional probabilities for each level of the variables describing the latent classes were estimated from the descriptions of the types of moves given by the author as follows:

#### **Initial conditional probabilities estimated for distance moved (DIST4) in Wiseman's (1980) typology**

The estimation of the initial conditional probabilities for the distance moved in each of the classes in Wiseman's (1980) typology was straightforward. In the six-class model that was to be tested, Wiseman classifies two of the moves as long distance (long distance amenity and long distance assistance), therefore the initial conditional probabilities were estimated at 0.8 for those moving over 50 miles, and 0.2 for those moving under 50 miles. The remaining four classes were defined as local moves (local amenity, local assistance, local environmental stress and local forced) and the initial conditional probabilities were estimated as 0.8 for moves under 50 miles and 0.2 for moves over 50 miles.

### **Initial conditional probabilities estimated for tenure and proximity of family (TENPFAM) in Wiseman's (1980) typology**

The characteristics of the long distance amenity move (Wiseman 1980) were the same as the retirement move described by Litwak & Longino (1987); therefore the initial conditional probabilities for TENPFAM were also estimated to be the same. The probabilities were estimated as 0.3 for both categories of home owners, 0.2 for both categories of renters and zero for the remaining categories. Specific value constraints (conditional probability restrictions) were imposed on the zero probabilities to ensure that respondents that had moved in with their family, into sheltered housing or into residential care, would be excluded from this type of move.

Long distance and local moves for assistance are assumed to be to the proximity of the family or into residential care. The initial conditional probabilities for TENPFAM were evenly distributed between: home owners within 50 miles of their nearest family member; renters within 50 miles of their nearest family member; living with family or in sheltered accommodation; or into residential care (0.25). All other categories were set at zero.

Local amenity and local environmental stress moves are both described as moves for amenities. The probability of moving in with family, into sheltered accommodation or into residential care were estimated to be zero and specific value constraints were imposed on these estimations. The initial conditional probabilities were estimated to be 0.25 which ensured an even distribution through the remaining four categories (home owner within 50 miles of nearest family member; home owner further than 50 miles from nearest family member; renter within 50 miles of nearest family member; and renter further than 50 miles from nearest family member).

The local forced move is described as a moved due to eviction or other crises. Wiseman (1980) assumes that eviction was more likely for people in rented properties. Certainly for the sample from BLSA eviction would be more likely for renters as a majority of people living in owned houses had paid off their mortgages and were therefore not at risk of having their properties repossessed. It was estimated that the highest probability for TENPFAM would be in the rented categories which were estimated at 0.3 (for renters with families either less than or more than 50 miles away). The probability of living in sheltered accommodation (often rented) or moving in with family after a forced move was estimated to be slightly lower (0.2) than for those in rented accommodation. Although, as previously mentioned home owners were not likely to be subject to repossession by mortgage lenders, the possibility of a forced move due to other crises such as flood or fire could not be ruled out. It was estimated that these occurrences would be less likely than eviction from a rented property. The initial conditional probabilities for both categories of home owners were estimated to be 0.1. Finally, the initial condition probabilities for the category representing admission to residential care was estimated as zero. As Wiseman does not specifically exclude the possibility of entering residential care after a forced move the condition probability remained unrestricted, so that the iterative process was free to estimate final conditional values across all categories in the variable TENPFAM for this class.

### **Initial conditional probabilities estimated for age (AGEMB2) in Wiseman's (1980) typology**

The three amenity moves (long distance amenity, local amenity and environmental stress) are described by Wiseman in relation to each other highlighting the similarities and differences between the moves. As previously mentioned, the characteristics of the long distance amenity move (Wiseman 1980) were the same as the retirement move described by Litwak and Longino (1987) and therefore, the initial conditional probabilities were estimated to be the same. It was proposed that

the long distance amenity move was most likely to be made by people at, or shortly after retirement therefore the initial conditional probabilities were estimated to be 0.8 for the people under 75 years old and 0.2 for the people who were aged 75 years and over.

Wiseman (1987) describes the local amenity move as similar to the long distance move but states that it has less to do with the age of the mover and transition from employee to retiree. The initial conditional probabilities were estimated to be slightly lower for the younger age group making local amenity moves, than for the people making long distance amenity moves, that is, 0.7 for people under 75 years old and 0.3 for people aged 75 years and over.

The differentiation between local amenity moves and moves due to environmental stress are in terms of the triggers prompting the move and the level of income of the mover, not in terms of age. The initial conditional probabilities for the age of people moving due to environmental stress were estimated to be the same as for local amenity movers.

Wiseman and Roseman (1979) state that moves for assistance correspond with physical decline and the need for help and suggest that they may occur at any time, but the probability of making a move for assistance increases with age. The initial conditional probabilities for age for both long distance and local moves for assistance reflect this consideration and are estimated to be lower for people under 75 years (0.2) than for people aged 75 or over (0.8).

Local forced moves are involuntary and are not characterised by the age of the mover. The initial conditional probabilities are estimated as equal (0.5), that is there is a fifty percent chance of the movers being either under or over the age of 75.

### **Initial conditional probabilities estimated for marital status (MARSTM) in Wiseman's (1980) typology**

Wiseman (1980) proposed that long distance amenity movers are most likely to be married. The initial conditional probabilities for MARSTM for long distance amenity moves were estimated at 0.8 for those people who were currently married, with lower probabilities estimated to be 0.1 for those people who were widowed or never married/divorced.

Wiseman (1980) suggested that during all of the stages of the 'life cycle' moves are made for improved houses, gardens or neighbourhoods and in this context the local amenity move for some older people is no different than moves made by younger people. He also suggested that a local amenity move could also be made at the time of retirement for a more leisurely and recreationally oriented lifestyle if the amenities are close at hand and do not require a move of great distance. Although the local amenity move does not exclude people who are widowed or never married/divorced, it was estimated that people making local amenity moves were most likely to be married, although the probability of this would be lower than the probabilities estimated for long distance retirement moves. The initial conditional probabilities for MARSTM for local amenity moves were estimated at 0.6 for those people who were currently married, with lower probabilities estimated to be 0.2 for those people who were widowed or never married/divorced.

The differentiation between local amenity moves and moves due to environmental stress are in not stated in terms of marital status. The initial conditional probabilities for the marital status of people moving due to environmental stress were estimated to be the same as for local amenity movers.



The initial conditional probabilities for marital status for both moves for assistance were estimated to be the same as the probabilities estimated for Litwak and Longino's (1987) moves due to moderate disability. The initial conditional probabilities for making long distance and local moves for assistance were estimated as 0.2, 0.5 and 0.3 respectively for married, widowed and never married/divorced people.

Local forced moves are not characterised by the marital status of the mover. The initial conditional probabilities are estimated as equal<sup>37</sup>.

### **Initial conditional probabilities estimated for level of income (INC3) in Wiseman's (1980) typology**

Wiseman's (1980) long distance amenity move is characteristically made by people who have a high income. It was estimated that the people undertaking this move would have a higher probability of a high or average income (0.8) than a low income (0.2).

Local amenity movers are most likely to have "middle and upper incomes" (Wiseman & Roseman 1979). It was estimated that the initial conditional probabilities for income level would be slightly lower for those in the high income category than for people making long distance retirement moves. The probability of a high or average income was estimated at 0.7 and a low income estimated to be 0.3.

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<sup>37</sup> The probabilities are estimated as 0.3 for married people, and 0.35 for widowed and never married/divorced people. The slight variation is necessary, as the sum of the probabilities across the variable must equal one.

People making local moves due to environmental stress are proposed to be “less affluent” than people making local amenity moves (Wiseman & Roseman 1979). The initial conditional probabilities were estimated to be equal, that is 0.5 for people with a high/average or low income.

Wiseman (1980) states that moves for assistance can be for either financial or health needs. He says that moves maybe due to “chronic health problems or fixed income in the face of inflation” (Wiseman 1980). In light of this characteristic it was estimated that people making long distance or local moves for assistance were more likely to have low incomes. The initial conditional probabilities were estimated to be 0.2 for people with high or average incomes and 0.8 for people with low incomes.

Wiseman (1980) noted that forced moves are characteristically made by people with income restraints, that is they are most prevalent amongst renters and older people with low incomes. In order to reflect the possibility that forced moves may also be due to crises events such as fire or flood, which could occur to anyone regardless of income, the probabilities of having a low income and making a forced moves were slightly lower than for people making moves for assistance. The initial conditional probabilities were estimated to be 0.7 for people with low incomes and 0.3 for people with high or average incomes.

### **Latent class probabilities estimated for Wiseman’s (1980) typology**

In the first instance, the proportion of respondents falling into each class (latent class probabilities) for Wiseman’s model, were estimated as equal. The initial runs for this analysis suggested that this was not appropriate because the analysis resulted in 15% of the sample being allocated to the local enforced move. This type of move would only be expected for a small proportion of the sample as it would not be expected that a large proportion of the sample would be evicted from their

accommodation or be forced to move due to crises such as flood, fire or an unsafe building. As only 1.7% of the respondents that had moved gave enforcement as the motive for relocation, the latent class probabilities for the six-class model were restricted for the 6th class to ensure that only 2% of the sample would be allocated to this group. The distribution for the remaining five classes were not restricted and were free to vary across the classes. The six-class model with restrictions resulted in only three respondents from the sample being allocated to the local enforced move. It was unlikely that the inclusion of this sixth class would significantly improve the fit of the model compared to a five-class model. Therefore a five-class model that omitted the local enforced movement type was also tested and compared to the six-class model. The initial conditional and latent class probabilities for Wiseman's (1980) typology are displayed in Table 8.3

Litwak and Longino's (1987) three-class model was tested for goodness-of-fit to the BLSA data. As this particular latent class analysis is to determine whether the model adequately fits the data it is not appropriate to introduce classes individually and test at each addition. The five and six-class models based on Wiseman's (1980) typology were also tested. The  $L^2$  statistic was used to assess the goodness-of-fit. This shows if there is a statistical difference between the observed data and the theoretical model.  $p$ -values less than 0.05 show that there is a statistically significant difference between the data and the model and therefore the fit is not good, whereas  $p$ -values greater than 0.05 suggest there is not a significant difference and signify a better fit. The Bayesian Information Criterion (BIC) statistic was not used for Litwak and Longino's (1987) model as there was no comparison between competing models, but was used in the comparison of the Wiseman's (1980) adapted six and five-class models. The index of dissimilarity (ID) shows percentage of the sample that were misallocated by the theoretical model (Clogg 1995).

**Table 8.3 Start values for conditional probabilities and latent class probabilities estimated from characteristics of Wiseman' (1980) types of moves**

Variable	Level	Long distance amenity	Long distance assistance	Local amenity	Local assistance	Local environ- mental stress	Local forced <sup>38</sup>
DIST4	50+ miles	.8	.8	.2	.2	.2	.2
	<50 miles	.2	.2	.8	.8	.8	.8
TENPFAM	Own/family < 50 miles	.3	.25	.25	.25	.25	.1
	Own/family 50+ miles	.3	.0	.25	.0	.25	.1
	Rent/family < 50 miles	.2	.25	.25	.25	.25	.3
	Rent/family 50+ miles	.2	.0	.25	.0	.25	.3
	With family/friends/assist. living	.0*	.25	.0*	.25	.0*	.2
	Residential care	.0*	.25	.0*	.25	.0*	.0
AGEMB2	65-74	.8	.2	.7	.2	.7	.5
	75+	.2	.8	.3	.8	.3	.5
MARSTM	Married	.8	.2	.6	.2	.6	.3
	Widowed	.1	.5	.2	.5	.2	.35
	Never married/divorced	.1	.3	.2	.3	.2	.35
INC3	High/average	.8	.2	.7	.2	.5	.3
	Low	.2	.8	.3	.8	.5	.7
	6-class model Latent class probabilities	.196	.196	.196	.196	.196	.02 <sup>†</sup>
	5-class model Latent class probabilities	.2	.2	.2	.2	.2	

\* Restricted conditional probabilities

† Restricted latent class probabilities

<sup>38</sup> This class was omitted for the five class model

## RESULTS

Table 8.4 shows the goodness of fit statistics for Litwak and Longino's (1987) three-class model and Wiseman's (1980) six-class model. The  $L^2$   $p$ -value for the three-class model is less than 0.05 which indicates that the model differs significantly from the data. The  $p$ -values for the five and six-class demonstrate that both the models fit the data well, but the lower BIC of the five-class model suggests that this model should be chosen in preference. The ID shows that approximately 19% of the sample have been misallocated in both five and six-class models. The five-class model based on Wiseman's (1980) typology was accepted as the one that fitted the data most adequately.

**Table 8.4 Latent class models of Litwak and Longino's (1987) and Wiseman's (1980) relocation types using five indicators.**

Model size	$L^2$	df	p	BIC	ID
<b>Complete independence:</b>					
One class	270.06	143	<0.0001		
<b>Litwak &amp; Longino's model:</b>					
Three classes	125.3	122	<0.0001		.249
<b>Wiseman's model:</b>					
Five classes	87.36	104	.88	-472.16	.188
Six classes	82.12	98	.88	-445.12	.187

Table 8.5 shows the final conditional probabilities for Litwak and Longino's (1987) three-class model. Although the model does not fit the data well the final conditional probabilities display the characteristics that would be expected for moves due to moderate and chronic disabilities, but not for long-distance retirement moves. The data for class one, which had initial conditional probabilities that were characteristic of the retirement move, shows that retirement moves for this sample, are more likely

to be short distance than long distance, and as likely to made by renters as home owners. The latent class probabilities indicate that it was estimated that 43% of the moves were classified as retirement moves, 34% were allocated to the category of moderate disability and 24% were assigned to chronic disability.

**Table 8.5 Final conditional probabilities and latent class probabilities for Litwak and Longino's (1987) three-class model of relocation.**

Variable	Level	Class 1 Retirement	Class 2 Moderate disability	Class 3 Chronic disability
DIST4	50+ miles	.3281	.2851	.0588
	<50 miles	.6719	.7149	.9412
TENPFAM	Own/family < 50 miles	.3191	.1177	.0000
	Own/family 50+ miles	.2493	.0000	.0000
	Rent/family < 50 miles	.3665	.2500	.0000
	Rent/family 50+ miles	.0650	.0000	.0000
	With family/friends/assist. living	.0000	.6322	.0000
	Residential care	.0000	.0000	1.0000
AGEMB2	65-74	.6660	.1865	.0392
	75+	.3340	.8135	.9608
MARSTM	Married	.5801	.1855	.0000
	Widowed	.3063	.6699	.7059
	Never married/divorced	.1136	.1446	.2941
INC3	High/average	.5937	.7317	.8039
	Low	.4063	.2683	.1961
Latent class probabilities		.4270	.3368	.2361

Table 8.6 shows the final conditional probabilities for Wiseman's (1980) five-class model. As noted in Chapter 7, the final conditional probabilities indicate the probability that a person who has moved will score a particular way on each of the observed measures for each type of move. Consequently, the characteristics of each of the classes can be interpreted from the final conditional probabilities.

A majority of the final conditional probabilities are very similar to the initial conditional probabilities and maintain the characteristics of the classes described by Wiseman (1980), *but a minority differ from the initial model thereby changing the description of the classes*. As in Chapter 7, the following descriptions of each class are based on the relationships between the variables that are identified by the final conditional probabilities, rather than 'observed' scores for the respondents assigned to each class. The probabilities that are most important in characterising each class are shown bold print in Table 8.6. The 'observed' frequencies for each class are displayed in Table 8.7 and are examined with regard to their correspondence with the final conditional probabilities. As in Table 8.6 the frequencies that are most important in characterising each class are shown in bold print.

**Table 8.6 Final conditional probabilities and latent class probabilities for  
Wiseman's (1980) five-class model of relocation**

Variable	Level	<b>Class 1</b> Long distance amenity	<b>Class 2</b> Long distance assistance	<b>Class 3</b> Local amenity	<b>Class 4</b> Local assistance	<b>Class 5</b> Local environ- mental stress
DIST4	50+ miles	<b>.9148</b>	.5448	.0697	.0868	.2682
	<50 miles	.0852	.4552	<b>.9303</b>	<b>.9132</b>	<b>.7318</b>
TENPFAM	Own/family < 50 miles	.0921	.2263	.2309	.0017	<b>.4798</b>
	Own/family 50+ miles	<b>.8360</b>	.0000	.1841	.0000	.0264
	Rent/family < 50 miles	.0000	.2035	<b>.5370</b>	.0029	<b>.4140</b>
	Rent/family 50+ miles	.0719	.0000	.0480	.0000	.0798
	With family/friends/assist. living	.0000	<b>.5702</b>	.0000	.2925	.0000
	Residential care	.0000	.0000	.0000	<b>.7028</b>	.0000
AGEMB2	65-74	<b>.9294</b>	.3622	.3958	.0348	<b>.8258</b>
	75+	.0706	<b>.6378</b>	<b>.6042</b>	<b>.9652</b>	.1742
MARSTM	Married	<b>.6371</b>	.3253	.2867	.0000	<b>.9917</b>
	Widowed	.2173	<b>.6727</b>	.4940	<b>.7101</b>	.0093
	Never married/divorced	.1456	.0019	.2193	.2899	.0000
INC3	High/average	<b>1.0000</b>	.5951	<b>.7066</b>	<b>.8193</b>	.3079
	Low	.0000	.4049	.2934	.1807	<b>.6921</b>
	Latent class probabilities	.0635	.2012	.2719	.3360	.1276



**Table 8.7 Observed frequencies for variables, and distribution of latent classes for Wiseman's (1980) five-class latent model of relocation.**

Variable	Level	Class 1 Long distance amenity	Class 2 Long distance assistance	Class 3 Local amenity	Class 4 Local assistance	Class 5 Local environ- mental stress
		N=12 %	N=35 %	N=65 %	N=75 %	N=29 %
DIST4	50+ miles	<b>100.0</b>	77.1	1.5	6.7	31.0
	<50 miles	0.0	22.9	<b>98.5</b>	<b>93.3</b>	<b>69.0</b>
TENPFAM	Own/family < 50 miles	0.0	20.0	23.1	0.0	<b>55.2</b>
	Own/family 50+ miles	<b>91.7</b>	0.0	18.5	0.0	0.0
	Rent/family < 50 miles	0.0	17.1	<b>55.4</b>	0.0	<b>34.5</b>
	Rent/family 50+ miles	8.3	0.0	3.1	0.0	10.3
	With family/friends/assist. living	0.0	<b>62.9</b>	0.0	32.0	0.0
	Residential care	0.0	0.0	0.0	<b>68.0</b>	0.0
AGEMB2	65-74	<b>91.7</b>	40.0	35.4	2.7	<b>93.1</b>
	75+	8.3	<b>60.0</b>	<b>64.6</b>	<b>97.3</b>	6.9
MARSTM	Married	<b>58.3</b>	31.4	30.8	0.0	<b>100.0</b>
	Widowed	25.0	<b>68.6</b>	49.2	<b>72.0</b>	0.0
	Never married/divorced	16.7	0.0	20.0	28.0	0.0
INC3	High/average	<b>100.0</b>	57.1	<b>72.3</b>	<b>81.3</b>	31.0
	Low	0.0	42.9	27.7	18.7	<b>69.0</b>
% of sample in each latent class		5.6	16.2	30.1	34.7	13.4

The characteristics of the classes can be interpreted from the final conditional probabilities as follows:

**(Class 1) The long distance amenity move**

Only 5.6% (N=12) of the sample made this type of move, which is a slightly lower proportion than estimated by the latent class probabilities (6%). As its name suggests, the move is most likely to be greater than 50 miles. The frequencies showed that all of the people that were assigned to this class moved further than 50 miles.

The move is most likely to be made by home owners, who relocate over 50 miles away from their nearest family member. The final conditional probabilities for TENPFAM are corroborated by the 'observed' frequencies which indicated that 92% of the movers were home owners who relocated further than 50 miles away from their families.

The final conditional probabilities show that the 'long distance amenity move' is made overwhelmingly by those people under 75 years old. The 'observed' frequencies indicate that 92% of this category were in this age group. 'Long distance amenity movers' are more likely to be married than widowed or never married/divorced, although the proportion of married people in this class (58%) was slightly lower than the estimated probabilities (64%). Both the conditional probabilities and the frequencies indicate that all of the people allocated to this class have a high or average income.

## **(Class 2) Long distance moves for assistance**

Sixteen per cent of the sample (N=35) were assigned to Class 2, which represented long distance moves for assistance. The initial conditional probabilities estimated that 80% of these moves would be over 50 miles in distance. The final conditional probabilities estimated that just over half of this class made a long distance move. Although the frequencies show that 77% of the class were observed to have made a long distance move, it has to be remembered that approximately 19% of the sample may be misallocated to latent classes. Therefore, it is more appropriate to use the final conditional probabilities to define the characteristics of the class.

As the *initial* conditional probabilities for the long distance move for assistance were identical to the local move for assistance, apart from the probabilities for distance moved. The two classes were examined to determine why the respondents that appear to have made short distance moves were not classified as such.

## **Comparison between (Class 2) Long distance assistance and (Class 4) Local assistance moves**

Thirty-four percent (N=75) of the sample were assigned to Class 4 which accounted for the largest proportion of moves. As indicated above it would not be appropriate to define Class 2 moves in terms of distance moved as the probabilities of moving less than, or greater than 50 miles are evenly distributed. However, Class 4 moves are predominantly short distance, 93% of the moves were less than 50 miles in distance.

Class 2 moves for assistance were made by home owners and renters to within 50 miles of their relatives (20% and 17% of the class respectively), but the destination for a majority of the moves were estimated to be in with the family or into sheltered housing with a warden. Sixty three percent of Class 2 movers relocated to the latter destination. The final conditional probabilities suggested that 29% of the local moves

for assistance (Class 4) were in with family or assisted living accommodation, and 70% were into residential care. The frequencies show little discrepancy with these estimations as 32% of respondents assigned to Class 4 moved in with family members or into assisted accommodation, and 68% were admitted to residential care. These findings indicate that whereas Class 2 moves are most likely to be made in with family members, or into sheltered accommodation, Class 4 moves are most likely to be into residential care.

The final conditional probabilities estimated that both Class 2 and Class 4 moves would be predominantly made by people over 75 years of age, but in Class 4 there would be proportionally more people in this age group. The frequencies show that 60% of Class 2 moves were made by people over 75 compared with 97% of Class 4 moves. Although both types of move are most likely to be made by people over the age of 75, there is a younger age profile for Class 2 movers.

One other difference between these two types of move is found in the marital status of the movers. For Class 2 movers both the final conditional probabilities and the observed frequencies indicate that approximately one-third of the class were married and two-thirds were widowed, whereas the Class 4 moves for assistance were made only by unmarried people, that is 71% widowed and 29% never married/divorced. Although Class 2 and Class 4 movers are most likely to be widowed an examination of the features of the other members of the classes reveal differences, primarily that other Class 2 movers maybe married, whereas the estimations suggest that Class 4 movers are not married.

The final conditional probabilities indicate that the income levels of the people in Class 2 were evenly distributed, whereas people making Class 4 moves were likely to have high or average incomes. The observed frequencies showed that 57% of Class 2 movers had high/average income compared with 81% in Class 4.

From the examination of the characteristics of each type of move that can be interpreted from the final conditional probabilities it appears that Wiseman's characterisation of the moves for assistance in terms of 'long-distance' and 'local' are inappropriate for this model. The descriptions of the two classes are more appropriately framed in terms of age, dependency and marital status rather than distance moved. Therefore, it seems inappropriate to continue to use the original names for these moves which do not describe the types of relocation made by people in the BLSA sample. For the remaining chapters of this thesis, on the basis of the values for the final conditional probabilities, the class of 'long distance moves for assistance' will be called 'moves for low level of assistance', and 'local moves for assistance' will be called 'moves for high level of assistance'. A synthesis of the characteristics for each type of move for assistance are presented below.

#### **(Class 2) Moves for low levels of assistance**

'Moves for low levels of assistance' are either long or short in distance. The move is most likely to be in with family, friends or assisted living accommodation. The movers are most likely to be over 75 and widowed. However, compared to the characteristics of Class 4 movers, a greater proportion of Class 2 movers are younger, also a larger proportion are married.

#### **(Class 4) Moves for high levels of assistance**

'Moves for high levels of assistance' are short distance. The move is most likely to be into residential care. The movers are most likely to be over 75 and widowed. Movers in this Class are also likely to have high/average incomes. Compared to Class 2 movers, a greater proportion of Class 4 movers are older and a larger proportion of the Class have never married or are divorced.

### **(Class 3) Local moves for amenities**

Thirty percent (N=65) of the moves were classified as local moves for amenities.

This was the second largest class in terms of the proportion of the sample assigned to it. The final conditional probabilities indicated that a majority of local moves for amenities were less than 50 miles in distance. The frequencies showed that 99% of the moves were short distance. These moves were most likely to be made by renters relocating within 50 miles of their families (55%), although a smaller proportion of the class were home owners who relocated with 50 miles of their relatives (23%) or home owners relocating further away from their families (18%). None of these moves were into residential care or in with other family members. This type of distribution would be expected considering that the motive for the move is assumed to be better housing or environment rather than the consideration of proximal family.

The conditional probabilities indicated that movers were most likely to be over 75 years. The frequencies showed that 60% of movers were over 75 years of age.

A fairly even dispersion of probabilities for marital status indicates that this variable *alone* cannot be used to differentiate this class. However, it is perhaps worth noting that a majority of movers were widowed (49%) and the marital status of the remaining respondents were married (31%) and never married/divorced (20%).

The final conditional probabilities indicated that the level of income of people making local moves for amenities was more likely to be high or average than low. This was corroborated by the observed frequencies as 81% of Class 3 movers had high or average incomes.

### **(Class 5) Local environmental stress**

The latent class probabilities estimated that 13% of the moves were classified as moves due to local environmental stress which was verified by the observed frequencies. The final conditional probabilities showed that a majority of the moves were for less than 50 miles. The observed frequencies denoted that 69% of Class 5 moves were for less than 50 miles.

Examination of the conditional probabilities for TENPFAM revealed that the move was most likely to be made by home owners or renters moving within 50 miles of their families. This was borne out by the observed frequencies which showed that 55% of the sample were home owners and 35% were renters who were relocating to within 50 miles of their families. In comparison with the other types of moves, the move for local environmental stress contained the largest proportion of home owners who lived within 50 miles of their families. None of the moves were made in with family members, into sheltered accommodation or residential care.

The conditional probabilities showed that movers were most likely to be under 75. In addition movers were likely to be married. Indeed, the class contained that largest proportion of married people. After assignment of respondents to classes it could be seen that 93% of the movers in this class were under 75 years, and all of them were married.

As predicted by Wiseman (1980) the conditional probabilities showed that people making moves due to environmental stress were more likely to be in the lower income category than those who moved for amenities (69% vs. 28% respectively). In fact, compared to the all other types of moves, Class 5 had the largest proportion of movers with low incomes.

There are interesting differences between the 'long distance amenity move' (Class 1) and the move due to 'environmental stress' (Class 5). Proportionally over twice as many respondents made a move due to 'environmental stress' (13%) compared to those making 'long distance amenity moves' (6%). The conditional probabilities show that both moves are predominantly made by married couples under 75 years of age. Whereas the 'long distance amenity move' is made by those with high incomes, the 'narrow choice local amenity move' is made by married couples with low incomes. These moves could succinctly defined as short distance moves to within 50 miles of family members, made by married couples, under 75 years old with low incomes.

## ***SUMMARY***

The confirmatory latent class analysis in this chapter has tested the goodness of fit to the BLSA data for Litwak and Longino's (1987) three-class model of moves and an adapted version of Wiseman's (1980) model.

Litwak and Longino's (1987) three-class model did not fit the BLSA data well. A comparison between the adapted five-class and six-class versions of Wiseman's (1980) model showed that the five-class model fitted the BLSA data most adequately. The final conditional probabilities for each class in this model indicated that the characteristics of the five classes were somewhat different to those proposed by Wiseman (1980). It appears that the two classes that Wiseman (1980) called long distance and short distance moves for assistance would be more appropriately framed in terms of age, dependency and marital status, rather than categorised by the distance moved.



## THE CORRESPONDENCE BETWEEN MOTIVES FOR MOVING AND TWO TYPOLOGIES OF MIGRATION: CHOOSING A MODEL

The exploratory latent class analysis and the confirmatory latent class analysis resulted in two different models producing an acceptable fit to the data. The exploratory four-class model was more parsimonious than Wiseman's (1980) five-class model. In addition, the characteristics that could be defined from the final conditional probabilities of the five-class model differed somewhat from the characteristics of Wiseman's (1980) typology. On the other hand, Table 9.1 shows that the  $p$ -value for the five-class model was higher than for the four-class model, and the ID indicates that fewer people were misallocated in the former. Rather than relying on these contradictory qualifications to ascertain the suitability of the models further analysis was executed.

**Table 9.1 Latent class models of Wiseman's (1980) and "Reasons for moving" relocation types using five indicators.**

Model size	$L^2$	df	p	BIC	ID
<b>Reasons for moving model:</b>					
Four classes	94.95	107	0.79	-480.71	.206
<b>Wiseman's adapted model:</b>					
Five classes	87.36	104	0.88	-472.16	.188

## ***METHOD***

All of those in the sample who had relocated and did not have missing data for reasons for moving or for any of the variables used in latent class analysis (N=209) were assigned to one of four classes for the exploratory latent class model and one of five latent classes for the confirmatory model. Respondents with identical scores on the variables used in the analysis are assigned to the same latent class. Assignment of latent classes is carried out on a cell-by-cell basis from the original cross-tabulation of the scores. PROG MLLSA calculates the probability of inclusion in each of the classes in the model, for the observations in each cell. Cell assignment to a latent class is made using the modal probability.

In order to ascertain whether the classifications could adequately determine the *motives* prompting relocation, it would have been ideal if both models could be tested for association with the grouped reasons for moving. This would allow a comparison between models to see which formed the strongest association with the stated motives for relocation. Unfortunately there are no tests of association which could allow direct comparison between the different models. Tests of association such as the Phi coefficient, the coefficient of contingency and Cramér's V are based on the chi-square statistic itself (Norušis 1993). Although the tests will result in a figure which can be used to assess the association between a model and a variable, it could not be used to compare to the strength of association that resulted from a cross-tabulation with a different model and the same variable. It was therefore necessary to examine the individual cells in the cross-tabulation of the four-class model with reasons for moving, and the five-class model and reasons for moving.

It would be expected that the cross-tabulation for the exploratory four-class model would result in an association between the latent classes and the grouped reasons for moving. It was predicted that the majority of the Class 1 (**improve housing/environment**) would have given 'improve housing' as a reason for move; Class 2 (**ill health/high levels of dependency**) would cite 'ill health' as a motive for moving; Class 3 (**familial/lower level of dependency**) would say that they moved for 'familial reasons'; and Class 4 (**retirement/social**) would move for 'retirement' or 'social reasons'.

Expectations about classification for the five-class model were based on the descriptions of each movement type. Therefore, it was expected that those who made **long distance amenity moves** (Class 1) or **local amenity moves** (Class 3) would either have said that they moved for 'retirement' or to 'improve housing'; people making moves for **low levels of assistance** (Class 2) or **high levels of assistance** (Class 4) could be expected to give 'ill health' or moving 'near to their families' as a motive for relocation; and those who made moves due to **environmental stress** (Class 5) would be most likely to have cited 'better housing' as a motivator.

By looking at the percentage of each class that fall into the cells that have been defined above as being expected to contain the highest percentage of the class, it would be possible to determine how adequately the classes in the models predicted the motives for the type of move. An average percentage of 'correct' allocation could be arrived at by summing the percentages allocated to these cells, and dividing by the number of classes in each model. It may appear that the five-class model has an unfair advantage over the four-class model in determining the average percentage of the classes that correspond with the expected motives, as two categories were chosen for Classes 1 to 4 as representing those that were expected to contain the greatest allocation. Wiseman (1980) described the motives for making Class 1 and 3 moves as 'amenity-seeking', which could translate into either seeking improvement

in housing and environment, or retirement being stated as a motive for relocation. In a similar vein, it would be expected that the motive for moves for assistance would be either a need to move closer to the family, or ill health. It was expected that even with two categories selected for expected allocation for the five-class model, that the four-class model would perform better in association with the grouped variable 'reasons for move' as the initial conditional probabilities for the latent classes were based on the characteristics of these groupings.

## ***RESULTS***

The results of the cross-tabulation of the four-class model with reasons for moving are displayed in Table 9.2. Only 45.95% of the sample stated the reasons that were expected given the class that they were allocated to. The retirement/social move (Class 4) made a particularly large contribution to the misallocation, only 17.6% of this class gave retirement as a reason for relocation. Over half the class said that they moved to improve their housing or environmental conditions. The four-class model does not accurately predict the motives behind the types of moves.

**Table 9.2 Respondents in each latent class of the four-class model of relocation cross-tabulated with reasons for moving.**

Latent classes:	Class 1 Improve housing/ environment  (N=53) %	Class 2 Ill health/high levels of dependency  (N=94) %	Class 3 Familial/lower level of dependency  (N=28) %	Class 4 Retirement /social  (N=34) %
Reasons for moving:				
Improve housing	45.3	22.3	28.6	52.9
Ill health	3.8	63.8	7.1	2.9
Familial	20.8	10.6	57.1	14.7
Retirement/social	24.5	2.1	0.0	17.6
Other	5.7	1.1	7.1	2.1

----- Indicates cells where largest percentage of each class was expected.

Table 9.3 displays the results of the cross-tabulation of the five-class model with reasons for moving. On average 69.42% of each type of move were allocated to the class that would be expected given the reasons that they had stated for relocation. The percentages ‘correctly’ allocated ranged from 91.6% in Class 1 to 37.9% in Class 5. From these results it can be seen that the assumptions that had been made about the stated motives for moves were more likely for certain classes than others. ‘Long distance amenity moves’ are overwhelmingly made for improvements in housing and environment or for retirement and therefore for this class it would be appropriate to assume that these are the most common motives for the move. Although ‘moves for low levels of assistance’ were made by 55.8% of the class due to ill health or to be close to the family, 35.3% also stated that they moved for better housing.

The fifth class, the move due to environmental stress also showed some discrepancies in expected allocation. Although 37.9% moved to improve their housing 27.6% said that they had moved to be near their families and 20.7% had moved for their retirement. It appears that the reasons given for moving by respondents in this class are similar to those given by people making long-distance amenity moves and local amenity moves.

One of the major differences for respondents making Class 5 moves was their limited financial resources, that is it was more likely that they were renters and had low incomes. It was therefore decided it would be more appropriate to rename this category as **narrow choice local amenity moves**. The category that had been called local amenity moves would be called **wide choice local amenity moves**. The post-hoc adaptation improves the fit of motivation to the classes of move considerably. With the inclusion of the reason for moving as 'retirement/social' for the 'narrow choice local amenity move', 58.6% of the class were allocated to the category that would be expected. This in turn improves the overall average percentage of each type of move which were allocated to the class that would be expected given the reasons that they had stated for relocation from 69.42% to 73.56%. Even without the post-hoc adaptation, overall it appears that the five-class model can distinguish the reasons for types of moves more accurately than the four-class model. In addition the five-class model fitted this sample slightly better than the four-class as the *p*-value and ID indicated. On this basis it was decided to accept the five-class model as the most adequate model.

**Table 9.3 Respondents in each latent class of the five-class model of relocation cross-tabulated with reasons for moving**

Latent classes:	Class 1 Long distance amenity  (N=12) %	Class 2 Low level of assistance  (N=32) %	Class 3 Wide choice local amenity  (N=65) %	Class 4 High level of assistance  (N=69) %	Class 5 Narrow choice local amenity  (N=31) %
Reasons for moving:					
Improve housing	58.3	35.3	56.5	8.3	37.9
Ill health	8.3	2.9	6.5	80.6	3.4
Familial	0.0	52.9	16.1	8.3	27.6
Retirement/social	33.3	0.0	16.1	1.4	20.7
Other	0.0	8.8	4.8	1.4	10.3

----- Indicates cells where largest percentage of each class was expected.

..... Indicates post-hoc adaptation.

## SUMMARY

The four-class exploratory model and five-class confirmatory model were tested to see which one more accurately determined the motives prompting relocation. As there are no appropriate tests of association which can be used to determine which model is more strongly associated with a particular variable, the adequacy of each typology was established by an examination of cross-tabulation of the models with reasons for moving.

On average 69% of those assigned to one of the five classes in the confirmatory model had been allocated to the group of reasons for moving that would be expected, compared to only 46% of respondents when assigned to one of the four classes in the exploratory model. With the re-definition of the class of move that Wiseman (1980) had called 'environmental stress' to 'narrow choice local amenity moves', on average 74% of those assigned to one of the five classes in the confirmatory model had stated the reason for moving that would be expected. Therefore, the five-class model (which included the moves: 'long distance amenity'; 'wide choice local amenity'; 'narrow choice local amenity'; 'low level of assistance'; and 'high level of assistance'), adapted from Wiseman's (1980) typology, distinguished the motives prompting each type of move more accurately than the four-class model.



## **SERVICE PROVISION PRIOR TO ENTRY INTO RESIDENTIAL CARE: ASSESSING THE ADEQUACY OF HEALTH AND SOCIAL CARE IN THE COMMUNITY**

This chapter tests an assumption made by Litwak and Longino (1987); that formal service provision is insufficient for people with major chronic disabilities and these inadequacies will play a part in the institutionalisation of older people. In order to test this hypothesis a comparison between those who entered residential care (including nursing homes and other institutions) and those people remaining in the community was made. This chapter looks at forty people from the BLSA who between 1979 and 1995 became institutionalised. Their pathways into residential care are examined and their need for help with activities of daily living, help with household tasks and formal service visits to their home prior to their admission to residential care, are compared with those of seventy-seven people who were aged eighty three and over and still living in the community in 1995.

### ***METHOD***

In 1995 seventy-seven people were interviewed in the community and eighteen in residential care<sup>39</sup>. The sample of people in residential care was made up of the eighteen people interviewed in 1995 and twenty-two interviewed in 1987 (see Appendix I for 1987 questionnaire). The data were compared for these forty people in residential care and the seventy-seven respondents age 83+ who were living in the community in 1995.

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<sup>39</sup> Includes residents in nursing homes.

The data used in the analyses were collected for home visits in the previous 6 months for those in the community and 6 months prior to the last interview before admission for those in residential care, from doctors, district or community nurses, chiropodists, local authority and private home helps, meals on wheels, social workers and clergymen.

Receipt of help with household tasks at the last measurement point prior to entry into residential care was compared with the help that the community sample were receiving in 1995 for shopping, cleaning, cooking, laundry, ironing, making fires, gardening, decorating and household repairs.

As the data used for respondents in residential care regarding home visits and the receipt of help with household tasks were taken from the last measurement point prior to entry it is noted that these may not have been an accurate representation of these services. Services will not have been recorded if they were introduced after the interview and before admission to residential care.

All other data for those that had moved into residential care were taken from the residential care interviews in 1987 or 1995. At all interviews, data were recorded for difficulties with thirteen activities of daily living: bathing or washing all over, washing hands and face, putting on shoes and stockings, doing up buttons or zips, getting dressed (other than above), using the toilet, getting in or out of bed, feeding oneself, shaving or brushing hair, cutting toenails, getting up and down steps, getting around the home, and going out. Questions were asked to ascertain self-rated health; whether the respondent had any health related limiting conditions; or was housebound. Respondents in residential care were asked why they had been admitted to the institution and those in the community were asked whether they had considered entry into residential care.

Statistically significant differences between the sample in the community and those in residential care were assessed using the Pearson Chi-squared test.

## ***RESULTS***

### **Activities of daily living and health status**

Table 10.1 shows the distribution of difficulties with ADL's. These are listed in descending order of percentage, for those in residential care who had difficulty with the ADL. The ADL that presented difficulty for most older people in both residential care and in the community was cutting toenails (83% and 66% respectively). A high proportion of both samples also experienced difficulty with going out alone (55% in residential care and 40% in the community). The ADL that presented difficulty to the smallest percentage of the sample was feeding oneself, with only 5% of both samples having difficulty. Although a higher proportion of the sample who entered residential care experienced difficulties with all activities of daily living prior to admission (except feeding themselves), the levels were only significantly greater than those in the community, for four activities. These were dressing, using the toilet, getting out of bed and putting on shoes and stockings. It can be seen that the most significant difference was for using the toilet: nearly a third of the people who entered residential care experienced difficulty compared to only 7% of people in the community.

**Table 10.1 Difficulties with activities of daily living.**

<b>Activities of daily living:</b>	<b>Residential Care N=40 %</b>	<b>Community N=77 %</b>	<b>Pearson Chi- squared (1 d.f.)</b>	<b><math>\chi^2</math> P values</b>
Cutting toenails	83	66	3.11	0.08
Going out alone	55	40	2.13	0.14
Bathing or washing all over	53	34	3.64	0.06
Putting on shoes or stockings	43	20	6.80	0.009
Getting up or down steps	43	38	0.16	0.69
Using the toilet	30	7	11.49	0.0007
Getting dressed	28	12	4.50	0.03
Getting in or out of bed	28	10	5.51	0.02
Getting around home	28	14	2.89	0.09
Doing up buttons or zips	23	12	2.27	0.13
Shaving or brushing hair	18	12	0.71	0.4
Washing hands and face	13	7	1.17	0.28
Feeding self	5	5	0.004	0.95

Table 10.2 shows the distribution for self-assessed health status. A higher percentage of people who remained in the community reported that their health was excellent, good or all right whereas those in residential care were significantly more likely to consider their health to be fair or poor (Pearson Chi-squared 11.69; d.f. 3;  $p=0.008$ ). Even though people in residential care were more likely to consider that their health was fair or poor they had not been significantly more likely than community dwellers to be housebound (23% vs. 13% respectively) or to have medical conditions that limited their activities (78% vs. 61% respectively).

**Table 10.2 Self-assessed health**

	<b>Residential care</b>	<b>Community</b>
<b>State of health:</b>	N=34 %	N=76 %
Excellent	50	53
Good or alright	18	38
Fair	27	7
Poor	6	1

Table 10.3 shows the distribution of the interviewers' assessment of the respondents' cognitive state. The interviewers assessed whether the respondents were impaired in their ability to respond to the questionnaires by either confusion, memory loss or lack of concentration. A significantly higher percentage of people who were in residential care were rated by interviewers as experiencing cognitive impairment that impeded the interview compared to those who remained in the community (52.8% vs. 11.7% respectively; Pearson Chi-squared 22.22; d.f. 1;  $p < 0.0001$ ).

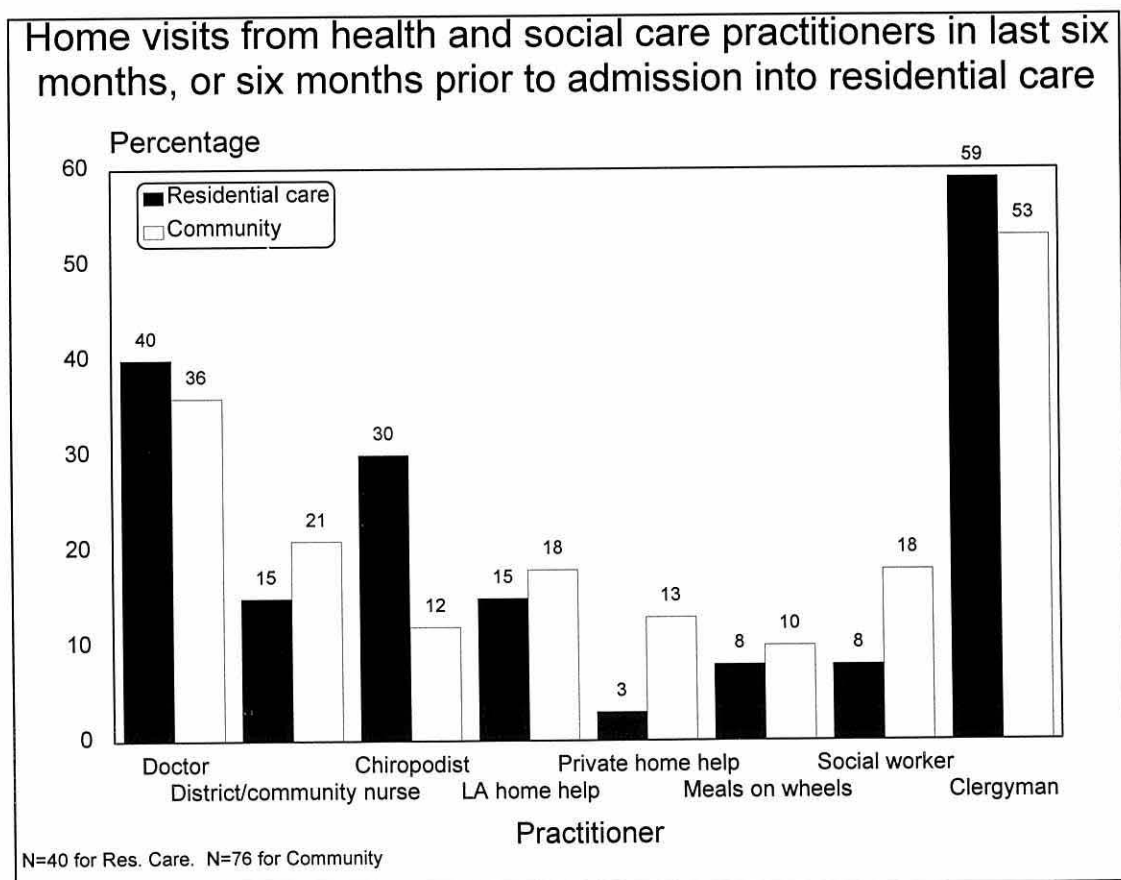
**Table 10.3 Interviewer-assessed cognitive impairment**

	<b>Residential care</b>	<b>Community</b>
<b>Cognitive impairment:</b>	N=36 %	N=77 %
Yes	52.8	11.7
No	47.2	88.3

## Home visits: health and social care services

Figure 10.1 shows the distribution of home visits from health and social care practitioners. A higher proportion of those *remaining* in the community received home visits from a majority of health and social services. Although those entering residential care experienced greater difficulty with activities of daily living the proportion that obtained help from either local authority or private home helps was lower than for those remaining in the community. Those entering residential care received slightly more visits from the general practitioner and clergyman. Clergymen were the most frequent visitors to either group. Fifty percent of the residential care sample had received a visit at home as had 53% of the community sample. Pearson Chi-squared tests revealed that the only significant difference in the percentage of visits received by either group were for chiropodists who visited more homes of those subsequently entering residential care ( $p<0.05$ ).

**Figure 10.1**



## Help with household tasks

The percentages for those who received help with household tasks are shown in Table 10.4 in descending order of percentage of receipt of help for those who entered residential care. Levels of help were similar for both samples for a majority of tasks. Pearson Chi-squared test indicated that those who entered residential care were significantly more likely to receive help with making fires than those remaining in the community ( $p=0.007$ ), but the latter group receive more help with household repairs ( $p<0.0001$ ).

**Table 10.4 Receipt of help with household tasks**

Household task:	N <sup>1</sup>	Residential care %	Community %	Pearson Chi- squared (d.f.1)	x <sup>2</sup> P values
Decorating <sup>2</sup>	37;58	70	51	0.77	0.38
Household repairs	36;73	65	95	22.33	<0.0001
Shopping	38;74	53	57	0.18	0.67
Gardening	35;74	40	55	1.16	0.28
Laundry	37;74	38	40	0.02	0.89
Ironing	37;74	33	34	0.00	1.0
Cooking	38;74	28	25	0.14	0.71
Making fire	31;74	20	7	7.31	0.007
Cleaning <sup>3</sup>	20;74	18	47	1.18	0.28

<sup>1</sup> N= Residential care: Community. Analysis of those respondents without missing values.

<sup>2</sup> Lower level of response from those in the community than for other tasks.

<sup>3</sup> Help with cleaning for those that entered residential care is not a reliable measure as data were only collected in 1983 and 1987.

## Entering residential care

The logistic regression analysis in Chapter 6 demonstrated that three categories of respondents were most likely to enter residential care: those aged 75 or over, in fair or poor health and widowed  $\leq 5$  years; 75 or over, in fair or poor health and widowed  $>5$  years; and 75 or over, in fair or poor health and never married or divorced.

Residents in the care facilities were asked why they had moved. They could give more than one answer and Table 10.5 shows the percentage of responses (N=51) given for each reason. By far the most frequent response (31%) was that relocation was for medical reasons. Sixteen percent of the replies were that they were no longer able to look after themselves. Two other categories each accounted for 12% of answers, these were; problems with mobility; and confusion or senility. Eight percent of responses cited carers who were no longer able to bear the burden.

**Table 10.5 Reasons for admission to residential care**

Reason for admission:	N=51 (responses)
	%
Medical reasons	31
Unable to look after self	16
Mobility	12
Confused/senile dementia	12
Carer at work/ill/unable to cope	8
Falling	8
Doctor's advice	8
Unable to look after spouse	4
Companionship	2

N.B. Column does not add to 100% due to rounding to nearest integer.



The people who were still living in the community in 1995 were asked if they had contemplated moving into residential care. Sixty-nine percent gave a definite rejection to the question. Only 26% had conceived of a possible stay in a care facility and no-one found relocation to residential care desirable. Five percent of respondents were unwilling or unable to answer.

## ***SUMMARY***

The most significant differences found between the situations of those that entered residential care, prior to their entry, versus those remaining in the community were self-assessed health, cognitive impairment and difficulties with four specific activities of daily living (dressing; using the toilet; getting in/out of bed; and putting on shoes and stockings). Although 50% of respondents in residential care said that their health was “excellent”, overall the people in long term care facilities considered their health to be worse than those people who remained in the community. As would be expected more of the people in residential care experienced problems with confusion, memory, and lack of concentration which was used in this study as an indication of cognitive impairment. A greater percentage of the people that had entered residential care had experienced difficulties with dressing, putting on shoes and stockings, getting in or out of bed and going to the lavatory.

It was expected that levels of help with household tasks and home visits from health and social care practitioners would be raised prior to admission to counter the inability to manage activities of daily living, however, this was not demonstrated by the findings. This analysis revealed that the levels of health and social care prior to admission were surprisingly low and comparable to, or lower than the levels of home care for those who had not entered residential care. These findings may not be an accurate representation of service provision as data were not recorded if services were introduced after the interview phase and before admission to residential care.

The data for 'reasons for admission' showed that the most common was for medical conditions (31%) which combined with the Doctor's advice (8%) perhaps indicate that home nursing care was being under-utilised.

It appears that the US finding of Litwak and Longino (1987) that formal service provision is insufficient for people with major chronic disabilities can be extrapolated to the United Kingdom. Although they assumed that it was the quality and rigidity of formal services that would prove to be inadequate for older people, the findings from this analysis suggest that it is also the quantity, that is the lack of an increase in service provision prior to admission to residential care, that may play a part in institutionalisation. The implications of these findings will be discussed in Chapter 12.

# **OLDER PEOPLE'S EXPERIENCES OF MOVING AND STAYING PUT: INTEGRATING QUALITATIVE AND QUANTITATIVE PERSPECTIVES**

The preceding chapters have used logistic regression to model the probability of a move taking place and latent class analysis (LCA) to determine the number and types of classes that most adequately fit the data. These tools of analyses inevitably mean that some of the richness and diversity of the motivations behind residential mobility is lost. In order to counter this limitation this discussion introduces qualitative data from intensive interviews with some of the respondents between 1983 and 1987 and observations from the interviewers' reports throughout the study that illustrate some of the quantitative findings from the preceding chapters.

Intensive interviews with thirty respondents were conducted by Professor G. Clare Wenger over a four-year period, from 1983 to 1987. The interviews were taped and the conversations were transcribed. For this chapter the transcriptions were examined for references to housing conditions and residential relocation. In addition to this source of qualitative data, interviewers' reports from throughout the study were also examined for the same references. Although a majority of the interviews were conducted by interviewers employed solely for this purpose, in 1995 the author also took part in interviewing respondents.

This chapter is organised into sections which discuss in turn, residential stability and residential mobility. In Chapter 6 logistic regression models predicted the people who were most likely to move. The results showed that a majority of the sample did not move, therefore, it is important to examine reasons for residential stability in tandem with residential mobility. However, as mentioned above, logistic regression

cannot reveal the ‘motivations’ for older people’s relocation or stability. For this purpose the qualitative data that highlighted reasons for *staying put* are used to illustrate the decision-making process that might be employed by older people. The findings are discussed with reference to the degree of fit with Wiseman’s (1980) theoretical model of elderly migration processes (see Chapter 1, Figure 1.3). An adapted model is developed to fit the findings of the BLSA.

The second part of the chapter examines residential mobility. This chapter uses qualitative data to illustrate the motives for *moving* for each type of move identified using LCA in Chapter 8. The results of the logistic regression analysis and LCA are integrated with the qualitative data, and are fitted to the author’s theoretical model of the migration process of older people.

In order to conceal the identity of the respondents and maintain confidentiality, the names of the respondents and their houses have been altered.

### ***RESIDENTIAL STABILITY***

In Chapter 6 the logistic regression models predicted the people who were most likely to move. The results showed that a majority of the sample did not move, and that the overall odds of moving were low. Therefore, it is important to examine reasons for residential stability in tandem with residential mobility. For this purpose Wiseman’s theoretical model of elderly migration processes is used to illustrate the decision-making process that might be employed by older people, and to highlight some of the factors that affect their decisions.

Wiseman's (1980) model assumed that everyone is a potential migrant and that their current living situation is continuously re-evaluated with respect to their needs, desires, resources and the perception of what the final outcome (of moving or not moving) will yield. This assumption is supported with evidence in the qualitative data which indicated that some respondents were assessing their living situation in terms of benefits and costs of moving, sometimes recognising that their current position may change in the future. There is the suggestion that there needs to be a trigger, or a factor that will outweigh the decision to stay put and necessitate a move. This is expressed by Miss Evans who at the time of the interview managed without help from anybody, but recognised that a time might come when she would no longer be able to cope on her own:

“So far, so far [I can manage]. I say, it's to an old people's home I'm going, isn't it? When we fail, isn't it?”

Mr. Williams was also thinking about the future and the possibility of failing health:

“I think you start deteriorating when you get round about the fifty mark. I did. I started finding things difficult. I could see the lads were going to leave home, like they do. So I said to the wife, ‘We can't stay here because it's going to be too big for us’ and she said ‘I realise that’. [She] had high blood pressure. I said to her, ‘What's wrong with us leaving here and having a bungalow?’”

The qualitative data also showed that the ‘costs’ of moving that are weighed against the benefits of moving, are multifarious. These ‘costs’ could be cited as reasons for residential stability for a majority of the older people in the BLSA. Analysis of the transcripts from intensive interviews with respondents gave an indication of some broad classifications of these ‘costs’ such as; reticence or inability to expend the

physical and mental energy required during the upheaval of moving; material culture and attachment to home; joint decision-making and confining relationships; community ties and social networks; and suitability and availability of alternative housing.

### **The upheaval of moving**

A frequently cited reason for residential stability is the reticence or inability to manage the upheaval and stress associated with relocation. The literature suggests that loss of friends, change of community and a change in amount of contact with family can negatively affect self-esteem and cause stress in younger populations (Dohrenwend & Dohrenwend 1974, Gaylord & Symons 1986, Luo & Cooper 1990, Martin 1995, 1996). The effect of relocation on older people is controversial. Hasselkus (1978) found that in older populations, men were more susceptible to stress than women were but other findings suggest the opposite (Brand & Smith 1974). Likewise, contradictory evidence has been produced about the effect that relocation of older people has on mortality rates (Wittels & Botwinick 1974, Rowland 1977, Danermark & Ekstrom 1990). The results of some studies suggest that stress is dependent on how voluntary the move is (Schulz & Brenner 1977, Bourestom 1984), with those making voluntary moves experiencing no more stress than non-movers (Storandt & Wittels 1975).

These findings are similar to those for younger populations such as adolescents, which suggest that stress depends on the individual's perception of moving (Pittman & Bowen 1994). At least one study has demonstrated that the individual characteristics of the older person are important in determining whether they will experience stress during residential relocation (Heller 1982). Some indication of the differing perceptions of what a move would entail are expressed by respondents in the following extracts. Mr. Bevan was keen to relocate whereas other respondents were more reluctant.

Mr Bevan:

“... despite my 84 ½ years I would move to, say, North Wales if the right bungalow in the right area were to crop up.”

An interviewer wrote that Mr. and Mrs Morris were reluctant to relocate:

“The question of giving up [their home] has come up in recent times, but the sheer enormity of packing up everything and financing alternative accommodation has defeated them and they eventually decided to finish their days at the house they love, and have lived in for so long”

Mr. Hughes didn't want an upheaval of moving house after he had a stroke:

“I don't feel like setting up house again, now...I'd rather stay here”

A response by Mrs Richards was typical of many of the respondents:

“I'm too old to change [house] now.”

### **Material culture & attachment to home**

In addition to 'upheaval' being perceived as an inhibiting factor in relocation, respondents have also mentioned attachment to personal possessions or their home and garden as constraining residential relocation. Some respondents were loathe to move to smaller properties as it would mean the loss of material possessions. Mr. and Mrs. Davies reflected that they had too much furniture to fit in a bungalow and they didn't want to part with it, as they had owned it for 34 years. Another respondent was adamant that she would not surrender any more of her possessions:

“Every time we move I lose a good half of my possessions. This can’t go, and that can’t go, and that can’t go... I’m long in the tooth and the things I love, I love. I don’t want a modern piece of art or a modern suite, and I don’t want to leave things. I’m not moving again.”

Material possessions may be especially important to women as a study has found that they are more likely to symbolise emotional attachment and interpersonal relationships than men’s possessions (Dittmar 1991). Possessions may help people maintain historical continuity by supporting their memories, they can also highlight important roles in the person’s life, or symbolise sources of social support (Csikszentimihalyi & Rochberg-Halton 1981, Kamptner 1989, 1991, McCracken 1987, Wapner et al. 1990). Studies have indicated that a lack of cherished possessions is associated with lower life satisfaction scores (Sherman & Newman 1978), and that more women have cherished possessions than men (Wapner et al. 1990).

Kamptner (1989) found that ‘homes’ themselves were often referred to as the ‘most important’ possession of older people. Throughout Europe (with the exception of Greece and the United Kingdom) it has been found that the pension system is the most important factor that makes older people feel financially secure. In the United Kingdom and Greece older people said that their houses were the source of their financial security. The monetary value of property to the home owner seems to be particularly important in the United Kingdom as older people are more likely to rate the state pension poorly than any other EU country as a measure of financial security (Walker & Maltby 1997).



Although the home and the garden could have similar symbolic functions as possessions such as familiarity and a locus of importance for meaningful life events, or represent financial security, the attachment to a residence may also be due to the importance of the home in facilitating independence (Kummerow 1980, O'Bryant 1983, Fogel 1992, Langan et al. 1996). O'Bryant and Murray (1986) found that non-movers were more likely than movers to feel that their houses demonstrated their competence.

As mentioned in Chapter 1 (see figure 1.2) when independence in the home becomes threatened, adaptation of the home may ensue to maintain an environment which matches the decline in functioning abilities of the person (Kahana 1975, Nachison & Leeds 1983, Ellingham et al. 1984, Brink 1985, Hoglund 1985, Filion et al 1992, Moen & Wethington 1992). Some of the respondents in BLSA adapted their homes in order to maintain their independence in the preferred place of residence. These were not always structural alterations or even 'low-tech' adaptations (Regnier et al. 1992; see Chapter 2). In some instances it was sufficient to re-arrange the living space to make it more accessible. For example, Mrs. Jones felt she was too incapacitated to remain in her own home and "threatened to leave" and go into residential care. Her friends and family "were frightened to death" and persuaded her to stay. They brought her bed downstairs and she said, "it's a big help." She had no bathroom downstairs but she stated that:

"These kids are very good with the commode and that sort of thing."

Mrs. Jones had an outside lavatory at the back of her house and she thought that it was good for her to walk out there, although she did admit that it was not as convenient as it was upstairs. She washed at the kitchen sink. She said:

“ It’s working really well. I would rather be home here than go to a [residential care] home. That’s definite. If it’s possible. Well now then, if I’m staying home, I must have somebody [a home help] more full-time. I don’t want to be, ‘Oh she’s incapacitated, she’ll have to go to a home.’ I’m going to fight it for a bit.”

Mackintosh and Leather (1992) found that the most commonly required home adaptations are specially designed kitchens, bathrooms or toilets, and hand-rails. Some of the respondents in the BLSA required adaptations due to declining health. Some alterations were straightforward such as the installation of a shower for Mrs. Probert who said that she needed one because she couldn’t get out of the bath. Other respondents needed larger scale alterations, and financial help in achieving this. In 1979 Mr. Hughes’s bathroom facilities included a big tin bath in front of the fire and an outside toilet. He did not consider moving from his present house, although to avoid the harsh winters he stayed at his sister’s house for three months of the year.

“We don’t get any snow over there, you know, when you come up here it’s thick.”

By 1984 Mr. Hughes’s sister had installed a storage heater in the dining room where his bed was situated, as the previous winter he had been very cold.

“I was cold, very cold. I kept getting chills one on top of the other. And the heater [electric fire] - well you can’t have it going day and night as well can you? You can’t really. I used to find it cold in the morning”.

In 1984 Mr. Hughes had not improved his bathroom facilities but he had applied for a grant to put in a bathroom, or shower room in the cottage. He had had plans drawn up and was waiting for planning permission. He was dependent on the district nurse to help him with washing:

“The district nurse comes three sometimes four times a week and I get a wash down. She says its a very long time to go without a sponge down or a wash. Because I used to do it myself the same as the miners used to with a tin bath in front of the fire. But, she says its too dangerous to keep mucking about with the hot water in the kettle and pouring in there - and then you’ve got to empty it.”

At that time he had to rely on a brush and a shovel to sweep away snow or frost to get out to the lavatory. He said that when it got frosty he put a pair of socks over his shoes so that, “You don’t slip”. By 1986 the interviewer reported that:

“[Mr. Hughes] was pleased to show me the alterations to the cottage. New bathroom with shower, kitchen rebuilt and floor raised to same level as living room, bedroom altered and ramp built to back door so he has no steps to deal with.”

### **Joint decision-making**

Adaptation of the home or relocation did not always occur if the decision to move or stay put was negotiated within a relationship. It was apparent that some respondents were constrained by their spouses in their attempts to relocate when the ‘costs’ of moving or staying put may be construed differently by each partner. Sometimes it appeared that the decision was a joint one, with one member of the dyad willing to consider the other member’s wishes. Mrs. Pritchard discusses the reasons that she didn’t move, which take into account the feelings of her husband.

“We should have had [a decision to make] this time last year. A bungalow near [my son]. We had it on our minds. We couldn’t sleep, we couldn’t eat, and we were both in a right state. But, one day [my husband] came down and said ‘I’ve made a decision, I’m not moving.’”

Mrs. Pritchard agreed with her husband that they should remain where they were. Mr. Pritchard’s health worsened, he started displaying signs of senile dementia and was admitted to hospital. Mrs. Pritchard decided that she should remain in familiar surroundings in case his health improved again and he could come home at weekends.

A study of retired couples in rural locations in the USA has shown that joint decision-making by husband and wife leads to the satisfaction of the wife in retirement (Dorfman & Hill 1986). On the other hand, in Britain a study has found that couples, especially wives, were happier if the husband dominated the decision-making, but excessive domination reduced the wife’s satisfaction (Weisfeld et al. 1992). It has been shown elsewhere that as the length of time spent cohabiting increases, relationships are more likely to develop rules of dominance in decision-making (Kirchler 1993). Although respondents in the BLSA refer to joint decision-making, at times it is difficult to assess if one member of the dyad has taken more responsibility for the choice. It appears from an interviewer’s comments that Mr. and Mrs. Evans were beginning to encounter difficulties coping in their accommodation and would have been happier moving to a one storey home.

“They are thinking of moving for two main reasons. The stairs are getting difficult and they are thinking of the future, and they do not enjoy the winter. [The village] is high and gets bad snow, so they would move lower down. Mr. Evans is a keen gardener and his garden is beautiful - he would hate to see that go wild because he couldn’t manage it any longer.”

It is not possible to determine from the previous extract to what extent the decision to move or stay put was negotiated or coerced. However, the following passage illustrates a relationship in which it is apparent that the wife was manipulated into staying in accommodation which was inadequate for her or her husband’s needs. The interviewer described the Owens’ housing situation in 1979:

“The Owens live in a small secluded stone farm house set in a picturesque but overgrown dell. Their stone outhouses are in a poor state of repair: walls are beginning to crumble; slates are falling off the roof. At the end of the garden partly hidden by the long grass, is the Owens’ former mode of transport, an old Wolsley...”

The entrance to their bathroom and toilet was outside the house and the interviewer reported that going outside at night worried Mrs. Owen.

“She told me she keeps a hay-pitchfork in the house, to protect them. It only needs a door through from the living room to the toilet, only she said her husband doesn’t want the upset of it.”

Neither Mr. nor Mrs. Owen were in good health and both had disabilities that limited their functional abilities.

“Mr. Owen is virtually housebound - an excursion to the coal shed is almost totally exhausting. His contribution to the domestic routine is negligible. All the domestic chores are undertaken by Mrs. Owen, who in addition, has to tend to her husband who is in a very poor state of health. He has a severe chest complaint and goes through painful spasms of not being able to catch his breath... His body gives him so much discomfort that he stated that he wished he could “peg it out”.”

“Mrs. Owen is partly crippled due to a double curvature of the spine and arthritis. She cannot lift her arms up very high, due to the curvature, and manages by lifting one arm with the other.”

“The nearest village is approximately three miles away, along a narrow winding country lane. It is not accessible by bus. It is possible to catch a bus to [the nearest large town] by walking a mile down the lane to the main road. In short the Owens’ 28 acre small-holding, idyllic though it may be, exacerbates the problems that they face in their attempt to battle on against, what appear to be, insuperable difficulties.”

The social worker commented on the difficulties that Mrs. Owen had coping in her home:

“Now he [Mr. Owen] is adamant that he is going to end his day there, there is no way he is going to move... but as soon as he does die there’s no doubt she’ll be re-housed as high priority. How she copes there I’ll never know. She showed me how she switched on a light... She stands with one leg on the step and the other one on the other level and she forces her arm up to the switch.”

Mrs. Owen's son found a suitable bungalow for the couple which was situated near his home. Mrs. Owen wanted to move but her husband refused to. He attempted suicide in order to convince her that he did not want to move.

"Oh, dear me, you never saw such a disgrace in your life... Even put a plastic bag on his head. I turned round and found him. I just snatched it off. It upset me the first time, so when [my son] had been and said about [the bungalow], he did it again. So, I just took it off and put it on the fire and never said a word. So, it was a very upsetting time for me."

Mrs. Owen told her son about these events and he told her to leave her husband. Mrs Owen replied:

"I said, 'I couldn't. I couldn't.' So that's it. There are some things you just keep to yourself, but it's just like a child that sits down and kicks its heels until it gets its own way... You've just got to cope with these things as they come along and thank God, I've been able to, that's all I can say."

Understandably, after these events Mrs. Owen did not want to broach the subject of moving again with her husband. This example suggests that joint decision-making about residential relocation is not always straightforward. If one member of the dyad is adamant about their decision then there may be little room for the other member of the dyad to negotiate. However, it is not inevitable that the resulting housing situation is unacceptable to one of the members of the dyad. In Chapter 1 it was suggested that when non-moving is involuntary the individual whose wishes to relocate are not fulfilled may have to make some personal adjustments, that is reconstruing the current housing situation to one that gives satisfaction (Lawton 1983).

### **Community ties and social networks**

In addition to considering decision-making within the *marital* relationship, other important relationships also play a part in decisions associated with relocation. The ties to a community and the social networks therein can affect a person's decision to relocate or stay put. A large proportion of the literature on social networks focuses on their role in the support of older people in the community (Burholt & Wenger 1997, see also; Berkman 1983, Coe et al. 1984, Cole 1985, James & Davies 1987, Depner & Ingersoll-Dayton 1988). Although kin support was mentioned by some of the respondents as a reason for moving it was not mentioned as a factor *constraining* residential relocation. On the other hand, *friendship* networks were considered when making decisions about staying put. Mr. and Mrs. Davies were adamant that they would not move from the village because they knew no-one in the villages where they had been offered bungalows. Mrs. Davies said:

“I want to spend the rest of my days here if I can. If they put me somewhere else I've no friends or no anything.”

Mr. and Mrs. Morgan were considering a 'long distance amenity move' until they realised that they couldn't leave their friends:

“We used to think we'd retire to Dorset, but when it come to retirement age we realised that all our friends were here and all [Mr. Morgan's] interests were in Wales.”

Studies have found that the role of friends is especially important for the psychological well-being of older women (Jerrome 1981, Lewittes 1988, Lubben 1988), although there is some indication that for those over 70, old men are especially vulnerable to psychological distress when losing the support of friends (Matt & Dean 1993). It has been found that contact with family members has little



impact on morale or life satisfaction for older people, but contact with friends and neighbours is related to less worry and loneliness and greater feelings of usefulness and satisfaction (Arling 1976, Wood & Robertson 1978, Goudy & Goudeau 1981, Lee & Ishii-Kuntz 1987, Mullins et al. 1987, Mullins & Mushel 1992, O'Connor 1995).

### **Suitability and availability of housing**

Bearing in mind that some older people want to remain in the community in which they have established social networks, the lack of proximal suitable housing alternatives can become an exogenous factor inhibiting relocation. Availability of local housing specially designed for older people in some rural Welsh communities seems to be an obstacle to those wishing to move, as sheltered housing may be located several miles away from the person's social network. Butler et al. (1983) found no evidence to support claims that sheltered accommodation helps to combat loneliness in old age and suggested that residents in these facilities maintained relationships that had been established prior to relocation. Public transport in rural areas is not abundant and therefore does not facilitate travelling between towns to visit former friends. In addition, a preference to remain outside a village but in special housing is not an option as the site of the accommodation is usually near to facilities such as shops and doctors' surgeries (Butler et al. 1983). This reasoning is typically built on the claims of administrators that are not backed by evidence, such as,

“With very few exceptions, there is nothing elderly people like less than being in a remote situation.”

(Bessell 1975; quoted in Mackintosh & Leather 1992)

This sentiment is not echoed by some of the older people in rural communities who may have had a life long experience of living in isolated areas. For example, Mrs. Jenkins lived in an isolated cottage approximately one and a half miles from the nearest village. She did not want to move into a town and therefore could not consider sheltered housing. When she spoke to her relatives about a possible move her son-in-law commented:

“You would hate a place with the door opening on the road.”

The size of specially designed housing also played a part in some of the respondents’ decisions to relocate to them. Policy makers have assumed that older people want ‘compact’ houses that are easy to maintain and heat (Butler et al. 1983). This is not always what older people require as Mrs. Probert points out:

“A lot of these places are small. I’d hate to be squashed into small living accommodation”

The perception of the suitability of housing stock is also a factor that prevents some people relocating into certain types of housing. Some respondents mentioned the negative connotations of ‘old age’ associated with specially designed accommodation. As sheltered housing tends to segregate older people from the rest of the population it is perhaps not surprising that for some people they have become stigmatised (Butler et al. 1983). Mrs. Huws noted:

“It’s partly psychological, because I wouldn’t want... you have your pride you see. I wouldn’t want anyone to say I lived in an older persons’ bungalow. It sounds so awful. It’s people’s attitude that is all wrong. I’ve got a friend now, living in one. She’s exactly the same as me, she lived up on the hills, and her husband died, but unfortunately she herself has arthritis, and one of these bungalows came vacant and she applied for it. That’s quite right she should have it. But I wouldn’t want one. I wouldn’t go into one... no... But it’s the idea that I should tell people I’m in sheltered accommodation, it sounds so awful doesn’t it. A lot of old people are much more competent and capable than young people are. I mean I walk miles with that dog.”

Special accommodation for older people is also associated with the end of life. Mr. Snow commented on moving into sheltered housing:

“It’s like waiting for death.”

This may be a valid comment as Mr. Bevan, who was already living in sheltered accommodation noted:

“The residents are very friendly and all ‘pass the time of day’ with one another sometimes having a short chat. However, it could be most depressing if you were not able to face it, for almost weekly someone goes into a mental home, into geriatric care, or dies.”

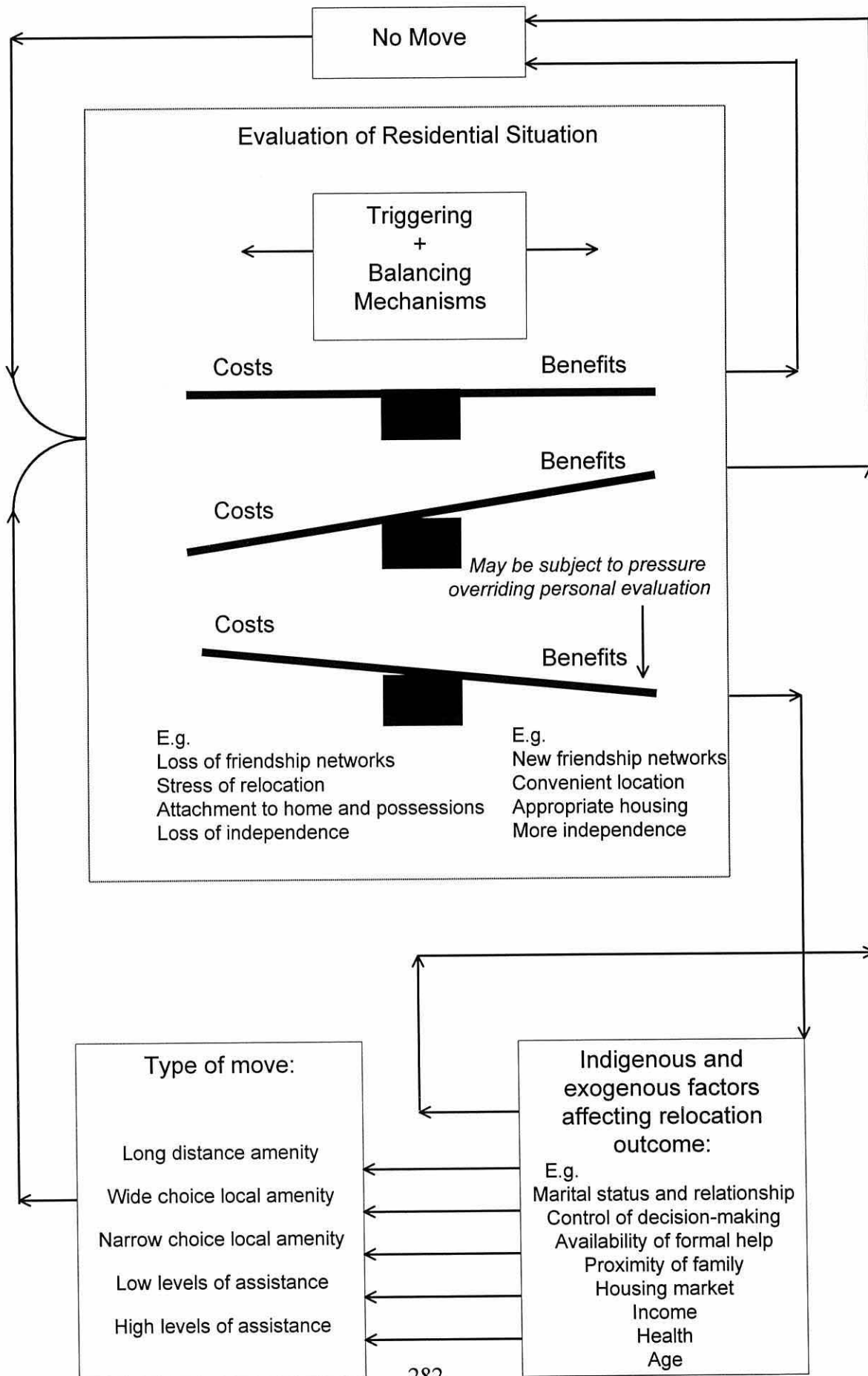
In addition to the lack of suitable local housing and the negative perceptions of certain types of accommodation constraining relocation, a person wishing to make a long distance move, perhaps back to established friendship networks may find that the housing market can also hinder residential mobility. Mr. Bevan and his partner were both keen to move back to North Wales as their friends lived there and they

“preferred the atmosphere.” They were unsatisfied with their current housing because they were unable to go for walks without having to go through the suburbs first. They had been unable to sell their sheltered accommodation and in 1995 they had three sales fall through. Mr. Bevan said:

“I would move to, say, North Wales if the right bungalow in the right area were to crop up. However, such a miracle is not to be expected.”

The above reasons for non-movement of older people, that is, reticence or inability to expend the physical and mental energy required to undertake a move; material culture and attachment to home; joint decision-making and confining relationships; community ties and social networks; and suitability and availability of alternative housing, have been referred to as ‘costs’ that are balanced against the ‘benefits’ associated with residential relocation within the framework of Wiseman’s (1980) model. These ‘costs’ fit into the theoretical model of elderly migration process as indigenous and exogenous factors considered during the decision-making process after a triggering mechanism is encountered (see Figure 1.3). However, Wiseman regarded all people as potential migrants with the current living situation being continuously re-evaluated in terms of ‘costs’ and ‘benefits’ of moving. In the absence of a trigger and when the ‘costs’ and ‘benefits’ of moving were balanced the potential migrant would proceed no further around the model. In the presence of a trigger, after re-evaluating the ‘costs’ and ‘benefits’ the outcome may still be no move. The model can therefore be simplified to represent a continual evaluation of ‘costs’ and ‘benefits’ in the presence of triggering and balancing mechanisms (Figure 11.1).

**Figure 11.1 Theoretical model of the migration process of older people**



The inclusion of balancing mechanisms allows for the personal readjustment of individual's perceptions of 'costs' and 'benefits' for people who cannot move, and housing adaptations of those people who desire to remain in their own home, but who required alterations in order to address environmental incongruence. Although these were included in Wiseman's (1980) original model it appears that they are not correctly placed within the process of relocation. People making housing adaptations desire to stay in their own home and are redressing the imbalance in 'costs' and 'benefits' in order that they may comfortably remain in place. In the same way people who are forced to remain in their own homes may attempt to attach different values to 'costs' and 'benefits' in order to balance the situation.

When the 'benefits' of moving outweigh the 'costs' then a move is considered. The outcome of this process is determined by indigenous and exogenous factors facilitating or impeding the move. It seems appropriate to refer to factors that facilitate residential stability in a different manner than those that restrain desired movement. It can be seen from the preceding paragraphs that some of reasons for non-movement would fit into the model at the stage of 'evaluation of residential situation,' that is, the reticence or inability to expend the physical and mental energy required to undertake a move; material culture and attachment to home; community ties and social networks; and, perceived suitability (but not availability) of alternative housing. On the other hand, enforced decision-making in a confining relationship and the lack of available alternative housing, would be assimilated under the indigenous and exogenous factors affecting relocation outcome.

In the aforementioned examples the last two situations resulted in a non-move. In the model the person would return to the evaluation of their residential situation. In order to balance the evaluation they may adapt their housing or alter their personal perception of the situation. If this does not occur then a desire to relocate would remain. From this perspective it can be seen that as Wiseman (1980) proposed there

are two types of non-movers, voluntary and involuntary. Voluntary non-movers are those whose evaluation of the residential situation is balanced, or tipped in favour of staying put. Involuntary non-movers are those people whose evaluation of the residential situation is unbalanced in favour of the 'benefits' of moving, yet are constrained from achieving relocation by indigenous or exogenous factors.

### ***RESIDENTIAL MOBILITY***

The logistic regression in Chapter 6 indicated which people in the BLSA were most likely to move. With reference to the model of the migration process of older people, the results predicted for whom it was most likely that the 'benefits' of moving outweighed the 'costs', and who proceeded with a move after encountering indigenous or exogenous factors that would either facilitate or constrain a relocation. Before moving on to discuss the qualitative data that illustrated the motives for each type of move identified by latent class analysis, it is important to note that there was evidence to suggest that not all relocation was voluntary. In these incidences pressure was applied to force the person to move, regardless of the values that they attached to 'costs' and 'benefits' associated with the outcome (see Figure 11.1).

As previously mentioned, in marital relationships if one member of the dyad is adamant about a housing decision then there may be little room for the other member of the dyad to negotiate. This observation was applicable to both residential stability and residential mobility. The following case study serves to illustrate this point.

Mr. and Mrs. Parry moved to North Wales on their retirement. In 1983 Mrs. Parry, who was much younger than her husband, was suffering from ill health. Apart from his wife's health Mr. Parry's other big worry was a property that his wife had inherited in North-west England. It was a large house converted into flats, which was a listed property and subject to rent controls. They could not sell it because the

housekeeper, who was 80 years old, had nursed Mrs. Parry's parents until they died in their 90's and they had promised she would have a home there for the rest of her life. In 1983 Mrs. Parry suggested that they could go and live in her parents' house. Mr. Parry felt that they had to sell their current property as he was worried about leaving his wife alone when he died, but indicated that this would cause him some sadness,

“because it's become such a part of me”.

By 1984 Mr. and Mrs. Parry had moved to the wife's property. It became obvious through the course of the interviews that this was not the outcome that Mr. Parry had wanted.

“ To me the move has been such that... all kinds of people are very pleasant, you know, they're very friendly but coming from Bryn Rhyd and having dug myself in there, which was part of me really, I think the fact that I'm not at Bryn Rhyd anymore...[indistinct]...but the difference in the atmosphere living here as opposed to Bryn Rhyd. Oh...[indistinct]...they said I'd got to give it up or it would kill me. Well, you've got to die sometime. I think if I analysed it, I'd prefer to die in Bryn Rhyd than over here.”

When they had initially moved to England, Mr. Parry had understood that it would only be until they found suitable bungalow nearby. He said that he would like to go back to North Wales to live in a bungalow but Mrs. Parry was adamant that she did not want to leave.



“How it will work out in the end, I don’t really know... I haven’t been back to Bryn Rhyd, I couldn’t face it. I don’t think I’ve ever had so much unhappiness as in the six months since we left Bryn Rhyd... She’s established now, whether or not if I go out and find something acceptable and say, ‘If you don’t want to come, stay here,’ and I’ll go live on my own, which isn’t the best solution... It might bring her to her senses. But I don’t like this you see... I may come round to dislike it less than I do at the moment, but at the moment I loathe it.”

Later in 1985, Mr. Parry said that he still hated it in England and still felt that he had not made friends. By the end of the year Mr. and Mrs. Parry freely admitted that they were not getting on. Mr. Parry was thinking about divorce and talked openly about leaving his wife, she taunted “preferably before Christmas.” This unhappy situation continued for at least three years until Mr. Parry’s death.

The above incident serves to illustrate that not all moves are made voluntarily and that some older people may have pressure put on them to relocate. The BLSA did not collect any quantitative data to establish whether moves were made on a voluntary basis or otherwise, therefore the logistic regression and latent class analysis made no distinction regarding this aspect of relocation. However, it is possible to identify cases in which the person has been pressured into relocating using qualitative data.

The characteristics of the moves (in terms of distance moved) and the movers are displayed in Table 11.1 and the proportion of the pooled sample that made each type of move are represented in Figure 11.2. Each type of move is now discussed in turn using qualitative data to illustrate the diversity of motives for moving in each type of move. Where possible the qualitative data are integrated with the quantitative findings in order to substantiate and supplement the empirical evidence.

**Table 11.1 Characteristics of each type of move in the five-class model of types of residential relocation made by older people**

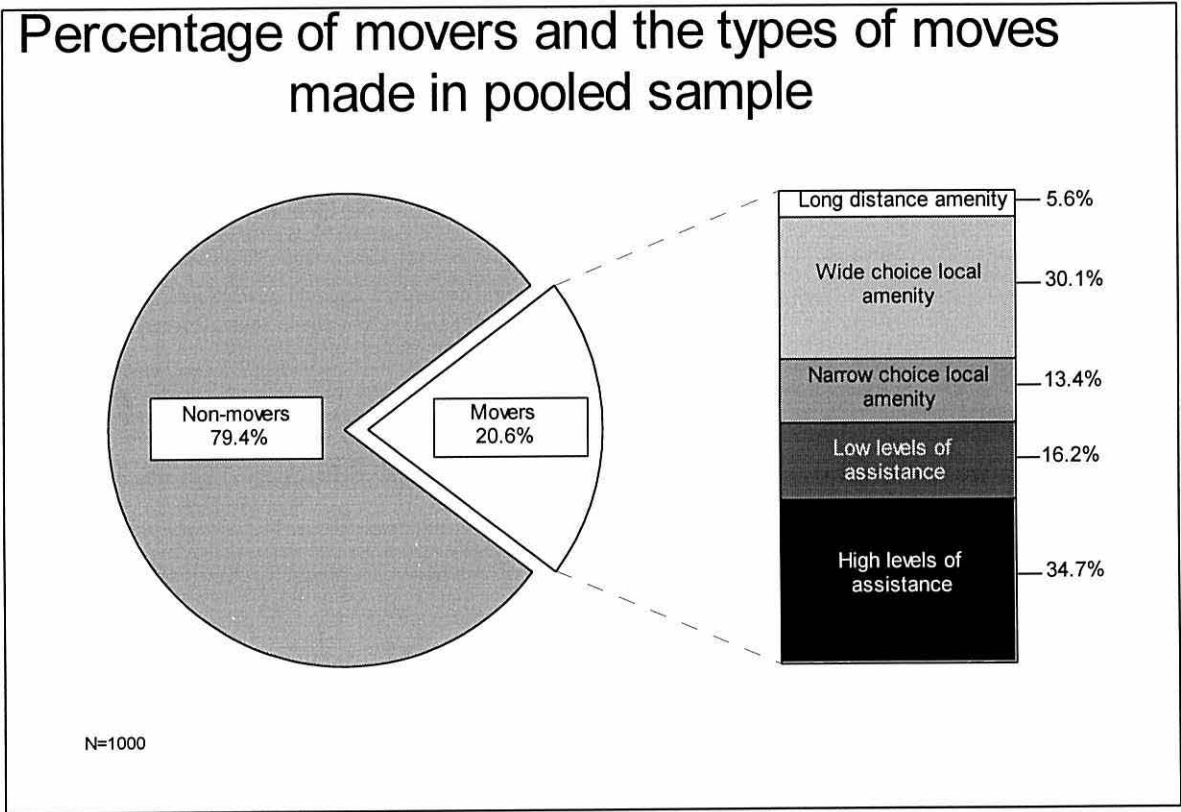
TYPE OF MOVE	CHARACTERISTICS
Long distance amenity	Motive: desire to change lifestyle to leisure oriented/ improvement in housing or environment. Move over 50 miles. High or average income. Home owners. Under 75 years old, married couples.
Wide choice local amenity	Motive: desire to change lifestyle to leisure oriented/ improvement in housing or environment. Move under 50 miles. High or average income. Renters moving within 50 miles of their nearest relative. Over 75 years old, widows.
Narrow choice local amenity	Motive: desire to change lifestyle to leisure oriented/ improvement in housing or environment. Move under 50 miles. Low income. Home owners and renters moving within 50 miles of their nearest relative. Under 75 years old, married couples.
Low levels of assistance	Motive: need for assistance from kin. Move either short or long distance. High, average or low income. Home-owner or renter moving within 50 miles of their nearest relative, in with relative or into sheltered accommodation with a warden. Over 75 years old, widows.
High levels of assistance	Motive: poor health. Move under 50 miles. High or average income. May be a move in with kin, into sheltered accommodation with a warden, or institutional setting. Over 75 years old, not married (that is widowed, never married or divorced).

### **Long distance amenity move**

Only 5.6% (N=12) of the BLSA sample made 'long distance amenity moves'. The people who were most likely to make this type of move, that is the youngest people who would be making relocation decisions post-retirement, were under-represented for the population as a whole in this sample. The move, as its name suggests, is most likely to be greater than 50 miles in distance. The observed frequencies for the respondents making 'long distance amenity moves' indicate that they are most likely to be home owners, who relocate over 50 miles away from their nearest family member. This move is made overwhelmingly by those people under 75 years old and

those who are married. All of those allocated to this class have a high or average income. This portrayal corresponds with the characteristics of the ‘retirement move’ described by others (Litwak & Longino 1987, Speare & Meyer 1988).

Figure 11.2



As the respondents in BLSA were at least 65 years old in 1979 it would be expected that only a small proportion would be undertaking a post-retirement move and as they aged it was more likely that they would be undertaking other types of relocation. There was evidence to suggest that a larger proportion of the sample *may* have undertaken this type of move at retirement. Sixteen percent of the 1979 sample had made a move of over 50 miles when they were between the ages of 55 and 65. It was impossible to include these moves in the analysis if relocation had not taken place in the four years prior to interview as it could not be assumed that data

collected in 1979 such as income and marital status would have been the same at the time of the move. A majority (58%) of the people making 'long distance amenity moves' were married. Although it is often assumed that only those people with intact marriages undertake 'long distance amenity moves', the adapted typology shows that 25% of this class were widowed and 17% were never married.

Mr. and Mrs. Williams are a typical example of a married couple who made a long-distance retirement move. They had previously lived in the Midlands where they had a big house with a large garden.

"I bought the Birmingham Post one day and I saw there that there was a thirty year building project. I'd been here dozens of times before, right from 1908, and I decided to come and have a look. So I said to [my son] 'would you take Mam and I over to Tywyn and we'll have a look at this estate and see if there is any decent bungalows there.'"

As frequently cited by long-distance retirement movers Mr. and Mrs. Williams had a long association with the area. Mr. Williams had taken family holidays there since childhood and as a young man he returned to the area on his motorbike. They also felt that Tywyn offered a better environment and associated this with improved health:

"As I say, I came here to recuperate after this first bad pneumonia. They said it was a good place to come to. A relation that used to come here for his fortnight's holiday every year told us about it."

When Mr. Williams retired the costs of living in the Midlands were high, and he and his wife moved into one of the bungalows in Tywyn that his son had taken them to see. Therefore, the decision to move house was also related to the costs of living.

As mentioned in Chapter 4 although house prices in Wales rose during the study period, they were cheaper than average house prices elsewhere in the UK. As noted above, *all* the people classified as making long-distance retirement moves had high or average incomes compared with other respondents in the study. When the level of income of long-distance amenity movers was looked at in more detail it was found that 83% (N=10) of the people making these moves had high, rather than average incomes. In-migration of people from other regions in Britain had the effect of increasing the competition for housing in Wales and raising property prices out of the reach of many rural inhabitants (Clope and Davies 1992). A cross-tabulation of type of move by ethnicity showed that the long-distance amenity move, as expected, was primarily made by people who did not consider themselves to be entirely Welsh (see definition for ethnicity in Chapter 5). Eighty-three percent of people making these moves were not entirely Welsh, which perhaps shows that the moves were made by non-indigenous people (Chi-square 14.38; d.f. 4;  $p=0.006$ ).

### **Wide choice local amenity move**

Although only 5.6% of the sample made a 'long distance move for amenities', a further 30% of the sample (N=65) made a 'wide choice local amenity move'. People assigned to this class were again more likely to have a high or average income, rather than a low income. Sixty-five percent of this group were over 75 years of age and the marital status of respondents was fairly evenly distributed throughout the categories.

Mrs. Griffiths made a 'wide choice local amenity move'. She was divorced and over 75 years old with a high or average income. Her intensive interview illustrated that she was offered a variety of new accommodation to choose from when she decided to move from her rented cottage to sheltered housing without a warden. She described the lack of amenities she had in her previous village:

“[I would like] more variety of shops. It was my choice to live here, so I have to put up with it.”

Mrs. Griffiths had her name down on the housing list for some time and she was offered three or four specially designed houses for older people before she decided on the one she wanted. Her new house was not located in the same village in which she had previously lived, but there was better access to the county town where she could visit the shops:

“I tell people I wanted to travel! I liked this spot, it’s easier to get to [the county town].”

Mrs. Griffiths’ experience highlights one of the differences between ‘wide choice’ and ‘narrow choice local amenity moves’. Many studies have noted that the current housing situation of an applicant for social housing affects the outcome of the process (Lund 1994). If the current accommodation is fairly satisfactory then the applicant has the ability to wait until they are offered a house that they like (Power 1987). Research has shown that most local authorities will continue to make unlimited offers of housing to people at the top of waiting lists (Prescott-Clarke et al. 1987). This means that allocation of the ‘better’ local authority housing is likely to be distributed to the people that can afford to bide their time, whereas people who are in unsatisfactory housing are more likely to accept whatever accommodation is offered to them, regardless of the match between their preferred choice of housing and what is on offer.

It appears that people making ‘wide choice local amenity moves’ have a better chance of realising their housing choices and thereby meeting the objective of the move, than people making ‘narrow choice local amenity moves’. Mrs. Griffiths’ objective for moving seemed to be to improve her environment in a way that would

ensure easier access to facilities and services. In total, 55% percent of respondents making a 'wide choice local amenity' move gave improvement in housing or environment (including relocation to a more convenient location) as a motive for relocation. Warnes and Ford (1995) have also found that convenience of location was one of the most frequent motivations for moving.

It may be that 'wide choice local amenity moves' which are motivated by the desire for accommodation in a convenient location, are more likely for people living in rural communities than those in urban areas. The low population density of the communities in this study means that facilities are often located at quite some distance. Examination of the qualitative data revealed that a move to a more convenient location was often triggered by events that made the current housing location inconvenient (such as severe weather conditions or cessation of driving) or in anticipation of these events occurring. The following excerpt serves to illustrate how a severe winter may prompt older people to consider their ability to cope, isolated from services and facilities.

Mr Wyn-Jones had never married, he had an average income and lived with his brother and sister in a remote area. The interviewer describes how they made a 'wide choice local amenity move.'

"Last time I interviewed Mr. Wyn-Jones he was living in an old terrace... with no running water. They had to fetch water from a well. He and his brother were there all week but his sister came back at weekends only, from her job. Although the landlord modified the house and installed running water four years ago, the three moved to an old people's bungalow in the village just over a year ago, after a very bad winter. They felt that they were getting on and it was too lonely where they were - isolated from all services with no telephone."

Compared with Mrs. Griffiths' accommodation before her move, Mr. Wyn-Jones' house perhaps appears unsatisfactory in comparison. However, it was only after Mr. Wyn-Jones and his siblings had experienced a harsh winter that they considered relocating. Therefore, they would have been in a similar situation to Mrs. Griffiths, inasmuch as they could remain in their current accommodation until they were offered a house that they considered suitable.

Another factor that sometimes made the current housing location inconvenient was the cessation of driving, which often prompted relocation nearer to facilities. Facilities that are considered 'convenient' whilst in the possession of a means of transport may be 'inconvenient' to a pedestrian and inaccessible by local transport. This is expressed by Mrs. Edwards:

“Being here I've got to own a car. What I would really like would be to live in a village where I could walk to the shops... For years I've been thinking about sheltered homes though, but, I would miss this view.”

In a study by O'Bryant and Murray (1986) it was found that after relocating there was a decrease in the number of respondents who drove cars. This may indicate that people were moving nearer to facilities to counter the limitations imposed by a lack of transportation.

As mentioned above, a majority of people who made 'wide choice local amenity moves' gave motives for moving which were classified as 'improvement in environment or housing'. This category of motives for relocation included responses that suggested that the size of the house prompted a move. Results from a study by Warnes and Ford (1995) also suggest that a frequent motivation for moving was size of the property. O'Bryant and Murray (1986) found that the size of accommodation



occupied by the respondents in their study decreased after moving. It appears that some older people wish to decrease the size of their accommodation (although as mentioned above, some sheltered housing appears to be too compact). It has been previously mentioned that bereavement is associated with relocation (Colsher & Wallace 1990), and that recent widowhood prompts relocation (Bradsher et al. 1992, Chevan 1995). Forty-nine percent of those people making 'wide choice local amenity moves' were widowed. Mr. Ellis was a widower who was over 75 years old and had a high income. His comments illustrate that sometimes the combination of widowhood and the size of the accommodation may prompt a move.

“Well you see my wife had died and I was just by myself and it meant that I was rattling like a pea in a ...and I had all the business of looking after that house...I wasn't handicapped then of course or any physical disability at all, so up till then really I wasn't over-worried about anything other than the house itself.”

Given that it has been identified that some relationships may be confining for one of the members in a residential situation that is not suitable or desirable, widowhood may also prompt relocation in as much as it is a release from a constraining situation. Mrs. Owen, who was previously mentioned as being constrained from moving by her husband, made a 'wide choice local amenity move' into a bungalow designed for older people after her husband's death.

### **Narrow choice local amenity move**

Whereas people making 'wide choice local amenity moves' tended to have high or average incomes which facilitated their choice in future housing, the people who were classified as making 'narrow choice local amenity moves' were more likely to have low incomes. This move was most likely for low income married couples who were under 75. Wiseman (1980) stated that the people who move due to

environmental stress probably have fewer resources than those who are moving for amenities and choose to relocate into a similar type of house, in a similar neighbourhood and at a similar cost. Certainly in the adapted model 69% of respondents making 'narrow choice local amenity moves' had a low income - the highest proportion of any of the classes. It appears that the differences between this move and the 'wide choice local amenity move' are in the range of choice of alternative accommodation that the person has and the outcome of the move.

As noted in Chapter 8, there are also interesting differences between the 'long distance amenity move' and the 'narrow choice local amenity move'. Both moves are predominantly made by married couples under 75 years of age. Whereas the 'long distance amenity move' is made by those with high incomes, the 'narrow choice local amenity move' is made by married couples with low incomes. Proportionally over twice as many respondents made a 'narrow choice amenity move' (13%) compared with those making 'long distance amenity moves' (6%). It has already been established that the younger married movers in this sample were under-represented. We may therefore expect that the proportion of people making this type of move in the population as a whole is higher.

One of the unstructured interviews indicated the problems faced by one couple who were financially constrained in their desire to relocate. Mr. Llewellyn was married with a low income. He lived with his wife, who could no longer climb the stairs, and his sister-in-law who was both mentally and physically impaired. In 1979 they were very bitter that they had not been given an old people's bungalow as they had been on the waiting list for a long time. Although the difficulties that Mr. and Mrs. Llewellyn were facing may have been similar to those of other respondents who undertook 'wide choice local amenity moves' this couple did not have the financial capacity to choose their housing situation. It took 5 years on the council list before a bungalow became vacant and they were re-housed, by which time Mr. Llewellyn's

sister-in-law had died. This scenario highlights the difference between 'narrow choice local amenity moves' and 'wide choice local amenity moves'. Whereas Mrs Griffiths, who made a 'wide choice local amenity' move could wait in her accommodation until she was offered a house that she liked, Mr. Llewellyn remained in housing which was unsuitable for the occupants' needs for a considerable length of time.

It has been noted that people on low incomes, such as 'narrow choice local amenity movers', are particularly likely to live in accommodation that is in a poor condition. It is also most likely that people with low incomes are those least likely to be able to adapt or repair their housing, or to obtain a grant (Department of the Environment 1982, 1983, Leather & Mackintosh 1993). Applying the model of the migration process of older people (Figure 11.1) to Mr. and Mrs. Llewellyn, the balancing of 'costs' and 'benefits' of moving are tipped in favour of the 'benefits' but the level of income, an indigenous factor which means that Mr. Llewellyn has to rely on social housing, constrains the type of move that can be achieved. Therefore, Mr. and Mrs. Llewellyn remained involuntary non-movers (a phenomenon identified above) for five years before achieving their desired outcome.

Similar results have been reported in the USA by Burkhauser et al. (1995) who related the findings to types of areas that the person lived in, that is 'distressed' or 'secure'. They found that older people on low incomes in 'distressed' areas were less likely to move than those with similar incomes in 'secure' areas. Movers from either type of area were most likely to move to a similar type of area, although older movers in 'distressed' areas were more likely than younger movers to move to another 'distressed' area (Burkhauser et al. 1995). The findings from the BLSA and the USA indicate that constraints imposed by low income, coupled with economically viable alternative housing in the locality, constrain the choices that older people have over their housing situation.

As proportionally more people in the BLSA made 'narrow choice local amenity moves' than 'long distance amenity moves', we could assume that in North Wales proportionally more older *married* couples are making moves that are financially constrained than making leisure oriented moves. The EU Observatory have made very tentative steps in evaluating the income levels of older people in Europe. Their findings indicate that the United Kingdom (along with Greece, Portugal and Spain) is amongst the countries in Europe with high poverty rates among older people (30 per cent plus) (Walker & Maltby 1997). These findings convincingly challenge the popular notion that a majority of migration by older people consists of moves made by married couples with a 'healthy' income at retirement age to a retirement resort (Karn 1977).

#### **Move for a low level of assistance**

Sixteen percent of the movers relocated for 'low levels of assistance'. Fifty-three percent of the respondents making these moves stated that they moved to be near their families. It has been noted elsewhere that one of the most frequent motivations for moving, given by older people, is to be near their family (Warnes & Ford 1995). O'Bryant and Murray (1986) also indicated that more relatives lived in the proximity of the respondents who had moved in their study, than close to those that had stayed put. However, Burholt and Wenger (1997) compared the proximity of family members in 1979 and 1995 for the respondents who survived until 1995. By 1995, approximately two-fifths of children lived more than one hour away from their parents and only 71% of parents had a child within 50 miles compared with 97% in 1979. This indicates that during the course of the BLSA children moved away from the vicinity of their parents.

Although fewer older people in BLSA lived near their children in 1995 than in 1979 the 'moves for low level of assistance' represent those moves that were made by older people towards their children throughout the course of the study. Twenty percent of the 'moves for low levels of assistance' were made by home owners to within 50 miles of their families and 17% by renters within the proximity of their families. The destination for a majority of the moves was in with the family or sheltered housing with a warden (63%, N=22).

The qualitative data highlighted one of the important psychological components of this type of move. As reported elsewhere (Moss & Moss 1992), many of the respondents were keen to keep their independence rather than burden their families with care duties. Typical reactions to moving in with children or other relatives included:

"[My son's] got a very nice wife... But there is the point that I'm old-fashioned and I think young people are best left on their own. I don't think they want to deal with elderly people. I've never wanted that, I've never wanted it. I've seen it."

"Well I did think about [moving in with my sister]. But, it's all very well having a close relative handy but it's a different thing altogether to have to live with them day after day, and I did value my independence. She did too... we kind of mutually agreed that it was a proposition which wasn't worth consideration."

"But then again [my sons] are young, they've got their own lives to lead, and age and youth - they won't mix"

“No it’s fatal... it isn’t fair on the younger family I think... I could be useful to them, I suppose. I’m still active, and I suppose I could help up to a certain extent, but nevertheless I think... I should be exposed to pop music and it would irritate me!”

“Quite honestly I don’t want to be a drag on them... They live a very full life down there and to have an old relative living with them who would be a drag on their activities... So long as I can be independent and live my own life here. I prefer it.”

“Sometimes I get quivers and wonder what I’d do if I had to give up the house and I hate to think of it because I wouldn’t like to be a burden on the children. They have their lives to live and they are just beginning now to be free of the responsibility of bringing their own children [up] and beginning to enjoy life together and I’d hate to go down and be a burden on them as an old person would be, you see.”

“[My daughter’s] temperament and my temperament, I don’t think... We’re the best of friends mind you, when she comes, but I really wouldn’t fancy living with her.”

The reticence on behalf of the respondents to burden their families has implications for the psychological well-being of both the older person and the carer. Family values regarding autonomy and independence play a critical role in determining the older person’s reaction to help by adult children (Thomas 1988). Burholt and Wenger (1997) found that fewer parents in the BLSA felt emotionally very close to their children with the passage of time, although they had higher levels of contact and provision of help. The authors concluded that it was likely that dependency on instrumental help from children reduced emotional closeness.

In the Netherlands a study found that although relatively high proportions of older people lived with their children neither party were in favour of the situation (Dooghe et al. 1977). In the USA it has been shown that living with children is associated with lower subjective well-being for older people (Lawton et al. 1984). Other studies look at the effects of co-residence on the multigenerational household rather than its effects on the older person. These studies relate satisfaction to the level of dependence of the older person, with lower satisfaction associated with high levels of dependence (Mindel & Wright 1982) and care-giver burden (Jutras & Veilleux 1991), and higher levels of satisfaction associated with less dependence and the ability of the older person to reciprocate with valuable contributions to the relationship (Brackbill & Kitch 1991). The number of generations living together also has been found to be a predictor of negative effects on care-givers. A study which looked at the relationship between widowed mothers and care-giving daughters found that one generation households (mother living alone) produced the least negative effects, whereas three generation households produced the most negative effects for the care-giver (Brody et al. 1988). The latter findings indicate the problems that carers, especially women, may encounter when faced with competing demands for care from older and younger generations.

Although a majority of those who made 'moves for low levels of assistance' moved in with relatives, 42% (N=15) of respondents in this class moved to within 50 miles of family members. Help from relatives is not always guaranteed for those who move to the proximity of family members. Other analysis of the 1995 data from the BLSA showed that for mothers (aged 81+), although 61% of their children lived within 50 miles only 44% were providing help, and for fathers 54% of their children lived within 50 miles but only 30% provided help (Burholt & Wenger 1997). Elsewhere it has been found that children tend to provide more help and support to parents who are widowed than to those who are still married (Dykstra 1993).



One-third of the respondents who made ‘moves for low levels of assistance’ were married and two-thirds were widowed. It has been established that spouses often help with household tasks, therefore chronic disability can be compounded by widowhood (Litwak & Longino 1987, Bradsher et al. 1992, Warnes & Ford 1994). Although Litwak and Longino (1987) suggested that moderate disability sometimes coupled with widowhood precipitates a move closer to the family, Wiseman and Roseman (1979) suggested that in addition ‘long distance moves for assistance’ may be the result of a significant health decline. This was not strongly supported by evidence from the BLSA, 53% of the respondents who moved for ‘low levels of assistance’ said that they moved to be near their families and only 3% moved due to ill health. Unlike Litwak and Longino’s (1987) category of move due to ‘chronic disability’, the ‘move for low levels of assistance’ encompassed those people who relocated to sheltered accommodation in addition to those who moved close to or in with children or other relatives.

### **Move for a high level of assistance**

Thirty-five percent (N=75) of the movers relocated for ‘high levels of assistance’. A majority of ‘moves for high levels of assistance’ were short-distance. The differences between respondents who made moves for ‘low levels of assistance’ and those who moved for ‘high levels of assistance’ were primarily in their age and marital status. There were proportionally more people over 75 making moves for ‘high levels of assistance’ than for ‘low levels of assistance’. In addition, moves for ‘high levels of assistance’ were made only by unmarried people, that is 71% widowed and 29% never married/divorced, whereas nearly one-third of those who were classified as moving for ‘low levels of assistance’ were married.



The expressed reasons for relocation showed that only 3% of those who moved for 'low levels of assistance' said the move was due to ill health, whereas 76% of those who made moves for 'high levels of assistance' gave this as a motive. All of the respondents who moved into residential care made moves that were classified as moves for a 'high level of assistance'.

The data indicate that *none* of those who made a move for 'high levels of assistance' were married and 68% of the respondents were admitted to residential care. This perhaps denotes the importance of spouse help for those who are married and functionally or cognitively impaired. It has been suggested that spouses provide the most comprehensive and least stressful support (Johnson 1983), for on average a longer duration overall than other family members, and for a greater number of hours per day (Montgomery & Kosloski 1994). For respondents without kin support, for example those who never married, or who are widowed without children, the lack of an informal care-giver may necessitate institutionalisation if a need for a high level of assistance arises.

In the absence of relatives living in the area, older people may rely on support from friends and neighbours. In the literature neighbour relationships have on the whole been treated primarily instrumentally (Chatters et al. 1985, James & Davies 1987, Petchers & Milligan 1987, Stoller & Pugliesi 1988, Wenger 1990(a)). However, Wenger and Burholt (1997) found that a majority of involved neighbours had local independent relationships (55%) with the respondents in the BLSA who had survived until 1995. This indicated that the relationship between the respondent and neighbour was characterised by; living close by, frequent contact, emotional closeness and similarity of opinions, but the neighbour *did not* provide help.

There are boundaries that are drawn by friends and neighbours to the extent of support that they 'expect' to give. In Canada, Keating et al. (1996) conducted focus groups with friends and neighbours of older people to clarify the concept of what eldercare is to these particular stakeholders. The results indicated that friends and neighbours saw their role as supplying help with household tasks, such as shopping and providing meals. Higher priority was given to their role in liaison with formal support agencies in the event of the older person requiring further services. Other analysis of the BLSA has identified a hierarchy of expectations of sources of help and personal care within social networks. Most personal care came from spouses or female members of the same household (Wenger 1992). A need for a 'high level of assistance' may well indicate that the respondent requires personal care and in light of the evidence produced by Keating et al. (1996) and Wenger (1992) this would be beyond the expectation of the level of support which would be provided by friends or neighbours. This is demonstrated in an interviewer's report about Mrs. Parry-Jones.

Mrs. Parry-Jones was already widowed in 1979 and was described as a "fiercely independent" woman. In 1991 she may have been exhibiting early stages of dementia. The interviewer reported:

"[Mrs Parry-Jones] did not remember any previous visits and told me her husband died last year - I know this is inaccurate... Papers everywhere and large notice telling people not to touch her papers or books. She claims people who come rummage in her papers... Seems a bit confused. Said she has no personal friends but many friendly neighbours."

By 1995 Mrs. Parry-Jones had been admitted to residential care:

“She was apparently very well supported by her neighbours but as her dementia worsened she increasingly made accusations against people, wandered at night and knocked on neighbours doors. Eventually \*\*\* was the only neighbour who would have anything to do with her...”

This passage highlights the extent to which neighbours will engage in provision of help for older people living in the community. Without the support from a spouse, or a relative nearby, Mrs Parry-Jones had to be admitted to residential care in order for her to obtain the care that she required.

Whereas Mrs Parry-Jones was amongst the 68% of people making ‘moves for high levels of assistance’ who were admitted to residential care a further 32% of this group moved in with members of their family. However, even when the older person has children living in close proximity to their home, care-giving may not be forthcoming. This may be because the needs of the older person are too great to be met by the informal networks, or an adult child may have competing roles demanding attention, such as mother, employee and carer.

Mrs. Wyn-Davies talked about the death of her spouse and the reaction of her children to the burden she was placing on them. The interviewer reported:

“Mr. and Mrs. Wyn-Davies had decided to move to be near their eldest son. The bungalow was purchased, the removal arrangements made and the day before moving Mr. Wyn-Davies died. Mrs. Wyn-Davies said, ‘Dreadful, dreadful. I went through an awful period then’. She said, ‘I was a nuisance for a few months. I used to get panicky and ring up. In the end, he had to get cross with me and say ‘We’ve got our own lives to live, you must try to control yourself’” She found it very difficult to live alone ‘I’m not a person who’s happy living alone - although I’ve learned to do it now.’”

Eventually Mrs. Mathew's son and daughter-in-law decided to move to a very old, large farm house with a built-on granny flat. Initially, Mrs. Wyn-Davies did not want to go with them, but her poor financial situation prompted her to move into the flat:

"[My bungalow] was lovely. We thought it over and felt it was the best thing... My son said, 'Well you'll have to live with us some day so you might just as well make the break now'".

The interviewer reported that:

"The two houses were sold and they moved as a family to about one mile outside [the town], up a very narrow lane and well away from all neighbours and other habitations."

The move meant that Mrs. Wyn-Davies became socially isolated. Although she lived on the same property as her oldest son and his family, she rarely saw them. In addition she remembered looking after her own arthritic mother and was determined not to be a burden on her own children:

"I don't see anybody you know, other than the family and I don't see them very often (laughs). My son works until six or half past every night and then he's glad to sit in his armchair and relax... Some days seem ever so long - other days pass quite quickly... I had my mother for six years with arthritis. I often think of her when I am sitting in the chair. How I used to wait on her. She went into a nursing home the last year of her life... I can't be the bright company I used to be. I feel I'm a nuisance to everybody... I want to keep my flat for as long as I can. I get difficulty in dressing and washing but I struggle. I will do it. I make myself do it. My hands - doing up buttons and putting my

frock on and getting my arms in. It's terrible. I have a good wash every morning. I don't get in the bath now. I'm afraid to. I'm afraid I won't get out again. But I have a good wash down every morning and that's an ordeal. I can't dry myself properly."

By 1985 Mrs. Wyn-Davies was in hospital after having broken her wrist in two places by falling out of bed in the early hours of the morning. She was unable to get up, but managed to drag herself to the phone. None of the family heard the phone call and she waited until 6am before they came to help her. A nurse informed the interviewer that:

"The family couldn't cope...they are trying to persuade Mrs. Wyn-Davies to go to a residential home."

Other families also commented on the stress associated with caring for an increasingly frail relative. Mr. and Mrs. Bird talked quite openly about the problems of caring for Mr. Thomas. Mr. Thomas had lived with his daughter and son-in-law since 1958. His wife died in her late 40's or early 50's while he was still working. He had a small amount of capital, but subsequently he got involved with a widow and within a year the money was gone. At that point he decided he would come and live with his daughter and son-in-law. He was increasingly difficult to care for, as he was partially sighted and had become slightly confused. Mr Thomas noted:

"I had nowhere else to go so I parked myself on [my daughter] and I've been with her ever since. Sometimes I think I've been here too, too long."

The social service department were aware of the difficulties that Mr. and Mrs. Bird were encountering caring for Mr. Thomas:

“The daughter and son-in-law are themselves of pensionable age. [Mr. Thomas] is blind and relies to a great extent on the family. Also hard of hearing and it was felt that he would benefit from meeting other people. Seems isolated in household. [Mrs. Bird] has the burden of the other elderly aunt and uncle living nearby. She couldn’t cope with them all... Mr. Thomas is a “difficult” gentleman. His name is on permanent admission list for residential care.”

It appears from the qualitative data that the respondents who were not in residential care, that is were living with relatives, were also in need of ‘high levels of assistance’. The levels of dependency for people making these moves are greater than those people classified as making ‘moves for low levels of assistance’. For example, in 1982 Mrs. Lewis was living in sheltered housing (without a warden) and was suffering from arthritis in her knee and deteriorating health. She went to stay with her daughter and continued to go home occasionally. She managed to maintain this routine until she was admitted to hospital in 1983. Two to three months after her discharge she gave up her bungalow and moved in permanently with her daughter. She said:

“... things seemed to be getting worse so I thought well, that’s it”.

Mrs. Lewis told the interviewer that she did not want to live alone again. Her daughter also said:

“She could never manage there, could she? You know where she is here don’t you, up there, well...(trails off)”.

Families were providing care for three-tenths of this group, but elsewhere it has been reported that committed carers, providing high levels of care could foresee that they would not be able to continue caring indefinitely (Jones & Salvage 1992). As 70% of those who moved due to need for 'high levels of assistance' were admitted to residential care there appears to come a time when either families can no longer provide the level of care required, that the older person does not have an informal network which can provide care, or that domiciliary services are inadequate to support severely functionally or cognitively impaired people to remain in the community.

Figures in this study, as in others, showed overwhelmingly, that older people in the community do not desire to enter residential care (Kraus et al. 1976, Vladeck 1980, Butler & Lewis 1982, McAuley & Bleizner 1985, Ory & Duncker 1992, Mackintosh & Leather 1992). Typical reactions to the prospect of entering residential care were:

"Can't envisage a time coming, I couldn't be in an old person's home - shall totter on till I drop dead."

"Oh dear, oh dear, wouldn't like to be in there. The poor old things in there are just sitting round... waiting to be fed... I couldn't go and live there. I couldn't live with any of them."

"I don't want to go into a nursing home. So long as I can stay on quietly here, living a quiet life here as long as I can. I'll remain so."

“Mrs. Daniels doesn’t like the home her sister’s in, she said they were all forced to sit up all day, in rows, and have the television blaring, whether they wanted it or not. She really didn’t fancy the prospect. She has always been independent but now is worried about how she will face the next winter.”

A study of the attitudes of medical and nursing personnel towards caring for frail older people found that community care as opposed to residential care was generally favoured. Family members were seen as the most appropriate providers of personal care tasks whereas domiciliary services were favoured for house care tasks and incontinence. Residential care and social care services were only seen as most appropriate for people with severe dementia (Victor 1991).

A study in Northern Ireland has also suggested that there are high levels of misplacement of older people into residential care environments ranging from 23% in conventional residences to 84% in elderly mentally infirm (EMI) care settings (Kirk et al. 1989) and in Nottingham a study reported that 12% of the entrants into residential care could have stayed in the community (Ovenstone & Bean 1981). Twenty percent of the reasons given for admission to residential care in this study could be termed as crisis decisions due to a sudden event, such as falling or change in carer circumstances, rather than a decline in health and functioning ability over time which has also been noted elsewhere (Coward et al. 1994, Jett et al. 1996). These situations may result in the older person being inappropriately admitted to residential care when they may have benefited more from an increase in formal services. The admission of Mrs Roberts to residential care serves to illustrate this point.

In 1984 the interviewer reported:



“Mrs Roberts lives in a small cottage which is half of the two houses which she originally bought. She lets out the other half. The house has had a bathroom added but shows little other evidence of modernisation, and the kitchen - more of a scullery - is very cold with an old, ill-fitting door. However, she seems well satisfied with her house and the living room seemed warm and cosy despite the cold weather... The only indication of Mrs. Roberts’ age (88) was the fact that she complained of her memory going. She couldn’t remember which day of the week it was and had trouble with names and dates sometimes. She also tended to tell me things three or four times.”

By 1987 Mrs. Roberts had been admitted to a nursing home, after a series of chest infections. Her confusion meant that she had not been lighting her fire, and could not remember if she had been eating or not. Her kin resources were limited as neither of her children’s families felt they could look after her as they were fully occupied with sheep farming. Formal service input, such as daily help to light the fire and a meal delivery service, may have alleviated some of Mrs. Roberts’ problems and may have lengthened the time that she could remain living in the community.

In terms of the model of migration process, the evidence suggests that the people moving for ‘high levels of assistance’ were most likely to be experiencing pressure to relocate, either from professionals or relatives. This is illustrated with two examples from intensive interviews with respondents. As ‘moves for high levels of assistance’ represent both moves in with family members and relocation into residential care an example of each is presented.

Mr. Rees had moved to the USA as a young man, where he earned enough money to return to Wales to buy a farm. In 1983 the interviewer reported:

“Mr. Rees’s house is two fields from the road up a grass track... He rarely goes into [town] now because there is no bus and when he does go he takes a taxi...[which] is expensive, so he only goes into [town] when he has shopping to do. However, he relies on the mobile shop, which brings his groceries to the house. He has no electricity and cooks on a ‘Simplex’ range... He had explained to me earlier that he could have had electricity put in fifteen years ago, but he never imagined he would live so long. He said it would have been different if there had been a family. ‘I would have put it in then as the old woman would have needed it to do things in the evening.’ He said that if he had known then that he was going to live past eighty, he would certainly have had electricity put in, but he feels that now it would be far too expensive. He uses an oil lamp for lighting, which he said he is quite used to but that he begins to miss having electricity at this time of year when the nights draw in and the evenings are long.

He said it wasn’t too bad [in hard winters] because the place where he lives is so exposed that most of the snow is blown off the fields between his farm and the road... His water comes from a spring nearby and it never freezes... so he does not have to worry about burst pipes or losing his water supply<sup>40</sup>. He always makes sure that he has good supply of coal in before the winter starts, otherwise he could very easily be without. Even when the roads are blocked, there is always someone with a tractor who will bring provisions in.

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<sup>40</sup> At another interview in 1983 it was established that he has piped water from the mains and that the spring was used only in emergencies and for keeping items (such as milk) cool in the summer.

His house is very sparsely furnished. In the only room which I saw, in addition to the 'Simplex' range, there were a couple of dining room chairs, an easy chair with wooden arms and a couple of sideboard-type [pieces of] furniture, on which he has his lamp, some of his foodstuffs, clock etc. The bare floor, which seems to be a kind of tile, was covered with ragged newspapers and feed sacks and the wallpaper is very old and discoloured from the fire."

Even with his lack of amenities, Mr. Rees had no intention of moving into the town:

"No, not now, it's too late - if I do it will be to [a residential care home]. I hope they get me in bed dead, that's my wish - one morning I suppose. You can't live forever can you."

The interviewer commented:

"I hope this gentleman lives healthily into a ripe old age and that he lives out his life in his environment because I'm sure it would break his heart to have to move from his home. But, if his health failed I suppose that he would have to go elsewhere because the farm is so isolated and primitive."

In 1985 the interviewer reported that there was no sign of Mr. Rees at his farm. It was established that he was at his niece's house where he had been for about eight weeks and later explained the events following Mr. Rees's relocation.

“He was suffering from hypothermia and flu. For the first eight weeks he was able only to go from bed to the lavatory. Now he gets up and dresses himself. They have a lot of trouble to get him to wash, change his clothes and have only had him in the bath once! He won’t accept he is ill or old and insists he want to go back to [the farm]. They [niece and husband] are determined to keep him at their house. They say he hasn’t been looking after himself for a long time but refused help. They had a lot of trouble persuading him to come to them.”

It appears that Mr. Rees was keen to retain his independence and his situation highlights an area of contention, that is risk-taking by older people. Throughout our lives we take calculated risks, some of which could potentially end in death, for example dangerous sports activities such as parachuting, ice and snow climbing or canoeing. Often assumptions are made about capability of older people to continue to make these kinds of judgements. Mr. Rees’s desire to return to his house in its current state of repair and with a lack of basic amenities would perhaps be regarded by some as risk-taking that may result in death. This type of behaviour associated with older people has been classified as a type of suicide described as “the omission of behaviours that would sustain life and health” (McIntosh & Hubbard 1988). The desire of some people to pursue this course of action emphasises issues surrounding the civil rights of older people. It is rarely questioned if a younger person wishes to indulge in an activity which may result in their death, for example camping in snow and ice which may result in hypothermia and death, but an older person’s desire to return to their home judged to be ‘unfit’ by others is more likely to be questioned.

For Mr. Rees the consequences of moving in with his relatives, such as the loss of his own home, loss of autonomy and psychological stress may have been equivalent to admission into residential care (Norman 1980). As previously mentioned, the period that the family will be able to care for the older person may be finite, in which

case institutionalisation may still occur. In the case of Mr. Rees perhaps this course of action could perhaps have been prevented with a suitable range of alternative choices offered to him. His niece notes that he refused help, but there is no indication as to what help was offered and how appropriate this was for Mr. Rees. It has been noted elsewhere that:

“The danger of active interventionist policies... is that such policies may interfere with the lives and deaths of those who prefer to remain at home. This is not intended to imply that no action should be taken, but rather that social policy should aim to provide a valid choice. The elderly should be free to choose whether or not to live alone.”

(Bradshaw et al. 1978)

The involuntary relocation of a person into a relative's home in their 'best interests' needs further investigation. It appears that in some instances the benefit of such an approach is for the relatives in relieving their anxieties, rather than meeting the needs and wants of the older person (Norman 1980).

The second example of involuntary relocation is Mr. Williams who was also keen to retain his independence. In 1983 he commented:

“It's nice to be independent if you can, when all's said and done it's my independence that keeps me on my own. I'm determined to carry on as long as I can. I think my sight will let me down at the finish. But I haven't got enough money to go into a nursing home. I don't want to go into a nursing home. There's nothing like your own home not to my way of thinking. When you get to 84 you think, well you can't expect another twenty years. Well it would be above the average (laughs). I'll live and die here now, as far as I know.”

In 1986 Mr. Williams was admitted to hospital. He experienced uncertainty about his future and was afraid to go back to being alone in the house. He stated a preference to return to the Midlands to be near his family. The only tie to the area where he was currently living was his wife's grave and his adjacent plot.

After his hospitalisation, Mr. Williams's children decided that he would be better off in residential care, which is where the interview in 1987 was conducted. Mr. Williams's children did not give him an opportunity to discuss their decision, which was evidently not one that he would have willingly chosen. The interviewer remarked that on leaving home Mr. Williams said:

“I didn't look back - I couldn't”

In this instance an informal channel has been taken and the decision-making has been removed from the older person's realm into the family's domain. The rights of an older person to make their own decisions regarding the preferred place of residence seem to have been ignored. A study in rural Wales found that older people who were referred to residential care by their relatives were unlikely to welcome the idea (Norman 1980). When admission is agreed to it is usually because the older person does not want to burden the relatives with care duties (Norman 1980).

As previously mentioned the BLSA did not collect any quantitative data to establish whether moves were made on a voluntary basis or otherwise, therefore the logistic regression and latent class analysis made no distinction regarding this aspect of relocation. The qualitative data, however, offer evidence which suggests that the move for 'high levels of assistance' may be most prone to pressures overriding the personal evaluation of the 'costs' and 'benefits' of relocation. In terms of the model of the migration process of older people it appears that pressure was applied to force some people to move, regardless of the values that they attached to 'costs' and

‘benefits’ associated with the outcome (see Figure 11.1). It must be emphasised that due to the small sample for whom qualitative data were collected, it is not possible to estimate the proportion of people making involuntary ‘moves for high levels of assistance’.

## ***SUMMARY***

In this chapter qualitative data has been integrated with quantitative data in order to explore the reasons for not moving, and the reasons for moving which are specific to each type of move identified in Chapter 8.

In terms of **residential stability**, the qualitative data suggests that there may be several broad themes which can be used to describe the reasons why some older people do not move. These were defined as; the reticence or inability to expend the physical and mental energy required during the upheaval of moving; material culture and attachment to home; joint decision-making and confining relationships; community ties and social networks; and suitability of alternative housing.

The qualitative data were also used in conjunction with the adapted five-class model of types of move. Quantitative analysis showed that **long distance amenity moves** were most likely to be made by non-Welsh people with high incomes. The qualitative data corroborated this finding. Excerpts from interviews showed that people were moving to Wales from other parts of the country in order to take advantage of the lower cost of properties. The data also showed that the reasons that have traditionally been associated with ‘long distance amenity moves’ (that is, the search for a better environment associated with health-giving properties) were being given by people making these moves.

**Wide choice local amenity moves** were also made by respondents with high or average incomes. The qualitative data showed that respondents were moving to improve their housing or environment including moving nearer to facilities and services. Sometimes this was as the result of an event which made facilities less accessible, for example severe weather, or the cessation of driving. There was also evidence to suggest that respondents moved when the property was perceived to be too large for their needs.

The **narrow choice amenity move** was also made in order to improve housing or environmental conditions. Probably the most influential factor regarding the outcome of this move was that a majority of the respondents allocated to this class had low incomes. This affected their choice of property that they could move to. Whereas people making a 'wide choice local amenity move' into social housing were able to wait in their current housing until a house that met their criteria was offered, it would be more likely that 'narrow choice local amenity movers' would accept the first offer of housing especially if their current property was particularly unsuitable for their needs. As a result of this, the allocation of the 'better' local authority housing is likely to go to the people who are more financially secure, that is those making 'wide choice local amenity moves' than to people making 'narrow choice local amenity moves'.

The qualitative data showed that the motive for moving for **low levels of assistance** was to be nearer members of the family. However, it was recognised that there is reticence on behalf of many older people, to burden children or other relatives with care duties.



Moves for **high levels of assistance** were primarily into residential care. The evidence shows that there are limits to the amount of care-giving that is forthcoming from neighbours, friends and families. It also appears from the qualitative data that older people making ‘moves for high levels of assistance’ are more likely to be prone to pressure from relatives or professional to relocate against their wishes, than people making other types of moves.

In examining the motives behind residential stability and mobility an adapted version of Wiseman’s (1980) elderly migration process has been developed which explains the relocation and staying put in terms of a continual evaluation of ‘costs’ and ‘benefits’ in the presence of triggering and balancing mechanisms (Figure 11.1).

The next chapter presents a conceptual and methodological overview of the thesis. The conclusion examines how the types of moves made by older people that have been identified in the analysis of data from the BLSA may be verified or improved with further research. In addition the applicability of the adapted five-class model to other countries will be debated. Chapter 12 will also explore the themes that have been discussed regarding the factors that constrain and facilitate residential stability and mobility, in terms of their relevance to housing policy.

# PART III

## CHAPTER 12

### **CONCEPTUAL AND METHODOLOGICAL OVERVIEW: CONCLUSIONS AND THEIR IMPLICATIONS FOR MIGRATION THEORY AND HOUSING POLICY**

This thesis has described the relocation patterns of older people in six rural Welsh communities over a period of 16 years. Logistic regression was used in order to predict which people in the Bangor Longitudinal Study of Ageing (BLSA) were most likely to move. Two main propositions have been tested. The first of these propositions was that using the motives for relocation given by older people a classification of types of move could be developed. Exploratory latent class analyses (LCA) produced a four-class model based on the reasons given by respondents for moving. A set of theoretical statements describing each category of migration were achieved.

The second hypothesis proposed that the typologies that have already been used to categorise older people's moves (Litwak & Longino 1987, Wiseman 1980) cannot be *entirely* supported by empirical evidence from the BLSA. The hypothesis that the best fitting model for the BLSA data has a greater number of types of move than the three types proposed by Litwak and Longino (1987) but fewer than the eight classes suggested by Wiseman (1980) was supported.

In addition it was also proposed that regardless of the types of classes identified, a comparison between those who entered residential care and those people remaining in the community, would support Litwak and Longino's (1987) assumptions that formal service provision is insufficient for people with major chronic disabilities to remain at home and its inadequacies play a part in institutionalisation. The findings verified the final proposition although the conclusions are tentative because they may not be an accurate representation of service provision. Data were not recorded if services were introduced after the interview phase and before admission to residential care.

The conclusions that can be drawn from this research can be organised into two broad themes that is: i) conceptual and methodological issues; and ii) implications for housing policy. The first part of this chapter will examine the ramifications for research on residential mobility and stability of older people that have been highlighted in the development of the typology and model of the migration process of older people, using both qualitative and quantitative data. In addition the applicability of the adapted five-class model to other countries will be debated. The final part of the chapter will examine in turn non-movers, and respondents who relocated. It will pay particular attention to the different problems encountered by both groups and will focus on the salient issues for housing policy.

### ***CONCEPTUAL AND METHODOLOGICAL OVERVIEW***

A majority of the research on migration of older people has been concerned with the characteristics of people undertaking particular 'types' of move. Generally, this has been based on untested theories. None of the frequently cited analyses in the area of residential mobility of older people makes attempts to analytically justify *all* of the types of moves proposed in either Litwak and Longino (1987) or Wiseman's (1980) models. This thesis has addressed this deficit in research.

The logistic regression differentiated between movers and non-movers who either moved *per se*, relocated in the community or entered residential care, but it *did not* indicate whether these factors adequately define *types* of moves for a population of movers only. Studies have assumed that three types of move described by Litwak & Longino (1987) adequately describe the majority of moves made by older people, and that these moves are either motivated by a desired change in life-style such as for a leisure-oriented retirement, or increases in need for assistance. Logistic regression can be used to indicate that people under 75 are most likely to make moves in the community, thereby confirming one of the theoretical characteristics of the 'retirement move.' It can also be used to demonstrate that people over 75 who have never been married are most likely to enter residential care, supporting a proposition concerning moves due to 'chronic disability.' However, logistic regression cannot distinguish whether the three types of move proposed by Litwak and Longino's (1987) are adequate to describe a population. As previously noted, people live longer, in better health than before and it would be expected that the reasons for residential mobility are diverse. It would therefore follow that this necessitates a variety of classes of move that encompass a wide range of motivations for movement. It may appear that Wiseman's (1980) typology, which describes eight different types of move, would be more adept at describing the relocation of older people. However, neither of the aforementioned USA typologies were *entirely* supported by UK empirical evidence from the BLSA. The hypothesis that, the best fitting model for the BLSA data has a greater number of types of move than the three types proposed by Litwak and Longino (1987) but fewer than the eight classes suggested by Wiseman (1980) was supported.

As it had been expected Litwak and Longino's (1987) classification of moves as 'retirement', 'moderate disability', and 'major chronic disability' were not adequate. Only one move, the 'retirement' move, presumes that older people make decisions about relocation that are based on motives other than need for assistance. This assumption is very limiting as little or no attention is given to the role that other factors have in determining relocation.

The adapted version of Wiseman's (1980) model developed in this thesis, which includes five-classes of move; 'long distance amenity', 'wide choice local amenity', 'narrow choice local amenity', 'low levels of assistance' and 'high levels of assistance' is more adept at addressing the variety of motives that may affect relocation. It was necessary to exclude the category of 'return migration' as there was not a method of distinguishing this from 'long distance amenity moves'. It was also necessary to exclude 'enforced moves', as the class contained too few people to improve the fit of the model. The prevalence of chronic movement also appeared to be very low and due to data constraints<sup>41</sup> this type of move was not included.

Although Wiseman's (1980) typology was more diverse than Litwak and Longino's (1987) model the definitions of the types of moves were not appropriate for the sample of respondents in BLSA. Wiseman (1980) characterised all the moves by distance which was not relevant in all instances. When the interaction between other factors was taken into account a re-definition of the types of move in the final model was required. Although Wiseman (1980) made a distinction between 'long distance' or 'local' amenity moves and moves due to 'environmental stress', it was found that it was more appropriate to define all three in terms of moves for amenities. Whereas the 'long distance amenity move' remained a valid category the 'local amenity' and 'environmental stress' moves were more appropriately defined in terms of the

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<sup>41</sup> No data had been collected which described the *residential career* of respondents prior to entering the study.

spectrum of choice available for local amenity movers given their financial resources. Therefore, these two categories were redefined as ‘wide choice local amenity moves’ and ‘narrow choice local amenity moves’.

This thesis has shown that the three types of move proposed by Litwak and Longino (1987) were not diverse enough to describe the moves undertaken by people in the BLSA. In addition the eight class typology proposed by Wiseman (1980) was rejected in favour of a five-class model which described the characteristics of movers in terms of moving for amenities, or assistance and took into account the distance moved, the respondents’ age, marital status, tenure, proximity of family and income. The number, type, and levels of the variables included in the model were constrained by data collection and the processing ability of the programme used in the analysis, and were dealt with in Chapter 7. However, the characteristics of the classes of move in the resulting typology have features that are recognisable from both Litwak & Longino’s (1987) typology and Wiseman’s (1980) typology.

Although the resulting five-class model adequately describes the moves of people over 16 years in the BLSA it may not describe other populations. Chapter 3 concluded that the *proportions* of older people making particular *types of move* may vary from country to country, or region to region, according to the state of the housing market and economic climate. For example, it has been noted that the modal propensity to migrate will be sensitive to institutional and socio-economic change: changes in a country’s statutory retirement age may mean that people retire at an older age; socio-economic factors such as periods of high unemployment may indicate that people retire at a younger age (Roger 1988); or a raise in mortgage interest rates may slow down the rate of relocation (Rosenbaum & Bailey 1991, Stillwell et al. 1995). The influences of any of these factors, or a combination of them, may change the proportions of people in certain age-groups in each of the type of move identified by latent class analysis, or in the proportion of people allocated to

each type of move. However, it is proposed that the types of move that can be potentially realised are dependent on the phase of elderly mobility transition that the country is in.

It is suggested that the five-class typology that has been developed in this thesis may be applied cross-nationally to countries in both the second and third phases of elderly mobility transition. The typology would not be of relevance to a country in the first stage of *demographic transition*, as it was noted in Chapter 3 that most older people would remain in the region of birth. Indeed, the first phase of the *elderly mobility transition* is characterised by very little migration of older people. At the end of Phase 1 older people may move from urban areas, where they relocated for employment, back to their rural origins. Once again, the typology is unlikely to be relevant. Although moves for assistance may be made during Phase 1, it is not until Phase 2 of the elderly mobility transition that the move for amenities emerges. This type of migration continues into Phase 3 when older people also choose to move to a wide variety of destinations in addition to the original 'retirement towns'. It is proposed that further research is required in order to test this hypothesis that the typology of moves developed in this hypothesis thesis may be applied cross-nationally to countries in both the second and third phases of elderly mobility transition.

In order to facilitate future research using the five-class model, the initial conditional probabilities to run the model using PROG MLLSA module (Clogg 1990) of CDAS (Eliason 1990) are presented in Table 12.1. These probabilities are the final conditional probabilities for the five-class model rounded to one decimal place. With larger samples it may be possible to include in the analysis a variable describing the health status of respondents which may improve the model. However, it has been suggested that as older people's functional ability decreases they are more likely to adjust their expectations for competence within their environment (Soldo & Longino



1988, Jackson et al. 1991), in which case the inclusion of a self-rated health variable may not improve the model. An estimation for a dichotomous<sup>42</sup> health variable is included in the Table 12.1. It was estimated that people making amenity moves were more likely to be observed to have excellent or good health rather than fair or poor health. It was also estimated that they would be in better health than those making moves for assistance. Of those people making moves for assistance, it was estimated that it would be most likely that those people making ‘moves for high levels of assistance’ would have the worse health status.

It has been assumed that the interrelationship between factors included in the five-class model can be used to categorise types of move, and that each type of move will also be characterised by particular motives for moving. A set of observed variables were assumed to form a relationship that categorised a latent variable, in this instance a type of move. Hammersley and Gomm (1997) have made a valid comment on assumptions such as this, that are made in social research:

“Given that all research necessarily relies on presuppositions, none of which can be established as valid beyond all possible doubt, we can never know for sure that a presupposition is leading us towards truth rather than away from it.”

(paragraph 4.10)

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<sup>42</sup> It is presumed that the health variable would be dichotomous, as the Maximum Likelihood Latent Structure Analysis (PROG MLLSA) module of the Categorical Data Analysis System (CDAS) Version 3.5 can only estimate for a maximum of three hundred cells. Therefore a cross-tabulation with six variables and 17 values would produce a two-hundred and eighty-eight response patterns (2 x 6 x 2 x 2 x 3 x 2) which is within its capabilities.



**Table 12.1 Start values for conditional probabilities and latent class probabilities for future analysis**

Variable	Level	Long distance amenity	Wide choice local amenity	Narrow choice local amenity	Low levels of assistance	High levels of assistance
DIST4	50+ miles	.9	.1	.3	.5	.1
	<50 miles	.1	.9	.7	.5	.9
TENPFAM	Own/family < 50 miles	.1	.2	.5	.2	.0
	Own/family 50+ miles	.8	.2	.0	.0	.0
	Rent/family < 50 miles	.0	.5	.4	.2	.0
	Rent/family 50+ miles	.1	.1	.1	.0	.0
	With family/friends/assist. living	.0	.0	.0	.6	.3
	Residential care	.0	.0	.0	.0	.7
AGEMB2	65-74	.9	.4	.8	.4	.1
	75+	.1	.6	.2	.6	.9
MARSTM	Married	.6	.3	1.0	.3	.0
	Widowed	.2	.5	.0	.7	.7
	Never married/divorced	.2	.2	.0	.0	.3
INC3	High/average	1.0	.7	.3	.6	.8
	Low	.0	.3	.7	.4	.2
HEALTH	Excellent/Good	.9	.9	.9	.3	.1
	Fair/Poor	.1	.1	.1	.7	.9
Latent class probabilities		.2	.2	.2	.2	.2

----- Indicates a variable that could be included in future analysis if the sample size permitted.

**Table 12.1 Start values for conditional probabilities and latent class probabilities for future analysis**

Variable	Level	Long distance amenity	Wide choice local amenity	Narrow choice local amenity	Low levels of assistance	High levels of assistance
DIST4	50+ miles	.9	.1	.3	.5	.1
	<50 miles	.1	.9	.7	.5	.9
TENPFAM	Own/family < 50 miles	.1	.9	.7	.5	.9
	Own/family 50+ miles	.8	.2	.5	.2	.0
	Rent/family < 50 miles	.0	.5	.0	.2	.0
	Rent/family 50+ miles	.1	.1	.1	.0	.0
	With family/friends/assist. living	.0	.0	.0	.6	.3
	Residential care	.0	.0	.0	.0	.7
AGEMB2	65-74	.9	.4	.8	.4	.1
	75+	.1	.6	.2	.6	.9
MARSTM	Married	.6	.3	.1	.3	.0
	Widowed	.2	.5	.0	.7	.7
	Never married/divorced	.2	.2	.0	.0	.3
INC3	High/average	1.0	.7	.3	.6	.8
	Low	.0	.3	.7	.4	.2
HEALTH	Excellent/Good	.9	.9	.9	.3	.1
	Fair/Poor	.1	.1	.1	.7	.9
Latent class probabilities		.2	.2	.2	.2	.2

----- Indicates a variable that could be included in future analysis if the sample size permitted.

It has been noted that research using quantitative data frequently assumes that the validity of numerical data is accepted, although it is produced with a certain level of inbuilt error (Converse & Schuman 1974, Schuman 1982, Bateson 1984, Pawson 1989, Western 1996) and that the statistical methods used to construct models produce authoritative conclusions (Lieberson 1985, Oakes 1986, Ragin 1987, Levine 1993). In the context of the typology of moves, it is argued that although measuring a variable such as income may determine what type of move is economically viable for a person to undertake, it cannot ascertain each individual's perception of the motive for that move. The assumptions which can be drawn from the typology *alone* are therefore limited.

The allocation of respondents to classes in the author's adapted model resulted in 74% of respondents having stated the reason for moving that would be expected given the type of move. It is suggested that although LCA can determine the number and types of classes that most adequately fit the data it will not predict the motives for moving with one hundred percent accuracy. For example, the model could not account for moves to assist other family members such as parents or children (Cribier & Kych 1992, Warnes 1993).

The author's adapted theoretical model of the migration process of older people (Figure 11.1) illustrates that personal evaluation of a residential situation may involve for example, the balancing of values attached to the challenge of a move to another community and the establishment of a new network of friends with the financial cost of a move, or the assessment of how the values attached to a need for assistance weigh up against the perceived loss of autonomy and potential change in family dynamics supposing a move was made in with relatives. These forms of value-laden judgements cannot be included in the mathematical model. Even though it may be possible to empirically measure some of these variables, the tools of

analysis currently available cannot allow inclusion of all factors in LCA. Although the five 'ideal' types of move can be used as a framework within which it is possible to identify the most likely motive for a move for people of differing ages, marital and economic status in the BLSA, it must be recognised that there will be individual differences within each class. Future analysis on data from different countries or ethnic groups will be particularly interesting as it may reveal cultural differences in the motives that are stated most frequently for each type of move.

Quantitative data have been used to construct a five-class model of moves, that may be used in further analysis, but these classifications inevitably mean that some of the richness and diversity of the motivations behind residential mobility is lost. This can be balanced with the use of qualitative data. In combining these two types of data, this thesis has: developed a typology describing the moves made by older people in the BLSA; and produced a model of the migration process of older people. This has made inroads into a previously under-researched area, that is, how older people come to make decisions about whether to move or stay put (Means et al. 1993).

### ***IMPLICATIONS FOR HOUSING POLICY IN RURAL NORTH WALES***

The logistic regression analysis in this thesis has identified those people who are least likely to move as well as those that are most likely to move. In addition, the latent class analysis has identified five types of moves made by older people in rural Wales. The concluding part of the thesis will examine in turn non-movers, and respondents who relocated - categorised as making one of five types of moves. Particular attention will be paid to the different problems encountered by both groups which will be linked to areas of housing policy which could be addressed in order to allay these difficulties.

## **Non-movers**

An examination of the qualitative data in Chapter 11 gave rise to some broad classifications of the reasons why some older people decided not to move. These were; reticence or inability to expend the physical and mental energy required during the upheaval of moving; material culture and attachment to home; joint decision-making and confining relationships; community ties and social networks; and suitability and availability of alternative housing. The qualitative data was accumulated from intensive interviews with thirty respondents and interviewers reports from all respondents in the BLSA. Due to the small amount of qualitative data the findings cannot be generalised, in the sense that it would not be appropriate to estimate proportions of people who were not moving due to particular reasons. However, it would be reasonable to expect that several older people have similar reasons for not moving, especially as it was demonstrated in Chapter 11 that this evidence can be corroborated with findings from other research.

Over the sixteen years of the BLSA, a majority (79%) of the pooled sample were non-movers. The proportion of people not moving has probably been influenced by the conditions of the housing market, however, other research has indicated that older people are less likely to move than younger people and prefer to age in place (Lawton 1980(a), Butler & Lewis 1982, Thomae 1988, Lehr 1991, Filion et al. 1992, Oswald & Wahl 1995, American Association of Retired Persons 1996). A majority of the reasons stated for non-movement in the BLSA could be described as positive influences constraining relocation. That is the older person wanted to age in place because of attachment to the property, or in response to a desire to be close to friends and neighbours in the vicinity. However, constraining relationships and the availability and suitability of alternative housing could be construed as negative or restrictive influences on the decision to relocate.

The logistic regression indicated that over a quarter (26%) of non-movers were in receipt of low incomes. Elsewhere it has been suggested that people on low incomes are more likely to expect to age in place than those with higher incomes (Robison & Moen 1995). It must be pointed out again, that low income in this context was judged as such when compared with other older people in the sample. Compared with all of the population in North Wales, a majority of older people are more financially constrained than younger people. As indicated in Chapter 5, 34% of working people in rural Wales were earning less than the decency threshold set by the Council of Europe, whereas 90% of single older people and 53% of married older people were below this level of income. It has been found that income has a fundamental influence on the housing consumption decision for the population as a whole (Boehm 1981, Henderson & Ioannides 1983, 1985, 1987, 1989, Rosenthal 1989). The proportion of older people with low incomes is highly significant in terms of older persons' ability to compete in the housing market.

Due to the nature of the *pooled* sample, low income non-movers may also be classified as low income movers at a different phase of the study. This was demonstrated in Chapter 11 where the case study of Mr. Llewellyn was presented. Mr. Llewellyn made a 'narrow choice local amenity move' after five years on the waiting list for a council house. In this instance Mr. Llewellyn represents a low income non-mover at one phase of the study, but also a low income mover at the next phase. Therefore the difficulties encountered by low income non-movers and movers, will be the same. For this reason the impact that low income has on the spending power of older people and their ability to compete in the housing market will be discussed later in this chapter when drawing conclusions about aspects of housing policy that have affected people making 'narrow choice local amenity moves'.

Low income may also affect those people who have opted not to move in their ability to maintain their housing in the 'zone of maximum performance potential' (see Chapter 2). In other word, the level of income of people ageing in place brings into question their ability to keep their homes in a satisfactory state of repair, or to adapt the homes if required in the face of decreasing functional ability.

In 1994 the Welsh Omnibus Survey found that 61% of people over 65 in Wales were home owners who had paid off their mortgages whereas only 5% still had mortgages outstanding (Beaufort Research 1995). Although a majority of older people in Wales do not have to meet mortgage repayments, those who receive a low income may encounter financial difficulties in repairing and maintaining their homes (Kirk & Leather 1991, Leather & Mackintosh 1992, Leather & Mackintosh 1993, Means et al. 1993). It has been estimated that older people spend between seventy to ninety percent of their time in their home (Czaja 1988, American Association of Retired Persons 1990, 1992, Gabb et al. 1991, Baltes et al. 1990, 1993). Functional impairment can be exacerbated by inappropriate living conditions. It is therefore of great importance that the quality of the home is adequate.

The level of unfit homes in Wales is approximately twice as high as those in England (Mackintosh & Leather 1993) and it has been noted that they may be the worst in Western Europe, if the age of housing stock is used as an indicator, as over one third was constructed before 1919 (Fisk 1996, Fisk & Hall 1997). Leather and Mackintosh (1993) have stated that inter-war stock is now beginning to need major investment for repairs, especially as many people delayed expenditure on such projects during the recession in the 1980s. National statistics reveal that there is a higher proportion of houses in poor condition in rural Wales than in urban areas (Welsh Office 1988). People on low incomes, especially older people who have lived in their houses for a long period of time are particularly likely to be living in poor housing conditions (Leather & Mackintosh 1993). Tai Cymru (1990) reported that nearly half of all

pensioner households in Wales were occupying properties that lacked basic amenities such as inside toilets.

In Britain, a review of the provisions of the 1989 Local Government and Housing Act concluded that measures were required, such as practical help from home improvement agencies, for people in poor housing conditions (Leather & Mackintosh 1992, Littlewood & Munro 1996). Since the 1980's two schemes, 'Staying Put' and 'Care and Repair', have endeavoured to help older people who require home maintenance or repair. These projects help to arrange finance, organise and supervise building work, and give technical and legal advice (Oldman 1990).

In 1990 the Welsh Office declared that 'Care and Repair' in Wales would become a separate organisation, renamed 'Care and Repair Cymru'. An annual budget of £100,000 was set aside to cover 50% of the running costs of 18 projects (Leather & Mackintosh 1992). In 1990, out of the seventeen districts in rural Wales only five had a 'Care and Repair' agency. Neither Glyndwr nor Meirionnydd had an agency operating in the district (Tai Cymru 1990). In 1992/1993, in addition to 'Care and Repair Cymru,' just under half (49) of the local authority districts in Wales had a home improvement agency.

Funding for home repairs comes from many sources:

- "Local authority grants (renovation grants, disabled facilities grants, minor works assistance, group repair grants, houses in multiple occupation grants, and common parts grants)
- Loans (from banks, building societies, or local authorities)
- Payment from the Department of Social Security including the Social Fund, additional income from welfare benefits, and help with payment of



loan interest

- Grants from national and local charities and contributions from project hardship funds
- Building insurance
- Contribution from clients' own savings or from relatives or friends."

(Leather & Mackintosh 1992)

However, many of these sources of funding have drawbacks, for example those people who are particularly likely to be living in sub-standard housing, that is older people and people with low incomes, who have lived in the property for a long time are the least likely to obtain a grant (Department of the Environment 1982, 1983). Leather and Mackintosh (1993) note that an unpublished Department of the Environment survey showed that after 1982 more grants were provided to people living in semi-detached and detached properties than to people living in properties which were lacking amenities or were considered to be unfit (Department of the Environment, unpublished). Also, those people who could afford to pay for repairs themselves were more likely to apply for grants than people on low incomes who could not afford the owners' contribution towards the cost of repair (Leather & Mackintosh 1993).

In addition to the drawbacks associated with people on low incomes obtaining a grant, the release of home equity from owned homes is also problematic. There are currently three types of mortgage release schemes offered by banks and building societies to enable home owners access to money that is tied up in their properties to pay for repairs. The repayments can be made in instalments, or deferred until the house is sold or the owner dies (Clapham et al 1990). The schemes are:

i) home income plan - a loan is secured on the house (usually a ceiling of £30,000) which is used both for paying for the home improvement and to purchase an annuity which is paid for monthly for the remainder of the person's life;

ii) home reversion schemes - the house is sold to a company (below the market value) but the original owner retains the right to live in the property for the remainder of their lifetime. The occupant is under obligation to maintain the property at a standard set by the purchaser;

iii) reverse mortgage - a loan is secured on the property and the borrower has the option to add the interest charged onto the remainder of the loan. The loan could potentially exceed the price of the property if it is large, or if the borrower lives a long time.

(Leather & Mackintosh 1992)

Although some of the individual problems have been highlighted in the brief descriptions of the schemes, the major disadvantage is paradoxical in nature. The houses that usually require the most repair are most likely to have the least equity, whereas the most expensive houses with the most equity are the least likely to require renovations (Leather & Mackintosh 1992, Means et al. 1993). These schemes are therefore not beneficial for people living in poorly maintained properties that require major renovation. It has been suggested that low-income low-equity home owners could be aided if appropriate schemes were supported by central government policy (Clapham et al. 1990). The 'Right to Buy' policy has meant that more people are now home owners, and in the future we would expect to see increases in the number of older home owners with low incomes (Kirk & Leather 1991). It appears that unless a solution is found to the problems associated with obtaining a grant and releasing equity from houses in order to repair and maintain properties, a substantial

proportion of the existing older housing stock is going to continue to decline in condition over time (Leather & Mackintosh 1993).

Currently there is no comprehensive account of the housing needs of the older people in rural areas of Wales. There is little indication as to the suitability of current accommodation and therefore it is not known whether proposed housing investment will meet the needs of older people (Tai Cymru 1990.) In Meirionnydd, the council considered that the results of the 1986 Welsh House Condition Survey (Welsh Office 1988) underestimated the proportion of properties designated as unfit. However, by 1990 the council had not discussed commissioning their own survey of properties in the area. On the other hand, in Glyndwr the council were undertaking research into housing conditions in the district, in order to update the Welsh House Condition Survey (Welsh Office 1988) and to help interpret the results (Tai Cymru 1990). It appears that there needs to be an up-to-date comprehensive housing needs survey in Wales. It is suggested that the survey should be centrally funded by the Welsh Office, or alternatively that local authorities are encouraged to commission their own research. In the latter instance it would be preferable that the Welsh Office issue guidelines for the format of the research, so that the data collected are comparable between districts and may be amalgamated in order to provide a national database of house conditions, provision and needs.

## **Movers**

Having discussed areas of housing policy which need to be addressed in order to ensure that non-movers may comfortably remain in their homes, this chapter now addresses the implications for housing policy that are raised by examining the characteristics of the movers in the sample. Firstly, in order to correctly interpret the results, the nature of the pooled sample is revisited.

The strategy of pooling the data from each four year interval of the BLSA was adopted in order to obtain a large enough sample of moves on which to perform latent class analysis. However, this means that the *pooled* sample of moves is not a ‘snap-shot’ of people at one particular time, but spans 16 years. Individuals may be represented more than once in the *pooled* sample, but more importantly the *BLSA* sample aged over time and diminished in size. Those people that died during the course of the study were not replaced with new respondents. Therefore, the proportion of the types of move that are undertaken by the pooled sample are not representative of a cross-sectional sample, that is, a sample drawn from rural communities at one particular time.

It was not possible to look at the proportions of people undertaking moves in 1979 and extrapolate to the population in general. The 1979 sample did not include people in residential care, therefore ‘moves for high levels of assistance’ would be underrepresented. As the sample included only those people aged 65 and over in 1979, it would also be expected that the proportion of moves made by people under 75 will not be representative of the population as a whole. Over time the sample aged and respondents were more likely to make the types of moves associated with older age groups, rather than those made at or around retirement age. In order to establish the proportions of older people undertaking each type of move in the population as a whole, further research would be required.

Logistic regression indicated that relocation per se was most likely for those under 75 with a low income. When the analysis was restricted to moves in the community, marital status was also an important explanatory factor. The respondents with the highest odds ratio for moving in the community were under 75 and married with low incomes. The factors predicting entry into residential care were age and marital status, but as would be expected were very different to the characteristics of those most likely to move in the community. The probability of entering residential care

was highest for respondents who were aged over 80 years and never married or divorced. This finding replicates other studies which have found that increasing age significantly influences residential admissions (Townsend 1965, Nielson et al. 1972, Evans et al. 1975, Kraus et al. 1976, Brody et al. 1978, Clark et al. 1979, Greenberg & Ginn 1979, Vicente et al. 1979, McCoy & Edwards 1981, Kane & Kane 1982, Branch & Jette 1982, Williams & Hornberger 1984, Shapiro & Tate 1985, Greene & Ondrich 1990, Pruchno et al. 1990, Glazebrook et al. 1994, Speare et al. 1991, Grundy 1992, Warnes & Ford 1995) as does the marital status 'never married' (Grundy 1992). The logistic regression differentiated between movers and non-movers who either moved per se, relocated in the community or entered residential care, but it *did not* indicate whether these factors adequately define *types* of move for a population of movers only. This was provided by latent class analysis in Chapter 8 where a five-class model was developed to describe the types of move undertaken by people in the BLSA.

The types of moves that have been identified by latent class analysis can be expressed as the interrelationship between variables used in analysis, that is in terms of the relationship between the distance moved, proximity of family, tenure, marital status and income. In addition, the most likely reason for each type of move has been identified and qualitative data has highlighted other significant features of the moves.

For the remainder of this chapter the implications for housing policy will be discussed by looking at the types of moves in two groups. Firstly, the three moves for amenities will be examined; the 'long distance amenity move'; the 'wide choice local amenity move'; and the 'narrow choice local amenity move'. A comparison between these moves highlights several inequities in housing choice and consumption. Secondly, the moves for assistance will be examined; 'moves for low levels of assistance'; and 'moves for high levels of assistance'. These moves take place at the interface between housing policy and social care policy. Moves for

assistance are affected by the availability of supported housing, or housing in the proximity of family, and provision and adequacy of social and health care services in the area.

### **Amenity moves**

The reasons for moving given by respondents in the BLSA (Table 9.3) showed that a majority of people making amenity moves stated that they moved for improved housing or environment. Although the motives of a majority of the movers were the same, the characteristics of each type of amenity mover (than is 'long distance', 'wide choice', or 'narrow choice') were different.

As mentioned earlier, the proportions of 'long-distance amenity movers' are underrepresented in the sample as the original sample in 1979 was made up of those aged 65 and over. Therefore, those people that had moved to retirement destinations at or around retirement age, but not in the four years prior to 1979, would not have been recorded as making long-distance amenity moves. The discussion in Chapter 11 indicated that a majority of 'long distance amenity movers' were defined as 'not entirely Welsh' which probably indicates that they migrated from elsewhere in the UK. Two-thirds (67% N=8) of the 'long distance amenity movers' relocated to Tywyn which is a popular retirement destination. Retirement destinations are usually rich in services for older people. Indeed, out of all of the communities in the BLSA, Tywyn had the greatest number of residential care homes (3) and nursing homes (2). As mentioned in Chapter 4 the influx of in-migrants into rural communities has the effect of pushing the prices of properties out of the reach of many of the local inhabitants. Nearly one third (32%; N=20) of the people moving to Tywyn had high incomes whereas only (14%; N=9) had low incomes.

The identification of the 'wide choice local amenity move' lends support to other evidence that demonstrates that the UK is in the third phase of the elderly mobility transition (Law & Warnes 1982, Rogers 1990). Whereas countries in Phase 2 of the elderly mobility transition are characterised by long distance migration of older people at retirement age to areas that cater specifically for older people, Phase 3 sees the emergence of shorter distance moves, where the choice of destination is more varied, including more inland and rural areas. From examination of the characteristics of 'wide choice local amenity movers', it appears that these moves are not just undertaken by people at or around retirement age. It was estimated that 67% of the movers were over 75 years of age. This may be a reflection of the increase in life expectancy. Nowadays people live longer and in better health than before, which has meant that the last years of life have become a time where plans can be made for enjoyment, rather than the expectations of previous generations that retirement would be a time to wind down whilst experiencing declining health. Although health was not included as a variable in the latent class analysis, cross-tabulation of the classes of moves with the health variable shows that 77% of the people making 'wide choice local amenity moves' were in excellent or good health (Pearson chi-square 21.01, d.f. 4,  $p < .001$ ).

The choice of rural destination may be important to the communities which are selected as destinations for 'wide choice local amenity moves'. As noted earlier, Tywyn caters for older people in its amenities, especially in the provision of residential care and nursing homes. However, over the course of the study two smaller communities experienced an influx of 'wide choice local amenity movers'. Seventy-three percent ( $N=11$ ) of the people that moved to Llanarmon made 'wide choice local amenity moves', as did 26% ( $N=17$ ) of those people moving into Llanrhaeadr. These accounted for 17% and 26% respectively of all 'wide choice local amenity moves'. As these moves are predominantly short distance in nature, it may be that the movers were relocating within the community that they were already



residing in. Wiseman (1980) suggested that during all of the stages of the 'life cycle' moves are made for improved houses, gardens or neighbourhoods and in this context these moves for may be no different than moves made by younger people. Short-distance moves were classified as such if they were under 50 miles, so people may also be moving into the communities from the surrounding hinterland. It was also possible to move less than 50 miles to Llanarmon or Llanrhaeadr from a conurbation such as Liverpool or Wolverhampton. This may have important consequences for the town receiving the older movers. Whereas it appears that Tywyn can cater for the influx of older migrants, smaller communities may experience difficulties in providing the facilities and services required for the incomers to remain in their houses, or even to move into residential care at a later stage of their lives. In light of the projected increases in the proportion of people making 'wide choice local amenity moves' to small rural communities (Law & Warnes 1982), the polarisation of services for older people in larger settlements may become less appropriate.

Currently, Llanarmon provides eight bungalows for older people with 'Lifeline' alarms and Llanrhaeadr provides fourteen similar dwellings. The nearest residential care home to Llanarmon is situated in Llanferres, six kilometres outside the village, and can accommodate fourteen residents. Llanrhaeadr has one residential care home, which can accommodate twenty-eight residents. Demographic forecasts suggest that there will be a substantial increase in demand for both residential and home care over the next decade, and the smaller communities which may be selected by older people as the destination for their moves will have to be aware of the impact that this will have on the levels of services that they will be required to provide. Unless local authorities keep a watchful eye on the demographic changes that the rural communities are undergoing, it may be that the aims of the Government to support older people with the necessary services in their homes in order to live "full and independent lives, in line with their wishes, in their own homes or in 'homely' settings within the community" will not be met (Tai Cymru 1990).



The third type of amenity move, the 'narrow choice local amenity move', is primarily differentiated from the other amenity moves in the level of income that the people classified in the group receive. 'Narrow choice local amenity movers' are most likely to have low incomes, whereas 'long distance' and 'wide choice local amenity movers' are most likely to have high or average incomes. This produces a disparity in the consumer power of people classified in each group.

The 'long distance amenity move' and 'narrow choice amenity move' have several similar characteristics. Both moves are predominantly made by married couples under the age of 75. Ninety-two percent of the people making 'long distance amenity moves' were home owners, as were 55% of those people making 'narrow choice local amenity moves'. However, whereas 'long distance amenity movers' may migrate to retirement towns from elsewhere in the UK, 'narrow choice local amenity movers' are unable to effectively compete for houses within these communities due to their financial status. Although the number of movers were very small an example of the restricted choice that is available to low income home owners is illustrated in the remote community of Llanycil.

Seventy-five percent (N=3) of the people who moved to Llanycil made 'narrow choice local amenity moves'. Llanycil is a widely dispersed sheep farming community. There are no local authority or housing association properties in the community. In Chapter 4 it was noted that 78% of the sample from Llanycil were Welsh speakers. This probably denotes that there has not been a significant in-migration of non-Welsh people into the community from elsewhere in the UK. Therefore, although there may be competition for accommodation amongst the indigenous population, the property prices are likely to remain within the reach of the local inhabitants. Although there may be scope to relocate within Llanycil itself, albeit limited to specific tenures, the opportunity to relocate further afield whilst remaining in the same tenure is considerably restricted. Home owners in Llanycil are

unlikely to be able to afford to relocate to rural communities where in-migration of people from other regions in Britain has had the effect of increasing the competition for housing and raising property prices out of the reach of many rural inhabitants (Cloke and Davies 1992, Tai Cymru 1990, Asby & Midmore 1996). Meirionnydd Council have noted that due to the prevalence of second/holiday homes in the area:

‘In reality properties in the private sector are not within easy reach of an increasing number of local residents.’

(Tai Cymru 1990)

Inequity in consumer power is also evident for people renting accommodation. This is illustrated by comparing ‘narrow choice local amenity movers’ with those people making ‘wide choice local amenity moves’. ‘Wide choice local amenity movers’ were predominantly renters (59%) who were most likely to have high or average incomes. Forty-five percent of ‘narrow choice local amenity movers’ were renters who were most likely to have low incomes. It has been noted that between 1953 and 1983 there was an increasing divergence of equality of incomes between home owners and renters. The median incomes of renters fell from 75% to 45% of that of home owners in this period (Bentham 1986). It has been found that low income renters are likely to be reliant on public housing. In 1985, 65% of households whose income was less than £50 per week, and were economically inactive, were accommodated in the public rented sector (Clapham et al. 1990). An examination of incomes in 1987 from the respondents in the BLSA showed that 73% of single person households were receiving less than £60 per week, as were 39% of households containing couples. The band containing people earning between £40 and £59.99 was classified as an average income. Therefore, in accordance with the findings of Clapham et al. (1990) cited above, a proportion of people classified as making ‘wide choice local amenity moves’ may well be relocating in the public sector.

When the tenure of movers was examined it was found that 51% (N=33) of 'wide choice local amenity movers' moved into local authority housing as did 35% (N=10) of 'narrow choice local amenity movers'. However, the allocation of public housing is indirectly affected by the level of income of the person applying to be rehoused.

In the discussion about non-movers above it was noted that people on low incomes are particularly likely to be living in poor housing conditions (Leather & Mackintosh 1993). Chapter 11 mentioned that the current housing situation of an applicant for social housing affects the outcome of the process (Lund 1994). If the current accommodation is fairly satisfactory then the applicant has the ability to wait until they are offered a house that they like (Power 1987). Most local authorities will continue to make unlimited offers of housing to people at the top of waiting lists (Prescott-Clarke et al. 1987). In terms of the consumer power of the amenity movers requiring public housing, this means that allocation of the 'better' local authority housing is likely to be distributed to 'wide choice local amenity movers' who are more likely to be able to bide their time. People with lower incomes are more likely to be in unsatisfactory housing. Therefore, 'narrow choice local amenity movers' are more likely to accept whatever accommodation is offered to them, regardless of the match between their preferred choice of housing and what is on offer.

A possible solution to the inequity in allocation of social housing would be to restrict the number of offers that can be made to individual applicants. However, this would be contrary to the Government's emphasis on the free-market and consumerism in housing (Lund 1994). A better solution may be to increase the quality and provision of social housing in rural communities.

In Chapter 4 it was noted that in Glyndwr and Meirionnydd there has been approximately a 20% decrease in local authority housing which has not been matched by an equivalent increase in housing association dwellings. The decline in availability of affordable rented accommodation raises the question of what housing options are currently available for older people with low incomes. Oldman & Greve (1983) report that in many areas of the country the only form of housing offered to older people is sheltered accommodation. Designed housing for older people has been built with these following assumptions in mind:

- That older people are a discrete social group
- That older people have special needs. These are not defined precisely, but are presumed to be for example, a requirement for compact housing units that are easy to heat, in close proximity with other older people to reduce isolation.
- That these paternalistic assumptions are in the 'best interests' of older people.

(Oldman & Greve 1983)

Some of the qualitative data in Chapter 11 showed that one of the consequences of age-segregation is that negative images of old age are attached to sheltered housing. The provision of this form of housing implicitly suggests that 'old age' is a problem, rather than either a lack of affordable alternatives for those that function quite adequately in ordinary housing without any special provision, or housing that is accessible with alarms linked for emergency help (if wanted) and formal social care support for those people who face declining functional abilities. Chronological age is not a good indicator of ability and therefore neither should it be used as a criterion for housing people in this form of adapted accommodation.

The provision of sheltered housing or specially adapted housing for older people installed with 'Lifeline' alarms showed considerable variation throughout the communities in the study.<sup>43</sup> For example, in Llanycil there was no provision of any local authority or housing association properties, and in Brynchrug neither housing provider supplied accommodation specifically for older people. In Aberdovey, although the local authority did not provide accommodation for older people, all of the housing stock provided by the housing association was for this age group. The only other community where Cymdeithas Tai Clwyd provided housing for older people was Bala, where 33% of their stock was specifically for older people. In the other communities the proportion of local authority stock of public housing which was designated as 'sheltered' or 'specially designed housing with 'Lifeline' alarms' ranged from 13% and 16% respectively in Tywyn and Bala to 57% and 73% respectively in Llanarmon and Llanrhaeadr. However, it must be noted that the high proportion of housing for older people in the local authority stock in the latter two communities is due to the sale of over 50% of the general housing through the 'Right to Buy' which subsequently has not been replaced.

Neither Glyndwr or Meirionnydd Councils know whether the provision of housing for older people is adequate. Glyndwr Council notes that:

'More information is required on the level of demand for social housing for local people'

(Tai Cymru 1990)

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<sup>43</sup> The percentages of local authority and housing association properties that were especially for older people are based on the statistics for 1995 or 1997 (depending on the community to which they refer) quoted in Chapter 4

In Meirionnydd the council has previously assessed the need for social housing from its waiting lists. However, as noted in Chapter 4 this method is flawed and may not accurately depict where applicants wish to live. In order to increase their chances of being re-housed an application will be made stating the first choice in an area in which there is more available social housing, for example the nearest large town or village (Shucksmith 1990). The Council in Meirionnydd has noted that there are problems associated with using the waiting list as a measure for housing need:

‘this can be misleading and merely reflects the demand as opposed to the need for housing.’

(Tai Cymru 1990)

There is a need for an up-to-date, comprehensive housing needs survey in Wales. This was suggested previously when noting that there is currently no indication as to the suitability of the properties occupied by older people in rural Wales. As noted in Chapter 4, an accurate, objective representation of ‘need’ and deprivation in rural communities may be warranted in light of the projected increase in the population aged 75 and over in Wales (Cloke et al. 1995). However, as nearly 30% of applicants aged 65 and over had waited for over 4 years for social housing in rural areas of North Wales (Tai Cymru 1990) it could be assumed that there is indeed a gap between the need for, and provision of social housing for older people in rural communities.

It is suggested that the lack of a variety of low-cost housing, could be dealt with by a two-pronged approach by the Government which need not be restricted to rural communities. Firstly, grants could be offered to private landlords to up-grade accommodation to a level that would be accessible for people with functional impairment (both young and old). As mentioned in Chapter 3, as a result of exits from the housing market through the repossession of houses during the 1980s, there

is a mismatch between housing demand and housing supply. Although the 'Right to Buy' was a mechanism for people to leave the rented sector, the 1980 Housing Act did not take into account reclamation of housing from the private sector back into the realm of social housing (Allen & Milne 1994). A financial incentive for home owners (or mortgage lenders who may now 'own' properties) to adapt their properties may be beneficial on two fronts: providing needed accommodation for older and low-income renters, and providing the home owner with additional income. The latter may be especially beneficial for those people in negative equity as it may help to recoup some of the losses incurred during the housing recession.

Secondly, it is suggested that the building of new housing stock and refurbishment of old stock, takes the 'Lifetime Housing' approach which would mean that housing associations and local authorities would no longer need to designate properties as either 'general need' or for older people. 'Lifetime Housing' incorporates the concept of universal design to meet the needs of all people regardless of age, gender or physical impairments (either permanent or temporary). Most people during their lifetime will experience periods when 'ordinary' housing will not fit into their 'zone of maximum comfort' (Lawton 1988): that is, the demands from the environment exceed the range of competence of the person. This may be temporary for example: having sustained a back injury bath supports and hand rails may be required; or transient and continually changing, for instance when the environment produces difficulties or hazards such as; narrow hallways in which a pushchair or wheelchair cannot be manoeuvred; stairs; items that may scald; toilets and baths that are difficult to negotiate; and work surfaces that cannot be reached. These problems require a supportive environment which is similar to those required by some older people or younger physically impaired people. It seems reasonable to build future housing with design features such as; walls of sufficient strength to hold grab rails if needed; non-skid floors; shower and baths with built in seating; anti-scald devices; wider



hallways and doorways; and adjustable work surfaces, all of which can support people throughout their lives (Raschko 1987, Belser & Weber 1995, Fisk & Hall 1997).

It has been suggested that 'Lifetime Housing' could also make the most of advances in technology and that homes could be automated as far as possible, in order to support the occupant. This would include for example, potential links with community alarm systems, telemedicine and interactive cable networks (Fisk 1996, Fisk 1997). Currently projects are evaluating the efficacy and acceptability of 'Lifetime/Smart houses': The BESTA project in Norway (Clatworthy & Bjorneby 1994, quoted in Fisk 1996), and in the United Kingdom and Portugal the HS-ADEPT project (Cooper et al. 1994, Cooper 1996, quoted in Fisk 1996). The results of these evaluations are eagerly awaited as several questions need to be addressed for example; how the clients rate the acceptability of intrusion in their home; the ease with which the technological hardware is used; and to what extent telemedicine and SOS linked alarm services may be used to substitute for care 'in person'. Oldman and Greve (1983) succinctly indicate that:

“The elderly [sic] have the right to the most sophisticated systems available, but they also have the right to feel confident that the systems are part of an extensive network of human care and are not used as an alternative to it.”

It may be wise to wait for the first evaluations of the BESTA and HS-ADEPT projects before it is suggested that 'Smart Technologies' should be incorporated into 'Lifetime Housing'. However, even in its present conceptualised form, if 'Lifetime Housing' was taken on board by the public housing sector it would offer accommodation that would eliminate age-segregation and the negative images that some people associate with sheltered housing, as well as providing suitable housing for people with low incomes. This form of building would also satisfy criteria



outlined in the Welsh chapter of the Government's White Paper 'Caring for People' which states that:

'Social care plans should take account of the progressive development of housing investment programmes, which has given greater priority to special needs and to the provision of homes that can *flexibly*<sup>44</sup> be adapted to enable people to live independently for as long as they wish.'

(Her Majesty's Stationery Office 1989)

In 1992 local authorities were given help in their role as housing enablers in the revision of Planning Guidance Note 3. This meant that as a condition of planning approval, local authorities could *require* new housing developments to include low cost housing (Barlow & Chambers 1992). It could be envisaged that local authorities could also stipulate that developers should incorporate features of Lifetime housing into the low-cost accommodation, thereby satisfying all likely criteria for special needs.

At this point, it seems that the provision of low cost housing merges with the provision of 'special needs' housing and the supply of social care in the community. It becomes apparent that some of the problems associated with obtaining low-cost housing for narrow choice local amenity movers may also be evident for people relocating for assistance.

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<sup>44</sup> Emphasis added by author.

## **Moves for assistance**

Two types of moves for assistance were identified by latent class analysis, these were called, 'moves for low levels of assistance' and 'moves for high levels of assistance'. People moving for 'low levels of assistance' were most likely to be over 75 and widowed. However, compared with the characteristics of people making moves for 'high levels of assistance', a greater proportion of those people moving for 'low levels of assistance' were younger, and a larger proportion were married.

'Moves for low levels of assistance' were either long or short in distance. The move was most likely to be in with family, friends or assisted living accommodation. Fifty-seven percent of people moving for 'low levels of assistance' moved in with friends or family or into sheltered accommodation with a warden. When broken down by tenure and house type, the data showed that proportionally more of the people moving for low levels of assistance moved in with friends or family (40%, N=14) than into sheltered accommodation (17%; N=6). Moving to the proximity of family means that, unlike the long-distance moves for amenity, people moving for 'low levels of assistance' are not moving to retirement regions. In light of the qualitative evidence that suggested that older people are particularly loathe to burden their children with care duties, these findings may point to either an inadequate supply or lack or appeal of sheltered housing, or shortfalls in domiciliary health and social care services which implies that older people have to relocate nearer to a member of the family in order to obtain the help that they require.

The possibility of shortfalls in health and social care services were highlighted in Chapter 10 in the comparison between those people who remained in the community and those who entered residential care. Although people moving for 'low levels' and 'high levels of assistance' may move in with members of the family, or into sheltered accommodation, only those people classified as moving for 'high levels of assistance' were admitted to residential care, which was the most likely destination for this type of mover.

'Moves for high levels of assistance' were short distance. The movers were most likely to be over 75 and widowed, they were also likely to have high/average incomes. Compared with people moving for 'low levels of assistance', a greater proportion of people moving for 'high levels of assistance' were older and a larger proportion of them had never married or were divorced.

In 1993 in Clwyd and Gwynedd 3.47% of those aged 65 and over were in a residential care home (Welsh Office 1994). The fastest growing sector of the population is those over 80 and this is the age-group for which logistic regression demonstrated that the odds of entering residential care are the highest. Apart from the old-old age group other factors have been identified as producing a high likelihood of entering residential care. Studies have found that older people who live alone and those without a carer have the greatest likelihood of being placed in residential care (Kraus et al. 1976, McCoy & Edwards 1981, Branch & Jette 1982, Glazebrook et al. 1994). The findings from this thesis have backed up other research that shows that those who are married are unlikely to apply for residential care (Neill et al. 1988, Cartwright 1991, Montgomery & Kosloski 1994). For those fortunate enough to have a care-giver, younger care-givers, usually adult children, are more likely to place their relatives in residential care (McFall & Miller 1992, Montgomery & Kosloski 1994). The employment status of care-givers can also influence their decision to place the older person in an institution due to the competing demands of

work and caring duties (Colerick & George 1986, Doty 1976, cited in 1986, Stoller 1983). Reciprocity in care-giving relationships has been found to delay institutionalisation (Stoller 1988). Care-givers often struggle for years before the decision to enter the recipient of care into an institution (Bear 1993) and spouses and care-givers, other than adult children, have been found to have an increase in stress levels once the older person is in residential care (King et al. 1971).

The presence of dementia has also been associated with entry into residential care (Glazebrook et al. 1994, Lindsey & Murphy 1989, Morriss et al. 1996), where most people with dementia are cared for, but a significant minority do remain in the community. Those in the community are on average less cognitively impaired than those in residential care, but some admissions occur at comparable levels of impairment. The analysis in Chapter 10 revealed that a significantly higher percentage of people who were in residential care were rated by interviewers as experiencing cognitive impairment that impeded the interview compared to those who remained in the community. Elsewhere it has been suggested that if more adequate services were available in the community, it might be possible for more of those in the early stages of dementia to remain at home and to do so for longer periods (Martin et al. 1985, Burholt et al. in press, Wenger et al. in press).

The findings in this thesis showed that people admitted into residential care were experiencing difficulties with activities of daily living prior to admission. A greater percentage of the people who entered residential care had experienced difficulties with dressing, putting on shoes and stockings, getting in or out of bed and going to the lavatory. In a recent study, Cartwright (1991) also found that prior to admission, 87% of those in residential care for a year or more had experienced difficulties with either getting in and out of a bath or shower, dressing and undressing, going to the toilet, washing and shaving, feeding themselves, making a hot drink or needing help at night. Aid with activities such as getting in or out of bed and dressing can be

performed by health or social care agencies visiting an older person in the community. This has disadvantages in that the person becomes restricted to imposed times of the agency's home visit but would enable the person to remain at home. On the other hand, once an activity, such as going to the toilet alone becomes too difficult for the person to complete, visits by a service agency twice a day is not going to alleviate the problem. Help available twenty four hours a day would be required but may not be forthcoming. Relocation into residential care would be the inevitable outcome were functional ability to decrease without the provision of personal services to maintain living in the community (Goldberg & Connelly 1982, Wilkin & Hughes 1987, Wingard et al. 1987, Sinclair et al. 1990).

It was expected that levels of help with household tasks and home visits from health and social care practitioners would be raised prior to admission to counter the inability to manage activities of daily living and the higher levels of cognitive impairment. However, the findings regarding a comparison of service receipt between those people remaining in the community and those people entering residential care cannot be considered to be an exact portrayal of service provision as data were not recorded if services were introduced after the interview phase and before admission to residential care. To gain an accurate representation of service provision prior to entry into residential care further research is required, in which the data were collected prior to or on admission.

The results of this study *tentatively* indicate that people who were admitted to residential care did not receive more services prior to entry than other people in the community. The analysis suggested that the levels of health and social care prior to admissions were surprisingly low and comparable with, or lower than the levels of home care for those who did enter residential care. These tentative findings are backed by more substantial studies which have shown that levels of formal service

delivery are not increased prior to admission into residential care (MacLennan et al. 1984, Coward et al. 1994).

Data regarding receipt of help with household tasks were also taken from the last measurement point prior to entry into residential care. Once again, the findings may not have been an accurate representation of these services as it was not recorded if help was introduced after the interview and before admission to residential care. The findings, although limited in their accuracy as registered above, indicated that help with household repairs was *not* available for 35% of those who entered residential care compared to only 5% of people who remained in the community. Housing conditions can have an effect on the ability to perform activities of daily living (Struyk & Katsura 1987) and therefore will affect the process relating to relocation into residential care. Mackintosh and Leather (1992) found that as well as needing ongoing maintenance assessment and assistance with small repairs, the main housing needs of the older population are for adaptations to the house to maximise functional ability.

The results of this study *may* indicate that the objectives of the Community Care Act 1990 and the recommendation of the Independent Review of Residential Care (National Institute for Social Work 1988) are not being met and that services are not being delivered to older people who are most likely to be institutionalised. Even though the results from the analysis in Chapter 10 have to be viewed in light of the recognised limitations of the data, other studies have indicated that the levels of domiciliary services received by older people and their families appear to be keeping pace with neither policies to expand care in the community nor with the ageing of the population (Jones & Peters 1992, Pritchard 1992, Wenger 1994, Impallomeni & Starr 1995, Philp et al. 1995, Forder et al. 1996, Means 1996).

Targeting of services towards older people in the community in conjunction with continued assistance from care-givers can reduce or delay admission into nursing homes (Nocks et al. 1986, Miller 1987, Morris et al. 1987, Greene et al. 1992, Challis 1992). Where the provision of services to older people becomes problematic, such as in areas with high densities of elderly people in retirement communities, it has been found that the rate of institutionalisation is higher than the national average (Harrop & Grundy 1991). It has also been noted that if more people are to remain in the community, certain services, such as community psychiatric services for older people, twenty-four hour supervisory and care provision and points of contact in cases of emergency should be made available (Ovenstone & Bean 1981, MacLennan et al. 1984, Iliffe et al. 1992, Burholt et al. in press).

In the United Kingdom much of the current rhetoric on community care advocates balancing the cost of admission to residential care with the cost of in-home personal services. Studies have found costs of care in the community very rarely exceed the average cost of care in residential facilities (Snell 1985) although in Denmark and Sweden neither have they been found to be less costly (Cates 1993). Greene et al. (1993) found that targeting services specifically at frail older people in the USA produced long-term care cost reductions in 41% of cases. It has been shown that very few dementia sufferers cared for at home, even at high levels of deterioration and dependency, cost as much as those in residential care (Snell 1985, Coughlin & Liu 1989). A study of informal carers by the Office of Population Censuses and Surveys (OPCS) in 1985 identified six million carers, whose total input into domiciliary care was more than that supplied by central and local government (Department of Health 1989).



Many studies have concluded that assessment of individuals to provide the appropriate mix of services should become an integral part of the process of relocation (Ovenstone & Bean 1981, Sinclair et al. 1988, Havens & Kyle 1993). In anticipation of advances in community care, assessment instruments were developed to: identify people with the greatest likelihood of institutionalisation (Sinclair et al. 1988); determine older peoples' competence in their environment; to aid selection for residential placement (Salamon 1986, D'Andrea et al. 1991); and to help to assess whether residential care or an increase in domiciliary social services is necessary (George 1991, Bezrukov 1993, Peet et al. 1994, Sharma et al. 1994, Oliveri et al. 1994, Quartararo et al. 1995).

The move away from institutionalisation to community care is more developed in other countries; Sweden, Netherlands, Denmark, Israel and Australia (Department of Community Services 1986, Holstein & Almind 1986, Thorslund & Johansson 1987, Morginstin & Shamai 1988, Ozanne 1990, Factor et al. 1991, Kraan et al. 1991, Thorslund 1991, Van den Heuvel & Gerritsen 1991, Cates 1993, Murveeman et al. 1994, Gibson et al. 1995). A significantly high proportion of the older population can remain in their own homes with help from support services (Challis 1992). However, it would be reasonable to expect that some people, such as those with advanced dementia, may need more aid and supervision than can be provided in the community.

In Chapter 11, in terms of the model of the migration process of older people it appears that the move for 'high levels of assistance' may be most prone to pressures overriding the personal evaluation of the 'costs' and 'benefits' of relocation. The discussion suggested that pressure was applied to the older person to relocate under the assumption (of the person applying the pressure) that the move is in the 'best interests' of the older person. It must be emphasised that due to the small sample for whom qualitative data were collected, it is not possible to estimate the proportion of



people making involuntary 'moves for high levels of assistance', or even whether this is a wide-spread phenomenon. However, some of the quantitative evidence from this study and elsewhere lends support to this hypothesis.

The data for 'reasons for admission' showed that the most common is for medical conditions (31%) which, combined with the Doctor's advice (8%), perhaps indicated that home nursing care is being under-utilised. Other studies have found that the GP is the health professional most likely to refer older people to residential care (Bear 1989, 1993). Coward et al. (1994) found that up to a third of new admissions to nursing homes reported that they had been 'told to' move there and approximately three-quarters of these were told to move by their GPs. Elsewhere results suggest that lower-income care-givers are more likely to be influenced by professionals' recommendations for placement in residential care (Freidson 1970, Bear 1993). GPs were the most common health care practitioners paying home visits and play an important role as 'gatekeepers' to other services. They may perceive that residential care or nursing homes are more appropriate for the medical care of their clients than community care (Caldock 1993).

It is proposed that more research is required into the incidence of forced residential relocation especially for those people making 'moves for high levels of assistance'. Future research may explore whether relocation for 'high levels of assistance' is in the 'best interest' of the older person, and what alternatives to relocation exist. Results may indicate whether policies advocating social intervention for older people need to be questioned regarding their suitability in meeting the needs and wants of older people themselves.

## SUMMARY

This thesis has shown that the three types of move proposed by Litwak and Longino (1987) were not diverse enough to describe the moves undertaken by people in the BLSA. In addition the eight class typology proposed by Wiseman (1980) was rejected in favour of a five-class model which described the characteristics of movers in terms of moving for amenities, or assistance and took into account the distance moved, the respondents' age, marital status, tenure, proximity of family and income. The adapted model which included five-classes of move; 'long distance amenity', 'wide choice local amenity', 'narrow choice local amenity', 'low levels of assistance' and 'high levels of assistance' was more adept at addressing the variety of motives that may affect relocation.

With regard to cross-national application of the five-class model, it was concluded that although the *proportions* of older people making particular *types of move* may vary from country to country according to the state of the housing market and economic climate, the model may be applied cross-nationally to countries in both the second and third phases of elderly mobility transition. It was proposed that further research is required in order to test this hypothesis. In order to facilitate future research, the initial conditional probabilities to run a five-class model using PROG MLLSA module (Clogg 1990) of CDAS (Eliason 1990) were presented.

The limitations of the analysis and ways in which it may be improved have been addressed. The special attributes of the pooled sample meant that the sample of movers used in this analysis is not a 'snap-shot' of people at one particular time. In order to establish the proportions of the types of move that are undertaken by the population as a whole, analysis of a cross-sectional sample would be required. It was also suggested that the five-class model should be tested on a larger sample with the inclusion of a health variable which may improve the fit of the model.

Finally it was argued that assumptions regarding the motives prompting moves cannot accurately be drawn from the typology of moves *alone*. In order to investigate the motives behind the moves it was suggested that qualitative data needs to be integrated with the quantitative findings. This would also ensure that any future analysis using the five-class model could identify cultural differences in the motives that are stated most frequently for each type of move.

The concluding part of the thesis examined in turn non-movers, and respondents who relocated. Particular attention was paid to the different problems encountered by both groups which were linked to areas of housing policy.

An examination of the qualitative data gave rise to some broad classifications of the reasons why some older people decided not to move. These were; reticence or inability to expend the physical and mental energy required during the upheaval of moving; material culture and attachment to home; joint decision-making and confining relationships; community ties and social networks; and suitability and availability of alternative housing. A majority of the reasons stated for non-movement could be described as positive influences constraining relocation. However, the availability and suitability of alternative housing could be construed as negative or restrictive influences on the decision to relocate. It was recognised that the availability of suitable housing may be due to the impact that low income has on the spending power of older people and their ability to compete in the housing market. However, the difficulties encountered by low income non-movers and movers are very similar.

It was concluded that low income may affect those people who have opted not to move in their ability to maintain their housing in the 'zone of maximum performance potential' (Lawton 1988). In other words, the level of income of people ageing in place brings into question their ability to keep their homes in a satisfactory state of repair, or to adapt the homes if required in the face of decreasing functional ability.

The 'narrow choice local amenity mover' represented those people with low income who moved. A form of social control is imposed on those with low financial status whereby a move can only take place within a restricted arena of alternatives.

Whereas 'long distance amenity movers' may migrate to retirement towns from elsewhere in the UK, 'narrow choice local amenity movers' are unable to effectively compete for houses within these communities due to their financial status. The influx of in-migrants into rural communities has had the effect of pushing the prices of properties out of the reach of many of the local inhabitants.

The competition for housing by home owners implies that 'narrow choice local amenity movers' will not be in a position to effectively compete against in-migrants. However, there appears to be an additional constraint on their housing choices in the public rented sector, where 'wide choice local amenity movers' are in competition with 'narrow choice local amenity movers' for scarce public housing. It was concluded that in terms of the consumer power of the amenity movers requiring public housing, the allocation of the 'better' local authority housing is likely to be distributed to 'wide choice local amenity movers' who are more likely to be able to bide their time in their current accommodation. 'Narrow choice local amenity movers' are more likely to accept whatever accommodation is offered to them, regardless of the match between their preferred choice of housing and what is on offer.

It has been predicted that the financial situation of older people in the United Kingdom is not likely to improve dramatically in the next decade (Bosenquet & Propper 1991, Greengross 1995). Fifty percent of men over the age of 50 were not in full-time employment in 1995, which implies that there will be financial constraints on their post-retirement support (Greengross 1995). Older people in the UK contend with some of the highest poverty rates for their age group in the industrialised countries of Europe. Whereas older people living in other countries in the Organisation for Economic Co-operation and Development (OECD) receive an income that is on average 93 per cent of the average household income, in Britain older people are in receipt of only 76 percent of the UK average household income (Bosenquet et al. 1990). In addition to these fundamental inequalities, older women often have notably lower incomes than their male counterparts (Walker 1980, 1992, Arber & Ginn 1991, Groves 1992, Maltby 1994, Dooghe & Appleton 1995, Ginn & Arber 1996). As long as these disparities remain, many older people will be restricted as consumers and not have the same range of choices regarding home improvements and adaptations, or relocation that others enjoy (Midwinter 1997, Walker & Maltby 1997).

In addition to providing low cost housing for older people with low incomes it was suggested that local authorities including rural communities should be made aware of the demographic changes that may occur within these locations due to the change in patterns regarding the destination of people who are retiring. Small rural communities may experience difficulties in providing the facilities and services required. In light of the proportion of people in the study making 'wide choice local amenity moves' to small rural communities, the polarisation of services for older people in larger settlements may become less appropriate.

It was concluded that there needs to be an up-to-date comprehensive housing needs survey in Wales. It was suggested that the survey should be centrally funded by the Welsh Office, or alternatively that local authorities are encouraged to commission their own research. In the latter instance it would be preferable that the Welsh Office issue guidelines for the format of the research, so that the data collected is comparable between districts and may be amalgamated in order to provide a national database of house conditions, provision and needs.

It was suggested that the lack of a variety of low-cost housing, could be dealt with by a two-pronged approach. Firstly, grants could be offered by the Government to private landlords to up-grade accommodation to a level that would be accessible for people with functional impairment (both young and old). Secondly, it is suggested that the building of new housing stock and refurbishment of old stock, takes the 'Lifetime Housing' approach which would mean that housing associations and local authorities would no longer need to designate properties as either 'general need' or for older people, as housing would be suitable for all age-groups and needs.

In addition to the housing constraints experienced by older people on low incomes, this thesis also identified that attention may need to be paid by policy-makers to those people who are making moves for assistance. Despite the qualitative evidence that suggested that older people are particularly loathe to burden their children with care duties, a majority of people making 'moves for low levels of assistance' were moving in with family or friends. These findings may point to either an inadequate supply of sheltered housing (which would be determined, as suggested above, if a comprehensive housing needs survey was conducted in Wales) or shortfalls in domiciliary health and social care services, which implies that older people have to relocate nearer to a member of the family in order to obtain the help that they require.

A comparison between those people that remained in the community and those that entered residential care only produced tentative findings. However, the findings *may* suggest that there are shortfalls in health and social care services provided to people prior to admission to residential care. The data showed that people who were admitted into residential care were experiencing difficulties with activities of daily living prior to admission. It was expected that levels of help with household tasks and home visits from health and social care practitioners would be raised prior to admission to counter the inability to manage activities of daily living and the higher levels of cognitive impairment. However, the analysis revealed that the levels of health and social care prior to admissions were surprisingly low and comparable to, or lower than the levels of home care for those who did enter residential care. To gain an accurate representation of service provision prior to entry into residential care further research is required, in which data are collected at the time of admission.

The analysis of data which were collected on people making moves for assistance may indicate that there are inadequacies in care in the community. In addition the qualitative data also indicated that for older people who experience failing health decisions to move may be made by others in the 'best interests' of the older person. These assumptions were made on the basis of analysis of a small sample of intensive interviews and highlights an area of research which needs further exploration.

The author recommends that further research in the area of housing and older people makes use of the methodology used in this thesis to determine the types of moves being undertaken by older people. LCA can identify the proportion of movers making particular types of moves and informed policy decisions may be made using this knowledge. Of particular importance may be the repeated use of LCA over time in identifying the changes in proportions of people undertaking particular types of moves. It is recommended that LCA is supplemented with qualitative data. This will help to disentangle the possible interpretations of findings. Following, are several



examples of how this could be put into practice and the implications that may be drawn from the findings.

i) The identification of the proportion of people undertaking narrow choice local amenity moves would indicate the extent to which people are structurally constrained in their attempts to move. Analyses, repeated over time, will determine if the numbers of people making these types of moves fall or increase. However, a fall in the number of people making 'narrow choice amenity moves' may be interpreted either as an improvement in the financial situation of older people, but could equally represent a worsening of the situation in which older people are so financially constrained that they are unable to make a move at all. The 'causes' of the decline in proportions making 'narrow choice local amenity moves' could be established with the use of qualitative data.

ii) It has been hypothesised that the UK has moved into the third stage of the elderly mobility transition. This is characterised by decreases in the proportions of people moving to well-known retirement destinations and increases in the proportion of people making 'wide choice local amenity moves', that is shorter distance moves to more inland and rural areas. Therefore, it follows that repeated use of LCA over time in other countries may identify changes in the proportion of people making 'long-distance amenity moves' and 'wide choice local amenity moves', and can thereby be used as an aid to identify when the country enters the third stage of elderly mobility transition. As far as policy makers are concerned this may mark the time at which the a dispersion of services for older people throughout more rural communities may be required.



The use of qualitative data may enhance the understanding of older people's motives behind the moves for amenities. It would also ensure that any future analysis could identify cultural differences in the motives that are stated most frequently for each type of move.

iii) By determining the changes in the proportion of people making moves for 'high levels of assistance' over time, it may be possible to indicate whether increases in formal care provision in the community reduce the proportion of people entering residential care. In addition qualitative data could be used to identify people for whom the decision to move is removed from their hands, either on entering residential care or on moving into accommodation with relatives.

Using the refined typology of moves supplemented by qualitative data, which incorporates the experiences of older people themselves, future research on older people's residential mobility and stability may focus on identifying their personal housing needs and desires. It is strongly urged that the provision of authentic housing choices based on these aspirations should be a goal for society at the beginning of the new millennium.

# APPENDIX I

## PHASE I

### 1979 QUESTIONNAIRE

Name of interviewer:  
Community?  
Time interview started:  
Time interview finished:  
Date:

1. Rating no:
2. Name of interviewee:
3. Address:

#### CODE FOR COMMUNITY:

Bala	1
Llanyceil	2
Bryncrug	3
Aberdovey	4
Cwrt/Pennal	5
Tywyn	6
Llanarmon	7
Llandegla	8
Llanrhaeadr	9

#### INTRODUCTION

##### TO BE USED AS A GUIDE ONLY:

Good morning. I'm (name), a research worker, from the University at Bangor. Last autumn you may remember, we took a census of everyone who is sixty or older in (name of community). To help planners of services for the elderly in the future, we are now talking to many of the people over 65 whom we met then to find out something about their lives, their problems and how they cope with retirement and living in a rural area. IF PHASE 1 FORM DOES NOT INDICATE EXACT AGE AND YOU DO NOT KNOW IF RESPONDENT IS OVER 65, ASK AT THIS POINT: Are you over sixty-five? IF YES, CONTINUE; IF NO, Well then I won't bother you, but I wanted to make sure you were given an opportunity to express your views if you were over 65.

Would it be convenient for me to talk to you for a while now or can I make an appointment to come back at a more suitable time?

PRIOR TO STARTING INTERVIEW AFTER YOU ARE IN THE HOUSE  
AND READY TO START:

I want to reassure you that anything you tell me will be treated in strictest confidence. The main aim is to assist in improving the delivery and future planning of services, and the information will be used statistically.

RESIDENCE AND MIGRATION

I'd like to start by asking you something about your background.

1. Can you tell me where you were born? (Place) \_\_\_\_\_  
(County) \_\_\_\_\_
- |                               |   |
|-------------------------------|---|
| Within 5 miles of here        | 1 |
| More than 5 but less than 15  | 2 |
| More than 15 but less than 50 | 3 |
| More than 50 miles away       | 4 |

MAKE SURE PLACE CAN BE IDENTIFIED. IF A SMALL PLACE GIVE  
NEAREST TOWN AS WELL AS PLACE NAME AND COUNTY. SEE  
INSTRUCTIONS FOR CODING.

2. Are you married?

IF YES ASK

- And where was your husband/wife born? (Place) \_\_\_\_\_  
(County) \_\_\_\_\_
- |                               |   |
|-------------------------------|---|
| Within 5 miles of here        | 1 |
| More than 5 but less than 15  | 2 |
| More than 15 but less than 50 | 3 |
| More than 50 miles away       | 4 |

IF INTERVIEWEE BORN ELSEWHERE, ASK:

3. How long have you lived in this community?

ROUND UP TO THE NEAREST YEAR.

_____ Year arrived	
Less than 3 years	1
3 - 5 years	2
6 - 10 years	3
11 - 20 years	4
21 - 30 years	5
31 years or more	6

4. How old were you when you came to live in this community?

IF INTERVIEWEE HAS LIVED AWAY FOR SOME YEARS AND  
RETURNED RECORD THE DETAILS AND THE AGE AT RETURN.

Under 20	1
21 - 40	2
41 - 50	3
51 - 60	4
61 - 65	5
66 - 70	6
Over 70	7

5. How long have you lived in this house/flat/farm?

ROUND UP TO NEAREST YEAR.

Less than 3 years	1
3 - 5 years	2
6 - 10 years	3
11 - 20 years	4
21 - 30 years	5
31 years or more	6

6. What were the main reasons for moving to this house/flat/farm?

IF RESPONDENT HAS ALWAYS LIVED HERE, INDICATE  
ACCORDINGLY.

Size	1
Near children/relatives	2
Convenient location	3
One storey	4
Cost	5
Other (specify) _____	6
Always lived here	7

IF APPLICABLE:

7. Where did you live directly before you came to Bala/Llandegla etc.

Place _____	County _____
Within 5 miles of here	1
More than 5 but less than 15	2
More than 15 but less than 50	3
More than 50 miles away	4

IF INTERVIEWEE HAS LIVED ELSEWHERE:

8. Why did you come to live in Bala/Llandegla etc.

RECORD RESPONSE VERBATIM:

Return to home area	1
Near relatives	2
Connections with area	3
Job	4
Country/seaside environment	5
Small town	6
Available housing	7
Other (specify)_____	8

PROMPT:

9. Anything else?

ACCOMMODATION

10. Do you or your husband/wife own your own home or rent it?

Owned outright	1
Mortgage	2
Council rent	3
Private rent	4
In relative's/friend's home	5
Other (specify)_____	6

11. INTERVIEWER RECORD TYPE OF HOUSING:

One storey bungalow/cottage	1
House/cottage more than one storey	2
Farm	3
OAP housing (without warden)	4
Sheltered housing (with warden)	5
Ground floor flat	6
Upper floor flat	7
Other (specify - caravan etc.)	8

12. How old is this house/flat?

APPROXIMATE AGE OF HOUSING IN YEARS:

13. INTERVIEWER ASCERTAIN WHETHER HOUSEHOLD HAS SOLE OR SHARED USE OF THE FOLLOWING:

a) Hot water

Sole	1
Shared	2
None	3

b) Fixed bath or shower

Sole	1
Shared	2
None	3

c) Inside flush toilet

Sole	1
Shared	2
None	3

14. IF SHARED OR NONE, DESCRIBE WHAT FACILITIES ARE AVAILABLE AND RECORD INTERVIEWEE'S STATEMENT RE USE, CONVENIENCE, ETC.

a) Water facilities

b) Bathing facilities

c) Toilet facilities

15. Is your bedroom upstairs?

Yes	1
No	2

16. Is your only toilet upstairs?

Yes	1
No	2

17. Are there things about this house which make life difficult for you?

For instance:	Yes	No
Steps/stairs	1	2
Heating/damp/condensation	1	2
Noise or other nuisance	1	2
Too large	1	2
Too small	1	2
Too isolated	1	2
Outside access difficult	1	2
Lack of any facilities	1	2
Other	1	2
Nothing	1	2

18. What is your main source of heat in the living room?

Coal or wood fire	1
Gas fire	2
Full central heating	
gas	3
oil	4
electric	5
solid fuel	6
Partial central heating	7
Storage heaters	8
Electric fire	9
Paraffin heater	10
Other (specify) _____	11

PROMPT AND RECORD INTERVIEWEE'S COMMENTS RE  
ADEQUACY, COST OR PROBLEMS INVOLVED

19. Do you have any heating in your bedroom?

Coal or wood fire	1
Gas fire	2
Full central heating	
gas	3
oil	4
electric	5
solid fuel	6
Partial central heating	7
Storage heaters	8
Electric fire	9
Paraffin heater	10
Other (specify) _____	11
No heat	12

PROMPT AND RECORD INTERVIEWEE'S COMMENTS RE  
ADEQUACY, COST OR PROBLEMS INVOLVED

20. How satisfied would you say you are with this house/flat?

Very satisfied	1
Satisfied	2
Neutral	3
Dissatisfied	4
Very dissatisfied	5

#### HOUSEHOLD COMPOSITION

\*21. Can you tell me something about who else lives here with you?

INTERVIEWER TO ASCERTAIN THE FOLLOWING INFORMATION  
FOR EACH MEMBER OF THE HOUSEHOLD. INDICATE HEAD OF  
HOUSEHOLD BY ASTERISK.

First name and relationship to respondent	Sex		Age	Marital status				Occupation, state FT/PT, retired, housewife, disabled etc.
	M	F		S	M	W	D/S	
i) respondent	1	2		1	2	3	4	
ii)	1	2		1	2	3	4	
iii)	1	2		1	2	3	4	
iv)	1	2		1	2	3	4	
v)	1	2		1	2	3	4	
vi)	1	2		1	2	3	4	



- \*22. IF RESPONDENT IS NOT HEAD OF HOUSEHOLD, ASCERTAIN WHETHER HEAD OF HOUSEHOLD IS EMPLOYED/RETIRED/DISABLED/UNEMPLOYED/HOUSEWIFE ETC. AND RECORD.

Head of household is:	Employed full time	1
	Employed part time	2
	Retired	3
	Disabled	4
	Unemployed	5
	Housewife	6
	_____ (occupation)	

IF APPLICABLE:

23. How long have you been/were you married? \_\_\_\_\_ Years

24. Have/had you been married before?

No	1
Yes, widowed	2
Yes, divorced	3

25. INTERVIEWER CODE WHETHER RESPONDENT:

Lives alone	1 IM
Lives with spouse only	2
Alone with child(ren)	3
Elderly couple with child(ren) at home	4
In child's household	5
With other elderly relative(s) only	6
With other elderly relative(s) present	7
Other (specify)	8

26. INTERVIEWER CODE IF:

Parent of older generations dependent* on interviewee	1
Spouse, brother or sister dependent on interviewee	2
Child or younger generation dependent on interviewee	3
No-one dependent on interviewee	4

\*Dependent = incapable of taking care of self

Older generation = parent, aunty, uncle etc.

Younger generation = niece, nephew, grandchild etc.

## CONTACT WITH COMMUNITY SERVICES

27. Let's move on now to talk about the various services that may have called here.  
For instance:

a) Which of the following has called to see you during the past six months?  
ASK (b) WHEN PERSON IN QUESTION HAS CALLED, THEN (c) AND (d).

b) How often does \_\_\_\_\_ call on you?

	a) Has called?		b) How often?				c) Is that often enough?		d) Is visit long enough?	
	Yes	No	More than once a week	Once a week	Once/fort-night	Less often	Yes	No	Yes	No
Doctor	1	2	1	2	3	4	1	2	1	2
Health visitor	1	2	1	2	3	4	1	2	1	2
Community/district nurse (AHA)	1	2	1	2	3	4	1	2	1	2
LA home help	1	2	1	2	3	4	1	2	1	2
Council welfare officer/social worker/occupational therapist	1	2	1	2	3	4	1	2	1	2
Social security/sup. Benefits officer	1	2	1	2	3	4	1	2	1	2
Meals on wheels	1	2	1	2	3	4	1	2	1	2
Voluntary organisation	1	2	1	2	3	4	1	2	1	2
Insurance man	1	2	1	2	3	4	1	2	1	2
Minister of religion	1	2	1	2	3	4	1	2	1	2
Chiropodist	1	2	1	2	3	4	1	2	1	2
Private nurse	1	2	1	2	3	4	1	2	1	2
Private household help	1	2	1	2	3	4	1	2	1	2
Other visiting service (specify)	1	2	1	2	3	4	1	2	1	2
None of these	1	2								

28. INVITE INTERVIEWEE TO COMMENT ABOUT THE CONVENIENCE/  
SUITABILITY OF ANY OF THE PREVIOUS SERVICES AND RECORD  
VERBATIM COMMENTS BELOW.

\*29. Have you ever asked for help from the social service: for instance, for a home  
help, nursing, mobility aids, a telephone or meals on wheels?

Yes	1
No	2

IF YES:

What happened?

RECORD DESCRIPTION VERBATIM:

PROMPT IF NECESSARY FOR OUTCOME AND FEELINGS ABOUT  
FAIRNESS OF DECISION IF REFUSED.

Still receiving help	1
Received help once	2
No help	3

MORALE (NOT PROXIES)

30. Now I'd like to ask you a few questions about how you feel about life in general.

	Yes	No	D/K
Do things keep getting worse as you get older?	1	3	2
Do you have as much energy as you did last year?	3	1	2
Do you feel lonely much?	1	3	2 LM
Do you see enough of your friends and relatives	3	1	2 LM
Do little things bother you more this year?	1	3	2
As you get older do you feel less useful?	1	3	2
Do you sometimes worry so much you can't sleep?	1	3	2
As you get older are things better than you expected?	3	1	2
Do you sometimes feel life isn't worth living?	1	3	2
Are you as happy now as when you were younger?	3	1	2
Do you have a lot to be sad about?	1	3	2
Are you afraid of a lot of things?	1	3	2
Do you get angry more than you used to?	1	3	2
Is life hard for you most of the time?	1	3	2
Are you satisfied with your life today?	3	1	2
Do you take things hard?	1	3	2
Do you get upset easily?	1	3	2

## FAMILY, FRIENDS AND RELATIVES

I'd like to talk to you about your family and friends now if I may

ASK THOSE WHO LIVE ALONE IF NO CLOSE RELATIVE ALREADY MENTIONED. THIS WILL HELP TO SCREEN SUBSEQUENT QUESTIONS.

CODE FOR ALL RESPONDENTS.

31. Do you have any living close relatives?

Yes	1
No	2 IM

IF LIVING ALONE:

32. How long have you lived alone?

\_\_\_\_\_ Years (round up)

IF WIDOWED:

33. May I ask how long you have been a widow?

\_\_\_\_\_ Years (round up)

IF NOT WIDOWED BUT ALONE:

34. Who did you live with before that?

RECORD REASON FOR BEING ALONE (E.G. PARENT DIED, BROTHERS AND SISTERS MOVE AWAY ETC.)

Parent	1
Child(ren)	2
Sibling	3
Other relative	4
Friend	5
Other _____	6

IF APPROPRIATE:

35. How many children have you got?

36. Can you tell me something about your children: where are they now, what are they doing, how often you see them and things like that?

PROMPT AS NECESSARY. IF MORE THAN SIX CHILDREN, RECORD DETAILS OF SIX SEEN MOST OFTEN.

		Children					
		1	2	3	4	5	6
a) Sex							
	Male	1	1	1	1	1	1
	Female	2	2	2	2	2	2
b) Age							
c) Where living : code for each child							
	Within 5 miles of here	1	1	1	1	1	1
	5 - 15 miles	2	2	2	2	2	2
	15 - 50 miles	3	3	3	3	3	3
	More than 50 miles	4	4	4	4	4	4
d) Marital status							
	Single	1	1	1	1	1	1
	Married	2	2	2	2	2	2
	Widowed	3	3	3	3	3	3
	Divorced/separated	4	4	4	4	4	4
e) How often do you usually see them or their spouse?							
	More than once a week	1	1	1	1	1	1
	Weekly	2	2	2	2	2	2
	2/3 times monthly	3	3	3	3	3	3
	6/12 times a year	4	4	4	4	4	4
	Rarely	5	5	5	5	5	5
	Never	6	6	6	6	6	6
f) Would you like to see more or less of them or are you quite happy with the frequency of visits?							
	More	1	1	1	1	1	1
	Less	2	2	2	2	2	2
	Satisfied	3	3	3	3	3	3
g) How would you describe your relationship with them? (WAIT)							
ASK QUESTION ONLY: USE CATEGORIES ONLY AS VERIFICATION							
	Very close and friendly	1	1	1	1	1	1
	Based on duty/responsibility	2	2	2	2	2	2
	Superficial or out of habit	3	3	3	3	3	3
	Contact by letter only	4	4	4	4	4	4
	No contact	5	5	5	5	5	5
h) Is he/she working?							
	Full time	1	1	1	1	1	1
	Part time	2	2	2	2	2	2
	Retired	3	3	3	3	3	3
	Housewife	4	4	4	4	4	4
	Does not work	5	5	5	5	5	5

37. How many grandchildren do you have?

38. How often do you see any of them?

More than once a week	1
Weekly	2
2/3 times monthly	3
6/12 times yearly	4
Rarely	5
Never	6
No grandchildren	7

39. Do you feel you would like to see more or less of them or are you satisfied with the contact you have with them?

TRY TO RECORD VERBATIM COMMENTS

More	1
Less	2
Satisfied	3

40. How many brothers and sisters do/did you have?

\_\_\_\_\_ Living      \_\_\_\_\_ Dead

Can you tell me something about them: are they nearby, do you see them often?

BE SURE TO RECORD NUMBERS OF DECEASED AS WELL AS LIVING. TRY TO GET AS MUCH INFORMATION FROM CONVERSATION. PROMPT AS NECESSARY.

		Brothers and sisters				
		1	2	3	4	5
a) Sex						
	Male	1	1	1	1	1
	Female	2	2	2	2	2
b) Age						
c) Where living?						
	Within 5 miles of here	1	1	1	1	1
	5 - 15 miles	2	2	2	2	2
	15 - 50 miles	3	3	3	3	3
	More than 50 miles	4	4	4	4	4
d) How often do you usually see them?						
	More than once a week	1	1	1	1	1
	Weekly	2	2	2	2	2
	2/3 times monthly	3	3	3	3	3
	6/12 times a year	4	4	4	4	4
	Rarely	5	5	5	5	5
	Never	6	6	6	6	6
e) Would you like to see more or less of them or are you quite happy with the frequency of visits?						
	More	1	1	1	1	1
	Less	2	2	2	2	2
	Satisfied	3	3	3	3	3
f) How would you describe your relationship with them? (WAIT)						
ASK QUESTION ONLY: USE CATEGORIES ONLY AS VERIFICATION						
	Very close and friendly	1	1	1	1	1
	Based on duty/responsibility	2	2	2	2	2
	Superficial or out of habit	3	3	3	3	3
	Contact by letter only	4	4	4	4	4
	No contact	5	5	5	5	5

41. Do you have other relatives or friends and neighbours with whom you are in contact?

PROMPT: COUSINS, NEPHEW/NIECES, FRIENDS IN NEIGHBOURHOOD ETC.  
GIVE DETAILS OF WHO, WHERE THEY LIVE, HOW OFTEN SEEN.



42. How often do you see any of your children or other relatives to talk to?

Every day, same household	1
Every day, different household	2
2/3 times a week	3
Once a week	4
2/3 times a month	5
Once a month	6
Every 3 months	7
3 months - 1 year	8
About once a year	9
Never	10
No living relatives	11

IF APPLICABLE:

43. Of your relatives, who do you see most often?

First names _____	
Child _____	1
Brother/sister	2
Parent	3
Uncle/aunt	4
Nephew/niece	5
Cousin	6
Grandchild	7
Other (specify) _____	8

44. Do you ever go to see relative or friends?

(INCLUDE BOTH DAY VISITS AND OVERNIGHT STAYS).

Yes	1
No	2

How often?

More than once a week	1
Weekly	2
2/3 times a month	3
6/12 times a year	4
Rarely	5
Never	6 IM
No relatives	7 IM

45. Apart from the people we have already mentioned, who else do you see to talk to regularly? (E.g. church members, village shop, milkman, neighbours etc.).

	Yes	No
Neighbours	1	2
Church members	1	2
Milkman	1	2
Local shops	1	2
Postman	1	2
Other members of community	1	2
Other (specify)	1	2
No-one	1	IM

46. In general how do you get on with your neighbours?

RECORD COMMENTS FULLY AND THEN ASK QUESTION BELOW:

47. Would you say you get on very well with all of them, very well with most of them, not very well with most, or not very well with any of them, or do you have no real contact with them?

Very well (all)	1
Very well (most)	2
Not very well (most)	3
Not very well (any)	4
No contact	5 IM
No neighbours	6 IM

48. Do you help any of your neighbours out in any way?

Yes	1
No	2

Specify:

	Yes	No
Shopping	1	2
Gardening	1	2
Fuel	1	2
Cleaning	1	2
Cooking	1	2
Other (specify)	1	2

49. Do you meet as many people as you would like to?

RECORD COMMENTS.

Yes	1
No	2 LM

LONELINESS/ISOLATION

50. Do you have a telephone ?

Yes	1
No	2 IM

IF NO:

51. Where do you go to use a telephone?

GIVE ADDRESS OR LOCATION AND DISTANCE FROM  
INTERVIEWEE'S HOUSE.

IF NO:

52. Have you tried to get a telephone installed?

Yes	1
No	2

RECORD COMMENTS VERBATIM.

53. Are you satisfied with you access to a telephone?

RECORD COMMENTS.

Very satisfied	1
Satisfied	2
Neutral	3
Dissatisfied	4
Very dissatisfied	5

\*54. Do you or does a member of your household have a car?

No car	1
Has car	2
Household member has car	3

\*55. What kind of public transport do you use?

	Yes	No
Bus	1	2
Train	1	2
Taxi	1	2
Other (specify) _____	1	2
None	1	

56. Do you find any problems with using public transport?

RECORD COMMENTS FULLY.

	Yes	No
Mobility	1	2
Fares	1	2
Timetables	1	2
Other (specify)_____	1	2

57. In general, how satisfied are you with local public transport?

Very satisfied	1
Satisfied	2
Neutral	3
Dissatisfied	4
Very dissatisfied	5

\*58. Do you ever feel rather lonely?

RECORD RESPONSE, THEN ASK WHICH CATEGORY BEST FITS.

Never	1
Rarely	2
Sometimes	3
Often	4
Most of the time	5

IF YES:

59. Are there any particular times when you feel especially like this?

RECORD COMMENTS.

	Yes	No
Evening	1	2
Weekends	1	2
Special holidays	1	2
Winter	1	2
Other (specify)_____	1	2
No special time	1	2

60. How many hours a day are you usually in the house/flat alone?

0 - 3	1
3 - 6	2
6 - 9	3
9+	4 IM

\*61. Are you usually alone in the house/flat all night?

Yes	1
No	2

62. Is there anyone in particular you can confide in or talk to about yourself or your problems?

First name\* \_\_\_\_\_

No	1 LM
Spouse	2
Brother/sister	3
Child	4
Other relative	5
Friend	6
Neighbour	7
Other	8
More than one	9

64. How long have you known this person?  
Number of years (round up) \_\_\_\_\_

65. IF SPOUSE: Is there anyone else?

No	1
Brother/sister	2
Child	3
Other relative	4
Friend	5
Neighbour	6
Other	7
More than one	8

66. Do you wish you had more friends?

Yes	1 LM
No	2

67. Are there people around from whom you can ask small favours? Who?  
PROMPT. Can you tell me their first names?

Yes	1
No	2 LM
Never ask favours	3

First names \_\_\_\_\_

66. Is there someone who needs you to take care of them?

Yes	1
No	2

First names\* \_\_\_\_\_

67. Are there people in this area you can call real friends?

Yes	1
No	2 LM

RECORD COMMENTS VERBATIM:

Can you tell me their first names?

LIST UP TO FIVE NAMES.

69. Is there someone who particularly depends on your friendship?

Yes	1
No	2

First names\* \_\_\_\_\_

70. Do you have a pet of any kind?

	Yes	No
Dog	1	2
Cat	1	2
Bird	1	2
Fish	1	2
Other _____	1	2
More than one	1	2
None	1	

\*71. Where does your nearest permanent neighbour live?

INTERVIEWER: DESCRIBE SITUATION IF ATYPICAL;

Next door/attached	1
Next door/detached	2
Across road	3
50-100 yards away	4
100 yards - ¼ mile away	5
More isolated (estimate distance)___	6

## MOBILITY/DEPENDENCY

We are interested in finding out how easily people can get around the house. I hope you don't mind answering a few questions about this.

SOME OF THESE QUESTIONS MAY SEEM MILDLY OFFENSIVE TO ABLE-BODIED PERSONS: OMIT ONLY IF THEY ARE OBVIOUSLY REDUNDANT. ONLY ASK (a) AND (b) IF TASK REQUIRES HELP OR PRESENTS DIFFICULTY.

	Can do				(a) Who helps? See codes below	(b) Is help enough?	
	Without difficulty on own	On own with difficulty	Only with help	Not at all		Yes	No
i) Having all over wash or bathing self	1	2	3	4		1	2
ii) Washing hands and face	1	2	3	4		1	2
iii) Putting on shoes or stockings yourself	1	2	3	4		1	2
iv) Doing up buttons and zips yourself	1	2	3	4		1	2
v) Dressing self other than above	1	2	3	4		1	2
vi) Getting to and using the WC	1	2	3	4		1	2
vii) Getting in or out of bed	1	2	3	4		1	2
viii) Feeding self	1	2	3	4		1	2
ix) Shaving (men), brushing and combing hair (women)	1	2	3	4		1	2
x) Cutting own toenails	1	2	3	4		1	2
xi) Getting up and down steps.	1	2	3	4		1	2
xii) Getting around the house	1	2	3	4		1	2
xiii) Getting out of doors on own	1	2	3	4		1	2

Code list for (a):	Spouse	1
	Someone else in household	2
	Relative outside household	3
	Friend/neighbour	4
	Voluntary visitor	5
	Home help	6
	District nurse	7
	Other (specify) _____	8

73. INTERVIEWER ESTABLISH WHETHER INTERVIEWEE:

Bedfast permanently	1
Bedfast temporarily	2
Housebound permanently	3
Able to get out only with help	4
Able to get out unassisted	5

\*74. How long is it since you were last up/went out?

ASK BEDFAST BOTH PARTS.

ASK HOUSEBOUND (b) ONLY

	(a) Got up	(b) Went out
One month or less	1	1
Over 1 month - 3 months	2	2
Over 3 months - 6 months	3	3
Over 6 months - 12 months	4	4
Over 1 year - 3 years	5	5
Over 3 years - 5 years	6	6
5 years plus	7	7
Vague	8	8
Not applicable	9	9

HEALTH

\*75. Now, just a few short questions about your health.

Do you suffer from any condition which limits your activities in any way?

Yes	1
No	2

Specify:

\*76. In general, how would you describe your state of health?

Good or excellent	1
Alright for age	2
Fair	3
Poor	4
Other (specify)_____	5



## HELP WITH COMMON PROBLEMS AND CRISES

77. One of the things that we are interested in is the kinds of local help available to people. Can you tell me who you would have turned to?

a) If you were ill and could not leave the house ☐  
Name \_\_\_\_\_

b) If you wanted advice about money problems ☐  
Name \_\_\_\_\_

c) If you were worried about a personal problem ☐  
Name \_\_\_\_\_

d) If you were felling “down” and just wanted  
someone to talk to ☐  
Name \_\_\_\_\_

e) If you needed a lift somewhere ☐  
Name \_\_\_\_\_

f) If you needed to borrow something (e.g.  
food, tools etc.) ☐  
Name \_\_\_\_\_

CODE FROM:

Spouse	1
Someone else in household	2
Relative outside household	3
Friend/neighbour	4
Voluntary visitor	5
Home help	6
District nurse	7
Social worker	8
Other (specify)	9

78. Do you receive help from anyone with any of the following:

ASK (a) (b) AND (c) FOR ALL TASKS

	Never	Occasionally	Regularly	Daily	(a) Who helps First names:	(b) Is help paid?		(c) Need for extra help?	
						Yes	No	Yes	No
Shopping	1	2	3	4		1	2	1	2
Cooking	1	2	3	4		1	2	1	2
Laundry	1	2	3	4		1	2	1	2
Ironing	1	2	3	4		1	2	1	2
Making fires	1	2	3	4		1	2	1	2
Cutting/ gathering firewood	1	2	3	4		1	2	1	2
Bringing in fuel	1	2	3	4		1	2	1	2
Gardening	1	2	3	4		1	2	1	2
Household decoration	1	2	3	4		1	2	1	2
Household repairs	1	2	3	4		1	2	1	2
Other (specify)	1	2	3	4		1	2	1	2

79. INTERVIEWER ESTABLISH SIZE OF GARDEN

No garden	1
Small	2
Average	3
Large	4

80. IF GARDEN: How do you feel about the garden? Would you say

Wouldn't be without it	1
Are glad to have it	2
Would rather be without it	3

81. IF WIDOWED: When your husband/wife died, who did you turn to for help?  
RECORD COMMENTS AND GIVE AS MUCH DETAIL AS POSSIBLE.

Someone else in household	1
Relative outside household	2
Friend/neighbour	3
Voluntary visitor	4
Home help	5
District nurse	6
Minister of religion	7
Other (specify) _____	8

82. One of the things we are interested in is how people manage to get various goods and services, knowing that some people live in very remote places, so I'd like to ask you, for instance:

Where you do your/ get your/go to your	Local village	Mobile visiting service	Nearby town	Good delivered /house call	Other	Not available	Not needed	(a) Are you satisfied with____ (see codes below)	(b) How do you usually obtain this service/ goods. (see codes below)	(c) When did you last obtain this service (see codes below)
Grocery shopping	1	2	3	4	5	6	7			
Greengroceries	1	2	3	4	5	6	7			
Fresh meat	1	2	3	4	5	6	7			
Prescriptions	1	2	3	4	5	6	7			
Post office	1	2	3	4	5	6	7			
Doctor's surgery	1	2	3	4	5	6	7			
Chiropodist	1	2	3	4	5	6	7			
Optician	1	2	3	4	5	6	7			
Library	1	2	3	4	5	6	7			

INTERVIEWER:

CODES FOR (a)

Very satisfied	1
Satisfied	2
Neutral	3
Dissatisfied	4
Very dissatisfied	5
Not applicable	0

CODES FOR (b)

Someone else goes	1
Goods delivered/house call	2
Walk	3
Drive household car	4
Taxi	5
Lift	6
Public transport	7
More than one of above	8
Other (specify)_____	9

CODES FOR (c)

Never see/use	1
Within last week	2
Within last month	3
Within last 6 months	4
Up to a year ago	5
More than a year ago	6

83. In general, how satisfied would you say you are with services in this community?

Very satisfied	1
Satisfied	2
Neutral	3
Dissatisfied	4
Very dissatisfied	5

84. Is there anything that you miss living in this community?

PROMPT IF NECESSARY:

That you might appreciate if you lived somewhere else?

OR:

That you enjoyed before you moved here?

85. Changing the subject a bit again, could you tell me how you spent last Christmas?

INTERVIEWER: IN ADDITION TO WHAT RESPONDENT DID, WE ARE INTERESTED IN THEIR FEELINGS ABOUT IT. SOME, FOR INSTANCE, MAY CHOOSE TO BE ALONE, OTHERS MAY FEEL LONELY.

RECORD VERBATIM COMMENTS. CODE AS APPROPRIATE.

Stayed at home	1
Went away	2
With children	1
With brothers/sisters	2
With other relatives	3
With friends	4
Alone by choice	5
Alone and lonely	6 LM
In hospital	7

86. FOR THOSE WHO LIVE ALONE: If you were taken ill or had a bad fall, how would you get help?

RECORD COMMENTS FULLY.

Call/shout	1
Bang or knock	2
Telephone	3
Wait for someone to come	4
Prearranged signal	5
Prearranged monitoring	6
Don't know	7 IM

87. FOR THOSE WHO LIVE ALONE: Have you ever needed to get help in an emergency like that in the past? What did you do?

RECORD COMMENTS AND DESCRIPTION OF EMERGENCY.

Called/shouted	1
Banged or knocked	2
Telephoned	3
Waited for help	4
Used signal	5
Other (specify)_____	6
No emergency	7

#### VOLUNTARY ORGANISATIONS

\*88. Do you belong to a chapel, church or other religious groups?

Yes	1
No	2
No longer	3

89. IF YES, How long have you been going there?

All life	1
More than 20 years	2
10-19 years	3
5-9 years	4
Less than 5 years	5

\*90. IF YES, How often do you go?

Every week	1
Less than every week but at least once a month	2
2-3 times a year	3
Occasionally	4
Only for weddings/funerals etc.	5

91. Other than the minister/rector, does anyone else from the chapel/church come to see you?

Yes	1
No	2

# RECORD DETAILS AND COMMENTS.

92. Are you a member of any organisations, clubs, societies or voluntary bodies?

LIST:

None	0
One	1
2-3	2
4-5	3
More than 5	4

93. IF YES. Do you attend meeting?

Yes, regularly	1
Yes, irregularly	2
No	3

94. IF NO: Why do you not attend meetings?

	Yes	No
Ill health	1	2
Eyesight poor	1	2
Hearing poor	1	2
Too far	1	2
No transport	1	2
Difficult time	1	2
Other (specify)_____	1	2

\*95. Do you have any spare time hobbies, activities or interests?

RECORD COMMENTS WITHOUT PROMPT. IF EXTENSIVE ASK:

Which four take up most time?

CODE SUBSEQUENTLY.

	Yes	No
TV/Radio	1	2
Gardening	1	2
Needlework/knitting	1	2
Reading	1	2
Other crafts	1	2
Walking	1	2
Playing cards/bingo/games etc.	1	2
Other (specify)_____	1	2

## ETHNICITY

96. Do you think of yourself as English or Welsh or some other nationality?

English	1
Welsh	2
½ and ½	3
British	4
Other	5

\*97. Can you speak Welsh fluently?

Yes	1
No	2

98. IF SPEAKS WELSH.

Do you speak Welsh?

Most of the time	1
Sometimes	2
Rarely	3

99. IF SPEAKS WELSH SOMETIMES OR RARELY ASK:

When would you use Welsh then?

## EMPLOYMENT

Now I'd like to ask a few questions about your working life.

100. Do you have a job of any kind now?

ASK ABOUT VOLUNTARY WORK.

Not working	1
Employed full time	2
Employed part time	3
Unpaid voluntary work	4

\*101. During your years of employment before retirement age, what was the occupation you had longest?

INTERVIEWER: DESCRIBE ACTUAL WORK DONE AND POSITION HELD.

102. IF WORKING INCLUDING VOLUNTARY WORK:

How many hours a week do you work?

Occasional/as needed	1
Up to 5	2
6-10	3
11-20	4
21-40	5
40+	6

103. IF IN PAID EMPLOYMENT;

Is your job one you had before retirement age or a new job since you retired?

New job	1
Same job	2
Return to earlier job	3

IF EMPLOYED, INCLUDING VOLUNTARY WORK

104. What do you do?

105. What was the main reason for leaving your main job?

Compulsory retirement	1
Voluntary retirement	2
Disability/injury	3
Ill-health	4
Redundancy	5
Other (specify)_____	6

106. How old were you when you retired?

IF NOT RETIRED CODE 99

107. IF NOT WORKING:

Have you looked for a job since retirement?

Yes	1
No	2



IF WORKING AFTER RETIREMENT OR IF THEY HAVE LOOKED  
FOR A JOB AFTER RETIREMENT ASK:

108. Why did you decide you wanted a job after retirement?

- |                               |   |
|-------------------------------|---|
| Needed to supplement pension  | 1 |
| Wanted to feel useful         | 2 |
| Wanted something to do        | 3 |
| The job gives satisfaction    | 4 |
| For contact with other people | 5 |
| Didn't feel ready to retire   | 6 |
| Other (specify)_____          | 7 |

\*109. ASK ALL WOMEN:

What was your husband's job for most of his working life?

INTERVIEWER: DESCRIBE ACTUAL WORK DONE AND POSITION  
HELD.

## INCOME

Of course you know that this information will be kept quite confidential. I am reminding you of that because I want to ask you some questions about your income. The answers will be helpful in understanding what financial problems elderly people may experience.

110. Can you tell me whether you or you husband/wife have income from any of the following sources:

INCLUDE COMMON LAW HUSBANDS OR WIVES AND  
INCLUDE SPOUSE'S INCOME EVEN IF THEY ARE NOT  
ELDERLY

	Yes	No
Wages or salary from employment	1	2
Income from business, practice etc. if self employed	1	2
Pension(s) from former employer(s) or spouse's employer	1	2
Any kind of state widow's pension or widow's allowance	1	2
Old age pension or National Insurance Retirement Pension	1	2
Supplementary Pension, supplementary allowance	1	2
Attendance allowance	1	2
Other state payments (e.g. war disability pension, war dependant's pension, unemployment, sickness, or invalidity benefits, family allowance, FIS, industrial disablement pension)	1	2
Other kinds of regular allowances from organisations, relatives or friends outside the household (e.g. maintenance for self or children from ex-spouse, income from TU, friendly society or charitable organisation)	1	2
Annuity, income form property, shares, rents (including boarders, lodgers, bank accounts, bonds, building societies, i.e. interest)	1	2
Do you receive a rent or rate rebate?	1	2

111. Could you show me into which of these groups the total net income of yourself and your spouse combined comes?

INTERVIEWER: SHOW CARD AND READ OUT WEEKLY SCALE  
(Annual scale matches weekly scale)

<u>Weekly</u>	<u>Annual</u>	
£0-9.99	£0-519	1
£10-14.99	£520-779	2
£15-19.99	£780-1039	3
£20-29.99	£1040-1559	4
£30-39.99	£1560-2079	5
£40-49.99	£2080-2599	6
£50-59.99	£2600-3119	7
£60-69.99	£3120-3639	8
£70-79.99	£3640-4159	9
£80-89.99	£4160-4579	10
£90-99.99	£4680-5199	11
£100+	£5200+	12

\*112. Do you find this adequate or is it difficult to manage on that income?

Adequate	1
Difficult	2

RECORD INTERVIEWEE'S COMMENTS

113. Do you ever find yourself worrying about how to meet your bills and other expenses?

No	1
Sometimes	2
Always	3

RECORD COMMENTS

114. IF SOMETIMES OR ALWAYS

What expenses do you find particularly hard to meet?

PROMPT BY READING LIST

	Yes	No
Rent	1	2
Rates	1	2
Coal	1	2
Electric	1	2
Oil	1	2
Gas	1	2
Food	1	2
Petrol	1	2
Other (specify) _____	1	2

ASK: Anything else?

INTERVIEWER: INDICATE THIS IS THE END OF INTERVIEW.  
THANK INTERVIEWEE: THEN ASK:

115. Now, would you like to make any suggestions for things that could be done to help elderly people, not just yourself, but elderly people in general?

RECORD COMMENTS AS FULLY AS POSSIBLE

INTERVIEWER REPORT.

Reception of interviewer by respondent	
Co-operative	1
Rather uninterested	2
Unco-operative	3

COMMENTS

Disabilities impeding interview:	
None	1
Hearing	2
Speech	3
Confusion	4
Illness/sickness	5
Other (specify) _____	6

General impression of respondent (outstanding needs, problems, health etc.)

General impression of house (cleanliness, heating, comfort etc.)

Interview conducted:

Wholly or mainly in English	1
Wholly or mainly in Welsh	2
Both	3

Proxy:

Yes	1
No	2
Part	3

Indicate if other persons present during interview

No	1
Part of time	2
All of time	3

Full or short interview form

Full form	1
Short form	2
Incomplete	3

Brief resume of household and respondent's situation.

### PHASE 3

#### 1987 RESIDENTIAL CARE QUESTIONNAIRE

IF N CAN RESPOND TO INTERVIEW, INTRODUCE YOURSELF AND REMIND THEM OF PREVIOUS INTERVIEW, WHEN THEY WERE AT HOME. ASK IF THEY CAN HELP US AGAIN.

2. How long have you been living here now?

3. Have you lived in any other residential home?

IF YES: How long?

Yes	1
No	2

4. Can you tell me why you could no longer live in your home?

PROBE EVENT LEADING UP TO ADMISSION ETC. RECORD VERBATIM COMMENTS

5. Did you talk it over with anyone before coming to live here? Who?

Yes	1
No	2

VERBATIM COMMENTS:

6. How did you come to be in this particular home?

RECORD VERBATIM COMMENTS:

7. What sort of house were you living in before you came to live here?

OAP housing (without warden)	1
Sheltered housing (with warden)	2
One storey bungalow	3
House/cottage more than one storey	4
Farm/smallholding	5
Flat (ground floor)	6
Flat (upper floor)	7
Residential care	8
Other (specify) _____	9

8. Let's see you must be \_\_\_\_ now, is that right?  
Year of birth \_\_\_\_\_

9. ASCERTAIN PRESENT MARITAL STATUS

Single	1
Married	2
Widowed	3
Divorced/separated	4

10. IF WIDOWED: How long is it since you lost your husband/wife?

Number of years \_\_\_\_\_

11. Were you living alone before you came to live here?

IF NOT ALONE: Who were you living with?

Lived alone	1
With spouse only	2
Lived with younger generation relatives < 60	3
Lived with younger generation relatives 60+	4
Lived with other elderly relatives i.e. 60+	5

12. IF LIVING WITH CHILDREN BEFORE, How old were you when you set up house with (Name) \_\_\_\_\_?

13. When you came to live here, who brought you?

Name _____	
Social worker	1
Doctor	2
Son	3
Daughter	4
Other relative	5
Neighbour	6
Friend	7
Other (specify) _____	8
Don't know/don't remember	9

14. Do you have your own room?

No. in room	
	1
	2
	3
	4
	5+

15. Do you have any children or other close relatives?

Yes	1
No	2

IF NO CHILDREN OR CLOSE RELATIVES GO TO Q.20

16. How often do you see any of your children or other relatives to talk to?

No relatives	0
Daily	1
At least weekly	2
At least monthly	3
Less often	4
Never/no relatives	5

IF CHILDREN:

17. You have \_\_\_\_\_ children don't you?

18. Can you tell me where they live now?

CODE FOR:

No child	0
One child within 5 miles	1
More than one child within 5 miles	2
Nearest child 5 - 15 miles away	3
Nearest child 16- 50 miles away	4
Nearest child 50+ miles away	5
No child	1
Son/s and daughter/s	2
Daughter/s only	3
Son/s only	4

19. How often do you see any of your children to talk to?

No children	0
Daily	1
At least weekly	2
At least monthly	3
Less often	4
Never/no relatives	5



20. Of your relatives, who do you see most often?

First name*	
Names same relative	1
Names different relative	2
Not clear	3
Daughter	1
Son	2
Brother	3
Sister	4
Nephew	5
Niece	6
Cousin	7
Grandchild	8
Other	9

21. Do you ever feel rather lonely?

Never	1
Rarely	2
Sometimes	3
Often	4
Most of the time	5
DK	6

VERBATIM COMMENTS:

22. Are there people here that you think of as friends?

No	0
Yes, residents	1
Yes, staff	2
Both	3
DK	8

VERBATIM COMMENTS:

23. Who comes to visit you here?

ENTER FIRST NAMES AND COMPARE WITH PREVIOUS SUPPORT NETWORK

	Names given without probe	ASK ABOUT: Previous members of support network	Yes	No
Daughter/s			1	2
Sons/s			1	2
Grand-daughter/s			1	2
Grand-son/s			1	2
Sister			1	2
Brother			1	2
Niece			1	2
Nephew			1	2
Cousin			1	2
Friend/s			1	2
			1	2
			1	2
			1	2
Neighbour/s			1	2
			1	2
			1	2
Clergyman			1	2
Social worker			1	2
Previous home help			1	2
Other (specify)			1	2

24. Do you ever go out with relatives or friends?

Yes	1
No	2
NA	9

IF YES, RECORD NAMES:

25. Do you ever go to stay with relatives or friends?

Yes	1
No	2
NA	9

IF YES, RECORD NAMES:  
COMMENTS:

26. Is there someone in particular you can confide in or talk to about yourself or your problems?

Name \_\_\_\_\_ Name\* \_\_\_\_\_

- |                       |    |
|-----------------------|----|
| Same confidant        | 1  |
| Gained confidant      | 2  |
| Lost confidant        | 3  |
| Changed confidant     | 4  |
| Unclear               | 5  |
|                       |    |
| No                    | 1  |
| Spouse                | 2  |
| Sister                | 3  |
| Brother               | 4  |
| Daughter              | 5  |
| Son                   | 6  |
| Niece                 | 8  |
| Nephew                | 9  |
| Other female relative | 10 |
| Other male relative   | 11 |
| Female friend         | 12 |
| Male friend           | 13 |
| Female neighbour      | 14 |
| Male neighbour        | 15 |
| Other                 | 16 |
| More than one         | 17 |
| Unclear               | 18 |

27. In general, how would you describe your health?

- |                   |   |
|-------------------|---|
| Good or excellent | 1 |
| Alright for age   | 2 |
| Fair              | 3 |
| Poor              | 4 |

28. Did you have visits from a district nurse?

- |     |   |
|-----|---|
| Yes | 1 |
| No  | 2 |
| DK  | 3 |

29. Were you visited at home by a chiropodist?

- |     |   |
|-----|---|
| Yes | 1 |
| No  | 2 |
| DK  | 3 |

30. Did you used to have a home help?

Yes	1
No	2
DK	3

31. Did you get meals on wheels?

Yes	1
No	2
DK	3

32. Did you go to a day centre, day hospital or disabled club?

Yes	1
No	2
DK	3

33. Did a clergyman used to visit you when you lived at home?

Yes	1
No	2
DK	3

34. Does a clergyman come to see you here?

Yes	1
No	2
DK	3

35. Do you need help with?

CHECK IF HELP NEEDED

Bath/all-over wash  
Washing hands and face  
Putting on shoes/stockings  
Buttons and zips  
Dressing  
Getting to and using WC  
Getting in/out of bed  
Feeding  
Shaving (M) Brushing hair (F)  
Cutting toenails  
Getting up/down steps

36. What do you like about (name of home)?

RECORD VERBATIM:

37. Are there any things you don't like about (this home)?

RECORD VERBATIM:

38. Would you be willing to talk to us again some time?

Willing	1
Neutral	2
Unwilling	3
Unable to state	4

QUESTIONS TO OFFICER-IN-CHARGE (ASK ALSO ANY UNANSWERED BY RESPONDENT THAT THE OFFICER-IN-CHARGE CAN ANSWER)

1. When did N come here? (Month and year of admission)

Age on admission \_\_\_\_\_

2. What were the reasons for admission?

PROBE FOR BOTH MEDICAL AND SOCIAL REASONS.

3. Was admission planned or an emergency?

Emergency	1
Non-emergency	2
Don't know	8

4. Was resident admitted from:

Own home	1
Relative's home	2
General hospital	3
Psychiatric hospital	4
LA OAP home	5
Private home	6
Other (specify)	7
Don't know	8

5. Is respondent confused/dementing?

No	0
Some memory lapse	1
Some confusion	2
Mostly confused	3
Totally confused/demented	4
Don't know	8

VERBATIM COMMENTS:

6. Is respondent incontinent?

	Yes	No
Sometimes of urine	1	2
Frequently of urine	1	2
Sometime of faeces	1	2
Frequently of faeces	1	2
No control	1	2

7. Is respondent ambulant?

Yes	1
Yes with help	2
Yes with aids	3
Chairbound	4
Bedfast	5

8. Which of the following does respondent need help with? CHECK IF HELP NEEDED

Bath/all-over wash  
 Washing hands and face  
 Putting on shoes/stockings  
 Buttons and zips  
 Dressing  
 Getting to and using WC  
 Getting in/out of bed  
 Feeding  
 Shaving (M) Brushing hair (F)  
 Cutting toenails  
 Getting up/down steps  
 Getting around home

9. Does respondent have problems with his/her sight?

DESCRIBE PROBLEMS

No	0
Yes, wear glasses	1
Partially sighted	2
Blind	3

10. Does respondent have problems with his/her hearing?

No	0
Yes, some	1
Yes, wears aid	2
Needs but does not wear aid	3
Has but cannot use aid adequately	4

11. Would you mind telling me whether all or part of N's fees are paid by the DHSS? (Other than by old age pension)

No they are not	1
Yes, all	2
Yes, part	3
Refused to say	4
Don't know	5
NA	6

12 What is your general impression of N's health, morale and general situation?

### INTERVIEWER'S REPORT

1. Respondent now resident in

Local authority home	1
Private home	2
Private nursing home	3
Geriatric ward	4
Others	5

2. Source of information to Qs 2 to 37/8

Respondent	1
Care staff	2
Member of family	3
Combination of above	4

3. Reception of interviewer by respondent

Co-operative	1
Uninterested	2
Unco-operative	3
Difficult to interview because of confusion, hearing etc.	4
Interviewed by proxy	5

4. Disabilities which interfered with interview:

None	1
Hearing	2
Speech	3
Confusion/memory	4
Illness/pain	5
Emotional distress	6
Others present	7
Other	8

Interviewer's general impression of respondent's health, morale etc.

Interviewer's impression of respondent's overall situation with comments on change and evaluation of present adaptation.



### PHASE 3

#### 1987 ADDITIONAL QUESTIONS ON DECISION-MAKING

229. Have you made any important decision since you retired or are you in the process of making any at the moment?

Yes	1
No	2

VERBATIM COMMENTS:

IF YES ASK AS APPROPRIATE:

i) How long ago was that?

ii) Did anyone help you come to the decision?

Yes	1
No	2

iii) Do you feel you made the right decision?

Yes	1
No	2

THE FOLLOWING ARE AREAS OF DECISION MAKING WE ARE INTERESTED IN. DO NOT ASK IF HAS MENTIONED IN ABOVE QUESTION.

IF NO TO Q.229 PROMPT WITH DECISIONS IN THESE AREAS.

IF YES - ASK ABOUT THESE OTHER AREAS.

230. What about decisions about your health? Have you had to decide whether to have surgery or medical treatment, such as hip replacement or cataract?

No	0
Yes, volunteered	1
Yes on prompt	2

VERBATIM COMMENTS:

IF YES ASK AS APPROPRIATE:

i) How long ago was that?

ii) Did anyone help you come to the decision?

Yes	1
No	2

iii) Do you feel you made the right decision?

Yes	1
No	2

231. What about activities? Have you for instance stopped doing anything or started doing anything since you retired? We're interested in things like driving, shopping trips, clubs and societies.....

No	0
Yes, volunteered	1
Yes on prompt	2

VERBATIM COMMENTS:

IF YES ASK AS APPROPRIATE:

i) How long ago was that?

ii) Did anyone help you come to the decision?

Yes	1
No	2

iii) Do you feel you made the right decision?

Yes	1
No	2

232. Have you asked for help with anything since you retired?

PROMPT: SUCH AS HELP IN THE HOME OR OTHER PRACTICAL  
HELP

No	0
Yes, volunteered	1
Yes on prompt	2

VERBATIM COMMENTS:

IF YES ASK AS APPROPRIATE:

i) How long ago was that?

ii) Did anyone help you come to the decision?

Yes	1
No	2

iii) Do you feel you made the right decision?

Yes	1
No	2

233. Have you accepted or rejected offers of help?

PROMPT: SUCH AS HELP IN THE HOME OR OTHER PRACTICAL  
HELP

No	0
Yes, volunteered	1
Yes on prompt	2

VERBATIM COMMENTS:

IF YES ASK AS APPROPRIATE:

i) How long ago was that?

ii) Did anyone help you come to the decision?

Yes	1
No	2

iii) Do you feel you made the right decision?

Yes	1
No	2

234. Have you made any decisions about altering or adapting your home since you retired?

No	0
Yes, volunteered	1
Yes on prompt	2

VERBATIM COMMENTS:

IF YES ASK AS APPROPRIATE:

i) How long ago was that?

ii) Did anyone help you come to the decision?

Yes	1
No	2

iii) Do you feel you made the right decision?

Yes	1
No	2

235. Have you made decisions about moving or staying put since you retired?

No	0
Yes, volunteered	1
Yes on prompt	2

VERBATIM COMMENTS:

IF YES ASK AS APPROPRIATE:

i) How long ago was that?

ii) Did anyone help you come to the decision?

Yes	1
No	2

iii) Do you feel you made the right decision?

Yes	1
No	2

IF NOT DECISION(S) MENTIONED, I.E. ANSWERED NO TO Q.229-235  
ASK:

236. If you had to make an important decision would you talk to someone about it?

Yes	1
No	2
D/K	8

VERBATIM COMMENTS:

IF YES ASK:

237. Who would you be likely to talk decisions over with?

Name/s \_\_\_\_\_

Relationship \_\_\_\_\_

VERBATIM COMMENTS:

## PHASE 4

### 1991 QUESTIONNAIRE

Case no. \_\_\_\_\_

Welsh speaker if box ticked

Name of interviewer: \_\_\_\_\_

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

New address, if moved (since 1987) \_\_\_\_\_

Interviewed	1
Refused, well	2
Refused, too ill	3
Never in	4
Other (specify) _____	5

#### 1. Since last interview:

Has not moved	1
Moved less than 15 miles	2
Moved 15 miles or more	3
Moved into Part III	4
Moved into private home	5
Other (specify)	6

#### 2. Household composition

Lives alone	1
Lives with spouse only	2
Member of younger generation	3
With other elderly relative/s	4
Other (specify)	5

#### 3. Are you married?

Single	1
Married	2
Widowed	3
Divorced/separated	4

4. Is any member of the family dependent on your care?

I.E.. IS RESPONDENT A CARER?

No-one dependent on respondent	0
Dependent spouse, brother or sister	1
Dependent child	2
More than one dependent	3

5. Have any of the following people visited you at home in the last six months?

	Yes	No	If so, how often
Doctor/ General practitioner	1	2	
District nurse	1	2	
Health visitor	1	2	
Chiropodist	1	2	
LA home help	1	2	
Private household help	1	2	
Meals-on-wheels	1	2	
Social worker	1	2	
Someone from social security	1	2	
Someone from a voluntary organisation	1	2	
A clergyman	1	2	
6. Have you been in hospital in the last year?	1	2	
7. Have you been to hospital as an outpatient in the last year?	1	2	
8. Have you attended a day hospital in the last year?	1	2	
9. Do you go to a day centre?	1	2	

10. In general, how would you describe your health?

Good or excellent	1
All right for my age	2
Only fair	3
Poor	4

11. Do you suffer from any condition which limits your activities in any way?

Yes	1
No	2

12. INTERVIEWER ESTABLISH WHETHER HOUSEBOUND

Housebound	1
Goes out	2

13. How far away does your nearest child or other relative live?

No relatives	0
Within 1 mile	1
1-5 miles	2
6-15 miles	3
16-50 miles	4
50+ miles	5

14. Do you have any children? IF YES

Where does your nearest child live?

No children	0
Within 1 mile	1
1-5 miles	2
6-15 miles	3
16-50 miles	4
50+ miles	5

15. Do you have any living sisters or brother? IF YES

Where does your nearest sister or brother live?

No sisters/brothers	0
Within 1 mile	1
1-5 miles	2
6-15 miles	3
16-50 miles	4
50+ miles	5

16. How often do you see any of your children or other relatives to speak to?

Never, no relatives	0
Daily	1
2-3 times a week	2
At least weekly	3
At least monthly	4
Less often	5



17. Do you have friends in this community? IF YES

How often do you have a chat or do something with one of your own friends?

Never/ no friends	0
Daily	1
2-3 times a week	2
At least weekly	3
At least monthly	4
Less often	5

18. How often do you see any of your neighbours to have a chat with or do something with?

No contact with neighbours	0
Daily	1
2-3 times a week	2
At least weekly	3
At least monthly	4
Less often	5

19. Do you attend religious meetings?

Yes, regularly	1
Yes, occasionally	2
No	3

20. Do you attend meetings of any community or social groups, such as old people's clubs, lectures or anything like that?

Yes, regularly	1
Yes, occasionally	2
No	3

21. This study of people over retirement age has been going on since 1979. Do you remember being interviewed before? Have you enjoyed taking part in the study?

VERBATIM:

I'd like to thank you very much for all your help with the study and leave you a copy of this brochure which tells you something about our research centre.

INTERVIEWER:    Pfeiffer scales:  
Mental health scale    1 2 3 4 5  
Physical health scale    1 2 3 4 5

## INTERVIEWER'S REPORT:

Information received from

Listed old person	1
Some/all proxy	2

Please write a brief account of your impressions of the subject's current situation and lifestyle, noting any changes you are aware of.

## APPENDIX II

### SUPPORT NETWORK TYPES

#### ***FAMILY DEPENDENT SUPPORT NETWORK***

Mainly focused on close local family ties with few peripheral friends and neighbours; often based on a shared household with, or close to, an adult child, usually a daughter. Nearly all support needs are met by the family. Community involvement is generally low. These networks tend to be small and the elderly people are more likely to be widowed, older and in less than good health than those with other types of networks.

An elderly person with this type of network would be inclined to describe their situation as follows: “I’m very lucky to have my family around me. They’ll take care of me if necessary”.

#### ***LOCALLY INTEGRATED SUPPORT NETWORK***

Includes close relationships with local family, friends and neighbours. Many friends are also neighbours. Such networks are usually based on long-term residence and active community involvement in religious and/or voluntary organisations in the present or recent past. These networks tend to be larger on average than others.

An elderly person with this network type would say: “We all know each other round here and look after each other. There’s always someone popping in to see how I am.”

### ***LOCAL SELF-CONTAINED SUPPORT NETWORK***

Typically has arms-length relationships or infrequent contact with at least one relative living in the same or adjacent community, usually a sibling, niece or nephew. Childlessness is common. Reliance is principally on neighbours but respondents with this type of network adopt a household focused lifestyle and community involvement, if any, tends to be low key. Networks tend to be smaller than average.

Old people with this type of network would probably say: “I like to keep myself to myself, but I know the neighbours are there if I want them.”

### ***WIDER COMMUNITY FOCUSED SUPPORT NETWORK***

Typified by active relationships with distant relatives, usually children and high salience of friends and neighbours. The distinction between friends and neighbours is maintained. Respondents are generally involved in community or voluntary organisations. This type of network is frequently associated with retirement migration and is commonly a middle-class or skilled working class adaptation. Absence of local kin is typical. Networks are larger than average.

An elderly person with this type of network would probably tell you: “Although all my family live away, I’m lucky to have good friends nearby and they’d help me if I needed anything.”

### ***PRIVATE RESTRICTED SUPPORT NETWORK***

Typically associated with absence of local kin, although a high proportion are married. Contact with neighbours is minimal. Elderly people with this type of network have few nearby friends and a low level of community contacts or involvement. The type subsumes two sub-types: independent married couples and dependent elderly persons who have withdrawn or become isolated from local involvement. In many cases a low level of social contact represents a lifelong adaptation. Networks are smaller than average.

People with this type of network would be likely to say: “I don’t really have much to do with the people round here but then perhaps I’ve always been too independent/a bit of a loner.”

(Wenger 1989)

# APPENDIX III

## **MEASUREMENT INSTRUMENT FOR PRACTITIONER ASSESSMENT OF NETWORK TYPE (PANT)**

The instrument is based on the following eight questions:

1. How far away, in distance, does your nearest child or other relative live? (Exclude spouse)
2. If you have any children, where does your nearest child live?
3. If you have any living sisters or brothers, where does your nearest sister or brother live?
4. How often do you see any of your children or other relatives to speak to?
5. If you have any friends in the community/neighbourhood, how often do you have a chat or do something with one or your friends?
6. How often do you see any of your neighbours to have a chat with or do something with?
7. Do you attend any religious meetings?
8. Do you attend meetings of any community/neighbourhood or social groups, such as old people's clubs, lectures, or anything like that?

(Wenger 1996(a))

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