

**SOCIAL SPACES, RURAL PLACES:  
Ageing-in-Place in Rural South Australia**

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## **ABSTRACT**

Australia has an ageing population and a clear policy focus on ageing-in-place supported by family and community care, and service provision in the home. This thesis therefore argues that place, space and availability of social support are important variables for how older people successfully age-in-place. The dual positioning of people in both physical and social space has important implications for understanding social behaviour and social support, particularly in rural areas where changing rural communities has been the focus of much attention.

This thesis explores place attachment, community connectedness and the social networks of 223 people aged 70 years and over living independently in small rural communities in the Murray Mallee region of South Australia. This is achieved by incorporating social, physical and temporal attributes of older individuals' lives in the data collection and analysis processes. A mixed method approach is adopted, using data from the 2006 Australian Census and face-to-face interviews with older people; with geocoding and GIS technology enabling social networks to be examined spatially.

The findings demonstrate that social networks and potential informal support are impacted upon by the dispersed geography of family ties. However, local community and a strong sense of place attachment provide some compensation for this, with the clear majority of other nominated network ties (groups, activities, friends, neighbours and services) being proximal. This creates a duality in the social networks of older people in rural areas – on the one hand they place emphasis on, and maintain strong links to family despite increasingly dispersed family networks. On the other, a sense of place attachment and local community provides strong bonds for many older people, but may require high levels of localised social support to enable older rural people to successfully age-in-place.

By focusing on social environments through a spatial lens this study contributes to a better understanding of the issues of ageing-in-place in small rural communities for older people, service providers and intergenerational family groups but also for local rural communities.

## DECLARATION

This work contains no material which has been accepted for the award of any other degree or diploma in any University or other tertiary institution to Helen Feist and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying, subject to provisions of the Copyright Act 1968. I also give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library catalogue, the Australian Digital Theses Program (ADTP) and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

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Helen R Feist

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## **ABBREVIATIONS AND ACRONYMS**

<b>ABS</b>	Australian Bureau of Statistics
<b>AHURI</b>	Australian Housing and Urban Research Institute
<b>AIHW</b>	Australian Institute of Housing and Welfare
<b>ASD</b>	Adelaide Statistical Division
<b>CACP</b>	Community Aged Care Package
<b>CPN</b>	Community Passenger Network
<b>CWA</b>	Country Women's Association
<b>EACH</b>	Extended Aged Care and Home
<b>HACC</b>	Home and Community Care
<b>GIS</b>	Geographical Information Systems
<b>LGA</b>	Local Government Area
<b>NBN</b>	National Broadband Network
<b>SA</b>	South Australia
<b>SD</b>	Statistical Division
<b>SLA</b>	Statistical Local Area
<b>SSD</b>	Statistical Sub Division

# CHAPTER 1: AGEING-IN-PLACE, SOCIAL SPACES AND RURAL PLACES

## 1.1 Introduction

Australia has an ageing population and a clear policy focus on ageing-in-place supported by family, community care and service provision in the home. Ageing in the community where one lives (ageing-in-place) is also the preferred option among most older Australian people (Australian Institute of Health and Welfare, 2007b). Therefore place, space and social connections become important influences on how older people age-in-place. Older people do not always live in settings which enable them to continue to contribute to, and interact with family, society and community as well as they could (Golant, 2004; Keating, 2008). Older people living in rural areas may be particularly disadvantaged at two levels. Like others, they face the physical and social changes associated with ageing but often without enabling environments to compensate for those changes. While some rural older people may live in idyllic high amenity settings, many face challenges not only from ageing but also from isolation, dispersed family and community networks, and poor local infrastructure associated with rural living.

Older people spend most of their time living and interacting in local environments and as people grow older they are less likely to relocate than any other cohort of people therefore location can profoundly affect the experience of growing older (Wahl and Lang, 2004; Peace, Holland and Kellaheer, 2006; Beer and Faulkner, 2009). As employment ceases, mobility decreases and health declines, neighbourhoods increasingly become the central context for daily life (Andrews and Phillips, 2005). Community connectedness and social networks have established links to positive ageing, health and well-being (Beckingham and Watt, 1995; Klein and Bloom, 1997; Wenger, 1997; Morrow-Howell, Hinterlong and Sherraden, 2001; Andrews, Gavin, Begley and Brodie, 2003; Phillipson, Allan and Morgan, 2004). With the advent of community aged care in recent years the home has also become the most important site for the provision of services for many older people. Therefore where one lives and how one is able to connect to community and services impacts greatly on health and well-being. This is particularly pertinent to rural communities where issues of place, space, change and often declining supportive services and institutions are current (Hugo and Smailes, 2003). There is often an assumption that rural regions have local

supportive communities and strong, localised kinship and friendship ties without any real conceptualisation of social network patterns and types, and without considering the influence of geographic space.

Within the social sciences there is a growing recognition of the importance of place and space. Place is an element of physical space, a location that is experienced, holds meaning and which shapes the intimate relations between people, as well as the bigger social processes that make up community and society (Wiles, 2005a). Place shapes our experiences of cultural, political, social and demographic processes (Champion and Hugo, 2004; Wiles, 2005a). In other words, place is the human meaning behind space. Social networks are about linkages, support and feelings of connectedness. No individual lives as a complete isolate; people are connected and linked in different ways and to different degrees. Rural communities incorporate many diverse elements that influence the lives and social connections of older adults such as: landscape, distance from family networks, availability and access to services, migration patterns, community economic viability, and social opportunities (Keating, 2008).

Australia's ageing population is well documented. The proportion of people aged 65 years and over in Australia has increased from 12 percent in 1996 to 13.3 percent in 2006 (Australian Bureau of Statistics, 2008g). This trend will continue to accelerate as the 'baby boomers' (those born between 1946 and 1964) reach this life stage over the coming decades. The Australian Bureau of Statistics (ABS) (2008f) suggest that as a result of sustained low fertility rates and increased life expectancy this will increase from over 13 percent of Australia's population in 2007 to between 23 percent and 25 percent in 2056 (Projection Series B and C respectively) and to between 25 percent and 28 percent in 2101 (Projection Series B and C respectively).

Currently, the majority of older adults in Australia, and the rest of the world, live independently in the community, not in assisted living accommodation (Oswald and Wahl, 2005). Over 90 percent of Australians aged 65 years and over live in the community with the proportion of older people living in non-private dwellings (such as hostels, nursing homes and hospitals) having fallen from 9.9 percent in 1991 to 8.7 percent in 2006 (AIHW, 2008b). The majority of older adults living in non-private dwellings are aged 80 years and over; yet only approximately 20 percent of this cohort lives in supported living accommodation, leaving almost 80 percent of people aged 80 years and over living in the community (AIHW, 2007b).

Over one third of Australia's population lives outside major urban regions, with the proportion of older people often higher in rural and regional areas than in urban areas (AIHW, 2007b). Rural Australia is not only an ageing environment it is also a changing environment, with some areas (such as regional, Arcadian and coastal communities) experiencing growth and other areas (such as the wheat belt, pastoral and dry farming areas) experiencing decline (Aylward, Hugo and Harris, 2000; Jackson, 2004; Hugo, 2005).

Ageing of the population in rural regions is, in part, for the same reasons as the general ageing of the population: reduced birth rates over time and increased longevity. However in rural regions population ageing is further compounded by other factors. Some rural communities are experiencing higher proportions of older people due to in-migration of 'tree change' or 'sea change' retirees (Burnley and Murphy, 2004). Other areas are experiencing population declines as services and infrastructure are centralised and younger people and families move to urban and regional areas for work and education resulting in smaller rural populations with higher proportions of older people (Alston, 1999; Black, Duff, Siggers and Bains, 2000; Cocklin and Alston, 2003).

Despite the growing number of studies linking social networks and neighbourhoods or community to wellbeing and health the symbiotic relationship of social space and geographic place has been under-researched, particularly within rural settings (Wahl *et al.*, 2004). Most people residing in rural localities have a mixture of local neighbourhood ties and external, non-localised connections (Smailes, 2006). Yet, taking into consideration Tobler's First Law of Geography - everything is related to everything else, but near things are more related than distant things - the influence of geographic distance should not be overlooked when examining social networks (Tobler, 1970). Examining social networks to highlight their complexities and spatial variations may show that despite living in small rural communities (where one may assume social networks would be concentrated) social networks, and therefore social support, are dispersed and diverse.

## **1.2 Aims and Objectives**

This research will highlight the interplay of human agency, spatial contexts, temporal influences and social structures for older people living in rural environments.

### ***1.2.1 Aim***

This study aims to explore the social networks of older people in rural South Australian communities as 'life spaces' and examine how the spatial, social and temporal constructs of social networks influence growing older in these rural places.

### ***1.2.2 Objectives***

In order to understand the social issues associated with ageing in a rural Australian environment this thesis has the objectives of:

- Understanding how older people in rural communities are connected to their communities.
- Examining what social networks look like spatially, mapping and comparing variables that impact on and shape social networks.
- Exploring the role of place and place attachment for ageing-in-place
- Informing the development of ageing policy, service provision and future research within the context of ageing rural populations.

### ***1.2.3 Anticipated Research Outcomes***

Theoretical:

- The development of theory relating to the socio-temporal-spatial influences on social networks of older people in rural places.

Practical:

- Identification of the parameters of social support through social networks, for older people in South Australian rural communities.
- Identification of the facilitators and barriers to community connectedness for older, rural dwelling people.
- Recommendations for policy and service provision relevant to rural and ageing issues.
- Recommendations for further research.

## **1.3 A Profile of the Murray Lands**

The state of South Australia is situated in south-central Australia and has a total land area of 984,377 square kilometres, as seen in Figure 1:1. Appendix One contains a detailed fold-out topographic map of South Australia. South Australia has an estimated population of 1,584,500 people, or approximately 7.5 percent of Australia's population (ABS, 2008i). The capital city of Adelaide and the outer Adelaide urban region of South Australia comprise 84.8 percent of the state's population. A further 14.3 percent of the population lives in

outer regional, rural and remote areas, with the remaining 0.9 percent in very remote regions (ABS, 2008h).

For South Australia the proportion of the population aged 65 years and over at the 2006 Census of Population and Housing was 15.1 percent. When broken down further into the Adelaide Statistical Division and the remainder of the state the proportions aged 65 years and over were 14.5 percent and 15.7 percent respectively (ABS, 2008b, 2008g); highlighting that older adults are proportionally over-represented in rural South Australia. As shown in Table 1:1 the Statistical Division (SD) with the highest proportion of people aged 65 years and over in Australia at the time of the 2006 Census was the Yorke and Lower North in South Australia (20.5 percent), followed by the Mid-North Coast (New South Wales) and Wimmera (Victoria), both with 19.1 percent; all rural and regional locations. The Statistical Divisions with the largest proportions of people aged 85 years and over were also the rural locations of the Wimmera (2.5 percent) and Yorke and Lower North (2.4 percent) (ABS, 2008g). This infers that within the context of a national trend towards an ageing society many rural communities are experiencing a more pronounced ageing of their populations.

**Table 1:1 Regional Variations in Ageing Populations, 2006 Census**

Region	Median Age	Proportion of Population aged 65+ years (%)
Australia	37.0	13.3
South Australia	38.7	15.1
Yorke and Lower North SD (SA)	45.1	20.5
Mid-North Coast SD (NSW)	43.0	19.1
Wimmera SD (Vic)	42.0	19.1
Murray Lands SD (SA)	40.0	16.3

Source: (ABS, 2008g)

The region selected for this study is the Murray Lands SD of South Australia. South Australia is divided into seven Statistical Divisions. The Murray Lands SD covers approximately 48,000 square kilometres of regional and rural areas between the eastern escarpment of the Mount Lofty Ranges and the state border with Victoria. The River Murray, the lower Murray lakes and some of the Coorong form part of this region. The area is a mixture of dry farming/grazing land, irrigated farming and fruit blocks, and small holiday river communities. The Murray Lands SD is further divided into 12 Statistical Local Areas (SLAs). A more detailed map of the region, highlighting the 12 SLAs and the key townships can be found in Appendix Two.

**Figure 1:1 South Australia, Non Metropolitan Statistical Divisions and Local Government Areas**

NOTE:  
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copy of the thesis held in the  
University of Adelaide Library.

Source: GISCA, 2009

The main centre servicing this area is the Regional City of Murray Bridge, with a population of approximately 17,000 people. Four Murray Lands SLAs were selected: the Mid-Murray<sup>1</sup>,

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<sup>1</sup> SLA 4200554210, includes the main town of Mannum and other smaller towns in the River Murray area. It is partly a peri-urban area within commuting distance of Adelaide, running along the eastern escarpment of the Adelaide hills region. It is a mixture of small river and hills communities, dry farming regions and irrigated fruit blocks along the River Murray. It is the largest and most populated of the four SLAs.

Karoonda East Murray<sup>2</sup>, Southern Mallee<sup>3</sup> and The Coorong<sup>4</sup>, as seen in Figure 1:1. Further demographic detail is provided on the study area in Chapter Three.

## 1.4 Concepts and Terms

There are four key terms that provide an overarching context for this thesis.

### 1.4.1 Community

When examining social environments the term community is used frequently. There has developed a dichotomous view of community as being *either* a place-based, localised phenomenon *or* as non-spatial networks of people with common concerns, or communities of interest (Delanty, 2003). Traditionally, studies in community have looked at relatively small groups based on ideas of interdependence, shared experiences, kinship ties, a common language and occupying a common spatial area; in other words, place-based communities (Redfield, 1955; Wellman, 1979). Community as a place-based notion has also been contested, particularly within the context of increasing societal individualisation (Webber, 1964; Giddens, 1990; Beck and Beck-Gernsheim, 2002). Additionally, the advent of more sophisticated communication technologies, increased mobility and changing kinship structures have seen increased attention in communities of interest (Castells, 1996; Bauman, 2001; Delanty, 2003; Hopper, 2003).

It is important to note that communities are not autonomous entities. All communities, and the people who reside in them, have relationships with external people, places and services (Delanty, 2003). Communities are also subject to exogenous factors such as national, state and regional policy development, the regionalisation and centralisation of services, and national trends such as in population and health (Cocklin and Alston, 2003). Defining community can be a very subjective process. Variables such as gender, culture, language, levels of mobility, location of kinship ties, where people shop, work, or access services may influence individual perceptions of community and belonging (Robert, 2002; Smailes, 2006).

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<sup>2</sup> SLA 42013080, includes the main town of Karoonda and surrounding dry farming region. It is further in-land, smaller and more sparsely populated than the other three SLAs.

<sup>3</sup> SLA 420107290, includes the larger towns of Lameroo and Pinnaroo and surrounding dry farming regions. As with Karoonda it is further inland, it contains large tracts of natural scrub and national park and has a mainly dry farming, agricultural focus.

<sup>4</sup> SLA 420107800, includes the larger town of Meningie, some of the Murray River, Lake Albert and Lake Alexandrina regions as well as some dry farming/sheep grazing regions. It also has a string of smaller rural towns along Highway One which connects Melbourne and Adelaide.

An examination of social networks implies a focus on communities of interest; who people interact with on a regular basis regardless of their location. Yet research that examines rural spaces and rural populations must also consider place-based communities. It is the symbiotic relationship between social networks, a sense of place and the spatial influences of rural living that this study has focused on. Consequently the most complete understanding of community, for the purposes of this study, is one that encompasses both a sense of the localised place-based community, and the more non-spatial, network-based idea of communities of interest. As Krause (2003, p.243) aptly describes it:

‘...neighborhoods are, in the final analysis, a state of mind. They are a set of subjective perceptions, beliefs, and reactions that older people construct in order to negotiate their immediate physical and social environment. But they are more than individual perceptions....neighbourhoods are determined in part by agreed upon natural boundaries. This suggests that instead of being an entirely individual matter, a subjective sense of the neighbourhood is socially constructed, by both the people that live there, and by those who reside in other places.’

There may be great elasticity in the definition and boundaries of community, even among people living near one another (Robert, 2002). An exploration of community through an examination of social networks encourages deeper thought about what are the essential characteristics that define community for older people in rural places. There is merit in exploring individual subjective examinations to measure community, even if it is just to point out that ‘official’ boundaries used to define regions do not necessarily represent the boundaries of community as it is perceived by those who live it and engage with it (Krause, 2003, Smailes, 2006).

Rural community studies have often explored place-based communities with an assumption that locally based activities and connections are indicative of a sense of self-identity and local solidarity (Liepens, 2000a, 2000b; Walmsley, 2006). In this notion of community the shared interests, activities and contacts of individuals overlap and become bounded with physical localities. However this study avers that a sense of connection for many people has the complexity of being connected in this way at the local level *as well as* a sense of connection to a social network that extends beyond these spatial boundaries. ‘One must be careful not to idealise communities, or depict them as impervious cells, for much of the social interaction pattern of rural people transcends the local ... yet localism is very important to people’ (Hugo and Smailes, 2003, p.99). Mapping social networks assists to highlight this duality of connection and belonging for older people in rural places.

### **1.4.2 Rural**

Much rural research and policy development focuses on agricultural related issues such as technological innovations, environmental trends and economic policies. The majority of people, particularly older people, living in rural Australia are not involved in farming, and this section of the rural population is often ignored in rural policy development (Black *et al.*, 2000). This leaves issues such as ageing and social change in rural spaces under the auspice of generic social policy which tends to be urban-centric. But what defines rural and urban?

Rural spaces cannot be described as merely non-urban spaces or with a simple definition that identifies rural by agricultural land use (Champion and Hugo, 2004; Smailes, 2006). Bowler (2001) suggests that rural spaces, and the people who occupy them, are no longer autonomous and cannot be as easily separated from other, urban-orientated spaces. Traditional views of what is rural do not take into consideration the multiplicity of spaces, and the diversity of people that comprise the rural (Bowler, 2001, p.131).

One method of acknowledging the nuances and diversity of settlements is to re-consider the urban-rural distinction as dichotomous and instead consider a continuum of settlement patterns. 'Any specific instance in the real world, therefore, can be viewed as demonstrating relative degrees of rurality and its opposite, urbanity, falling somewhere along the continuum between two extremes' (Lang, 1986, p. 120). While not a new suggestion, this idea has received much consideration as settlement patterns continue to change (Pahl, 1966; Lang, 1986; Champion and Hugo, 2004; Hugo, 2007b).

Brown and Cromartie (2004) suggest that such a continuum need not be limited to a simple classification system (such as population size) but instead can incorporate a multi-dimensional approach. 'The operationalization of rurality should be flexible enough to differentiate urban from rural, while recognizing and appreciating the diversity contained within each category' (Brown and Cromartie, 2004, p.270). They suggest four dimensions for classifying places along an urban-rural continuum: ecological, economic, institutional and socio-cultural. Table 1:2 provides a useful portrayal of the qualities of their four dimensions.

**Table 1:2 A Multidimensional Framework of Rurality**

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copy of the thesis held in the  
University of Adelaide Library.

Source: (Brown and Cromartie, 2004)

Smailes (2006) also defines rurality as a multi-dimensional concept, based on Burie (1967). Smailes, (2006, p.13) refers to four key dimensions of what is rural: physical, social, cultural and visual. All these dimensions may vary in levels of presence independently of one another. The physical dimension is represented chiefly by low population density, and land use. The social dimension refers to the impact of distance and isolation on interaction patterns with smaller, more sparsely located individuals and social groups. The cultural dimension is represented by distinctive habits, customs, attitudes and values. The visual/perceptual dimension is very subjective in nature, it refers to the extent to which an area 'feels' or 'looks' rural.

These multi-dimensional views are pertinent to this current study as they highlight the complexities of what, at one level, appear to be obviously rural spaces. The four SLAs included in this study are all very rural at a physical and visual level and yet there are many subtleties in the economic, institutional, cultural and social aspects across these regions, particularly in light of demographic changes (see Chapter Three for further discussion on demographic change). Considering the urban/rural continuum, as shown in Figure 1:2, these four SLAs would all appear at one end of the scale; however they are not homogenous rural communities.

Figure 1:2 Urban-Rural as a Continuum



For practical reasons this study utilises the ABS Australian Standard Geographic Classification (ASGC) ‘Section of State’ system (ABS, 2008c). The Section of State is a simple, broad classification system with four main categories: major urban areas (urban centres with 100,000 or more people), other urban areas (those with between 1,000 and 99,999 people), rural localities (places with 200-999 people), and rural balance areas (the rural remainder). Using this classification system, only two townships in the research study area qualify as ‘other urban areas’: Tailem Bend, with 1,024 people, and Mannum with 2,400 people (see Appendix Two for location within the region) (ABS, 2008g). The remainder can be classified as ‘rural localities’ or ‘rural balance areas’. However, if settlements within the research area are viewed as part of an urban-rural continuum it is clear that the entire study area can be regarded as rural.

### **1.4.3 Social Networks**

Personal social networks consist of a variety of ties that vary in duration, history, type, reciprocity, origins, strength and value. ‘At all stages of life, people constantly edit their understanding of the social environment and construct networks of relationships based on opportunities and constraints on their own participation’ (Peace *et al.*, 2006, p.71). Personal networks consist of superimposed layers of relationships which are the result of the individual’s personal history, the socialisation processes that have occurred over time and the people that the individual has met and engaged with along the way (Bidart, 2005). Personal networks need to be thought of temporally and spatially in order to understand the full complexity of their make-up and the changing nature of their composition. Consideration of network contacts over geographic distance and time may reveal a deeper understanding of the nature of the contact (Phillipson *et al.*, 2001; Bidart, 2005).

This study looks at rural communities and ageing populations through an examination of social networks. A social network can be described as the set of people with whom an individual maintains contact and has some form of social bond. It is the web of linkages among an identified group of people that has some influence over the behaviour of the people involved. Analysis of social network properties provides a framework for understanding the interplay of different relationships (Phillipson *et al.*, 2004). It enables study of the collective properties of varied relationships in a structural form. Analysis can either be for egocentric networks, relationships from the point of view of a single person; or recording the relationships these significant others have with each other within a complete social network.

Social network analysis is typically aspatial in its approach, ignoring the role of place and space in forming social bonds and networks (Wahl *et al.*, 2004). Examining social networks needs to include reference to the impact of individuals *and the local contexts they operate in* (Phillipson *et al.*, 2004; Peace *et al.*, 2006). The influence of the local community on meaningful connections cannot be overlooked. Rural places, with lower population densities; smaller, more dispersed social groups and greater distances between individuals mean that place impacts greatly on social networks. This is particularly relevant for older people who may experience a decline in mobility and health levels as they age.

#### ***1.4.4 Ageing-in-Place***

The term ageing-in-place, although widely-used in policy and service delivery arenas, is usually not well defined. It is often used to infer living in the one familiar setting as one grows older (AIHW, 2007b, 2008a). Ageing in place, in demographic terms, involves existing populations moving into older age cohorts. Where higher population numbers of a particular cohort exist, and age together, rapid population ageing can occur. This demographic process of ageing in place is the dominant process involved in ageing populations in Australia (Hugo *et al.*, 1984; Hugo *et al.*, 2009).

Within policy and care provision arenas ageing-in-place refers to supported aged care housing residents being able to remain in one accommodation setting despite increasing care and medical needs as they age (Gething, 2001). In more recent times the term has become more widely used in community care to refer to anyone who chooses to remain living in their own home as they age. The practice of ageing-in-place dates back to a pre-industrial, and predominantly rural, lifestyle with limited mobility and non-existent public services; when it was not uncommon for people to live out their entire lives in the one

house or in the one village, supported by close kinship and community ties (Rowles, 1993). Examples of this type of residential inertia are characteristic of some of today's 'old-old' (people 80 and above), particularly in rural areas. 'Not surprisingly, it generates a strong sense of ownership and attachment to place' (Rowles, 1993, p.67).

There is still some need for clarity around the term ageing-in-place. For the purposes of this study ageing-in-place does not only refer to those who choose to remain living in the same accommodation setting as they age, whether that be the family home, a retirement unit or some form of assisted living accommodation. This study emphasises 'place' in the term ageing-in-place to include ageing in the wider space and place in which older people live; in their communities, neighbourhoods or regions. The rise of interest in place attachment and the influence of place and space on the ageing process (Pain *et al.*, 2001; Phillipson *et al.*, 2001; Krause, 2003; Wahl *et al.*, 2004; Andrews and Phillips, 2005; Hopkins and Pain, 2007) encourages a broader understanding of ageing-in-place that includes the community or local setting in which the older person lives. Olsberg and Winters (2005, p.79) noted in their study of ageing-in-place and housing that 'home owners were most likely to want to age in place, although for many their attachment was not necessarily to the home but to the area in which they lived'. Consideration of place in ageing-in-place is particularly important within the wider context of a rural environment both in terms of the physical/spatial dimensions of rural places (such as the dispersion of family and friends, housing and service provision characteristics, transportation options and experiences of attachment to place) and the socio-cultural dimensions (such as social opportunities, nature and location of institutions, value sets and personal biographies).

## 1.5 Theoretical Framework

It is the person-environment interactions of older people in rural places, through community identity and personal social networks, which are of interest in this study. The two spheres of the material-physical environment and the social-cultural environment are closely integrated. Most theoretical frameworks and concepts, at best, emphasise one more than the other (Wahl and Lang, 2004; Wahl, 2005). The challenge is to apply a theoretical framework that acknowledges both social and physical environments as major resources or constraints for an older person's quality of life and daily activities.

Individuals actively regulate, and are regulated by, their social and physical environments (Lawton, 1998; Rowles and Watkins, 2003; Peace *et al.*, 2005). For example: who people choose to socialise with, where they choose to live, and the influence or constraints of

where they live on access to family, friends and services. Additionally, social and physical factors can impact on each other; for example who a person chooses to socialise with may impact on their choice of residential location or conversely the residential location may place constraints on who a person is able to socialise with. Therefore social and physical environments contribute in a closely interwoven manner to an individual's life and the theoretical basis for any study of ageing, space and place must address all these elements equally (Wahl *et al.*, 2004). Several relevant theories are discussed briefly below, concluding with an emerging new theory that incorporates elements from the others, acknowledging the role of both physical and social influences in the ageing-in-place process.

Understanding ageing involves viewing it as part of the life course continuum with the wide range of complexities associated with ageing over time, both as a lived past and an anticipated future. Life course theory suggests that 'if you don't understand what he's been before, you're not going to understand him when he's old' (Settersen, 2003, p.2). The individual lifecourse is influenced by not only genetics, lifestyles and personal experiences but also by time and place. Considering the context of place and space in the lives of older people requires that researchers conceptualise both the contemporaneous and cumulative effects of place and space (Robert, 2002). It is important to understand not only how geographical place influences social spaces and social networks for older people but also to contextualise that process by understanding and placing that within a life course view. 'This shift from seeing age and lifecourse stages as socially constructed categories rather than independent variables means that space and place gain significance' (Hopkins and Pain, 2007, p.287).

According to Socio Selectivity Theory (SST) the reduction in breadth of an older person's social network reflects an active selection process in which emotionally close social relationships are maintained and peripheral social relationships are discarded (Carstensen, 1995; Lang and Carstensen, 2002; Dudley and Multhaup, 2005). SST suggests that people do not merely react to changed social networks (through changes in location, health, familial relocation, loss of friendships and so forth) instead they proactively manage their social worlds. The main assertion of SST is that when boundaries on time are perceived (such as towards the end of life), present-oriented goals related to emotional meaning are prioritised over future-oriented goals aimed at acquiring information and expanding horizons (Carstensen, 1995).

Future time perspective is inherently associated with chronological age—the older people are, the more limited they perceive their futures. Such temporal motivational changes influence social preferences, social network composition, emotion regulation, and cognitive processing. SST further suggests that emotionally meaningful goals benefit more from smaller social networks comprised of familiar social partners who are emotionally close. As a result, greater emotional well-being is experienced and satisfaction with social support networks is higher, which may ultimately hold benefits for physical well-being (Lockenhoff and Carstensen, 2004).

Person-Environment fit (P-E fit) theory has been a long-standing approach to understanding person-environment relationships as determinants of residential satisfaction and well-being (Kahana, 1982; Kahana and Kahana, 1983; Lawton, 1985; Kahana *et al.*, 2003; Smailes, 2006). This approach postulates that congruence between personal preferences and environmental ‘presses’ (influencing factors) foster environmental satisfaction and psychological well-being. Competence or well-being does not reside solely with the individual *or* the environment. A loss of competence resulting from discordance between the individual and the environment may reflect decreases in the ability of the older person, changes in environmental demands or resources, or a combination of the two. P-E fit has more recently been utilised in community contexts, furthering understanding of the impact of place and community (in addition to residential space) on environmental satisfaction and perceived well-being of older persons (Golant, 2003; Wahl and Weisman, 2003; Oswald and Wahl, 2005).

These three theoretical perspectives work very well together to provide a holistic look at the influence of space and place on social networks and wellbeing in older people. From a life-course perspective our social and emotional development throughout the lifespan is closely related to the socio-physical contexts of life (Baltes, 1987). People interact with, and within, their social and physical environments all the time, leading to a meaningful representation of the self within the environment (Oswald and Wahl, 2005). Wahl and Lang’s (2004) Socio-Physical Over Time model (SPOT) suggests that consideration of person-related or environment-related characteristics alone provide an inadequate basis for understanding individual differences in outcomes such as health, autonomy and well-being. Instead it is a combination of person-environment resources and experiences that add substantially to the understandings of individual ageing outcomes. The SPOT model successfully combines the key elements of the three previously mentioned theories.

Wahl and Lang (2004) argue that in both the social and physical spheres of the person-environment interaction, reference needs to be made to both *social-physical agency* and *social-physical belonging* in order to understand change in the person-environment relationship as people age. Social-physical agency refers to an individual's attempts to use and actively shape both material-physical and social resources in order to achieve life goals and satisfaction. Social-physical belonging represents a goal in its own right; nurtured primarily by long-term attachment to places and people. Wahl and Lang (2004) suggest that as people age social-physical agency is assumed to decrease (again, particularly in very old age) and social-physical belonging is assumed to become increasingly important (particularly in very old age). This study investigates social-physical belonging, by examining social networks and attachment to place, through the lens of social-physical agency, placing the study within the context of rural environments, changing communities and ageing people.

## 1.6 Thesis Outline

Chapter One of this thesis has outlined the parameters of the research. It includes a brief overview of the issues associated with older people in rural settings and the ensuing aims and objectives that have arisen out of this discussion and that frame this research. Chapter One has outlined the key terms and theoretical concepts that inform the rest of the study. Chapter Two is an overview of current literature and research pertaining to space, place and ageing as social constructs and rural constructs and also examines the role of social networks in ageing, and ageing-in-place as a policy construct.

Chapter Three is a demographic overview of Australia's population, with a particular focus on South Australia, the Murray Lands Statistical Division and the four selected Statistical Local Areas for this study. Chapter Four outlines the ontological and conceptual frameworks to the study and the methodological approaches used, including data collection methods, survey instruments, analysis techniques and delimitations to the study.

Chapters Five, Six and Seven present the results of the research as thematic discussions. Chapter Five provides an overview of social network properties that forms the basis of the examination of participant variables and social network properties in Chapters Six and Seven. Chapter Six examines distance and place as social network variables by exploring proximal and distant network ties. Chapter Seven focuses on the life-course influences on social networks and ageing-in-place by examining age, length of residence and future residential intentions as temporal constructs. Chapter Eight concludes the thesis with a

discussion of the key findings and recommendations for policy, rural service provision and further research.

## 1.7 Conclusion

The places and spaces people occupy are not fixed or immutable, nor are the social relationships and networks they develop within those places. As individuals age, their relationship to the places around them, and the people in those places, are constantly renegotiated (Wiles, 2005a). The dual positioning of people in both physical and social space has important implications for understanding social behaviour. People are embedded in both social structures and in geographical space, and it is this combination of social and geographic space that is often overlooked (Wahl *et al.*, 2004).

People make choices about where they want to live, who they interact with and the lifestyles they want as they grow older. Choosing to stay in one location and age-in-place, or choosing a new place of residence that matches these lifestyle choices (such as a ‘tree-change’ or ‘sea-change’ lifestyle) is a central feature to this development (Phillipson, 2007). In addition the places of ageing may impose constraints on choices around ageing and social interactions. A sense of place becomes the site for reflection of personal identity. This kind of ‘elective belonging’ is critically dependent on people’s relational sense of place, their ability to relate their residence to other areas of their sense of identity such as family, friends and interests. An older person’s home, sense of place attachment and sense of belonging can be significant symbols of autonomy and independence (Wiles, 2005a).

Place needs to be considered as part of a negotiated process of ageing, not as a static setting or a simple background to life events. It is very much a part of social relations and the ageing process (Wiles, 2005a). This is particularly relevant in rural settings where space and place, changing and ageing communities are combined with a policy agenda that favours ageing at home and in the community setting. Policy makers, service providers and researchers in ageing alike, need to further their understanding of what influence rural settings have on community connectedness, social relationships and the ageing process.

## CHAPTER 2: AGEING AND PLACE, AGEING-IN-PLACE

### 2.1 Introduction

'Where we are and who we are with will affect our behaviour; our sense of well-being and how we think about ourselves' (Peace *et al.*, 2006 p. 3). Where a person lives is more than merely a backdrop to their daily life, it is an important influencing element on *how* that life is lived and experienced. Lawton (1980) suggests that a person's behaviour, psychological state and sense of identity are better understood if placed within an environmental context. '[T]his aspect of sense of self answers the "who am I?" question by answering the "where am I?" question' (Pretty, Chipuer and Bramston, 2003 p.274/5). However, geographic location alone does not create a sense of identity or sense of place; these develop from relationships between people and between people and spaces, places are embedded with both personal and social meanings (Pretty *et al.*, 2003).

The beginning of the Twenty-first Century has provided an opportunity to examine the changes in how, and where, older age is perceived and experienced. This is partly driven by the unprecedented changes in demography worldwide, creating an ageing global population; and partly driven by changing societal, political and cultural shifts towards ageing. This chapter will explore the nature of these shifts in ageing, in addition to rural places, ageing-in-place, and social networks, through an examination of current literature. The chapter begins by exploring the development of thought on space and place in order to further understand the concepts of place attachment and sense of identity. Place attachment and a sense of place are seen as key concerns for the ensuing examination of ageing and place. Ageing, environment and place are then discussed more specifically as rural constructs, followed by a discussion on another key concept to the study, social networks and ageing, and finally an examination of ageing-in-place as a policy direction.

Western societies often stereotype older people as economically dependent, physically less able and socially excluded (Pain, Mowl and Talbot, 2000; Harper, 2006; Hopkins and Pain, 2007). These generalisations belie the social, cultural, economic and spatial diversity of older people and their networks (Hopkins and Pain, 2007). Just as gender, society and culture shape people's identities so does the environment they live in, the spaces and places of everyday life. Both social relationships and the physical environment have been linked to

outcomes such as subjective well-being, preservation of self and a positive future perspective (Wahl and Lang, 2004)<sup>5</sup>. Wahl and Weisman (2003) suggest that the physical, social, organisational and cultural environments people live in are interwoven; they are often researched and discussed as separate entities, but in reality it is impossible to separate them. Older people are not necessarily located in homogenous environments, and the experience of ageing varies according to the spatial contexts of different settings (Pain *et al.*, 2000).

## 2.2 Space and Place

Space matters to our everyday lives and personal interactions, it is inherent to human existence. Tuan (1977) argues that the basic principles of spatial organisation can be found in two key areas: the posture and structure of the human body (with the body upright and looking forward); and the relationships people have with each other (both close and distant). 'Man, out of his intimate experience with his body and with other people, organizes space so that it conforms with and caters to his biological needs and social relations' (Tuan, 1977, p.34). This suggests that all human patterns of behaviour are structured spatially (Tuan, 1974; Giddens, 1984).

Spaces for human activity are not passive places but rather are active environments that influence, and in turn are influenced by, the interaction of people (Giddens, 1984). Therefore the networks of social relationships, which people are embedded in on a daily basis, are constituted, optimised and/or constrained by space. Further to this, social networks can be mediated by space. For example, distances between adult children and their parents influence the frequency and types of interactions they can engage in (Tuan, 1977; Giddens, 1984; Fried, 2000; Cresswell, 2004; Hubbard, Kitchin and Valentine, 2004).

From the 1970's until the 1990's the idea of space underwent a shift that began to challenge the notion of measurable, objective space; incorporating ideas about subjective distance, time and space as fluid concepts, and the influence of social relations on spatial properties. Place became a concept that emphasised subjectivity and human experience, an attitude to the world rather than logical, measurable space (Tuan, 1974; Relph, 1976; 1977; Pred,

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<sup>5</sup> Many previous studies provide links between social relationships across the lifespan and the contextual conditions of the physical environment. For Example.: Moss and Lawton (1982); Scheidt and Windley (1982); Rowles (1993); Phillipson, Bernard, Phillips and Ogg. (2001); Rowles and Watkins (2003); Wenger and Keating (2008).

1984). Both Relph and Tuan saw space and place as part of a continuum where space is intangible, something that can't be analysed or described; space as the context for places to exist, while places are experienced, interpreted and hold meaning (Tuan, 1974; Relph, 1976; Tuan, 1977; Cresswell, 2004).

'Space is transformed into place as it acquires definition and meaning' (Tuan, 1977, p.136). Space becomes place through familiarity, memory and by imposing a sense of spatial and temporal order on things including references to distance and cardinal points. This helps to establish a pattern of significant landmarks or places. For example, someone living in a small rural town may describe his son as living 'in the old family home on the farm, about 20 kilometres north of the town towards the river'. By understanding the sense of space, applying experiences, memory, distance and temporal attributes a broader, richer sense of place is developed. As such, sense of place is inextricably tied up with human relationships (Tuan, 1977). Even quite negligible human interactions and memories can build up strong feelings of place attachment. The home can develop a strong sense of place through perceptions of intimacy and a sense of the familiar; not necessarily because of its aesthetics, beauty or as the site of life changing events. It is not the physical building that creates a sense of place, nor the whole town that people are attached to – it is in the smaller, familiar things, the people and the interactions.

For many geographers, place thus began to represent a distinctive type of space that was constructed in terms of the lived experiences of people (Pred, 1984; Hubbard *et al.*, 2004). However this notion of place was generally still a physically bounded, measurable locality, constructed from subjective meanings or the interpretation of a group of people. Tuan (1977), and later Massey (1997), challenged the idea of a bounded, physically defined space and suggested that although attachment and meanings of place were often shared, place could mean different things to different people. Being in a place involves a range of cognitive and physical performances that are individual, dynamic and constantly evolving; as the place changes and as the people who occupy it change. 'Places are thus relational and contingent, experienced and understood differently by different people; they are multiple, contested, fluid and uncertain (rather than fixed territorial units)' (Hubbard *et al.*, 2004, p.6).

The concept of time can also be subjective and contested (Thrift, 1983; Giddens, 1984; Harvey, 1990). Space exists in the present; it is what human senses experience right now through basic human orientation with eyes looking forward, through sight, touch, hearing

and so on (Tuan, 1977). This enables people to determine where they are, how big the space is, how the space can be negotiated. It is the element of distance that brings the aspect of time to space. Distance is not purely a spatial concept. Individuals see or imagine distance and add a temporal dimension to it; for example people travel from one point to another, estimating and taking into account how long that journey should take. 'Time is experiential space' (Tuan, 1977, p.119).

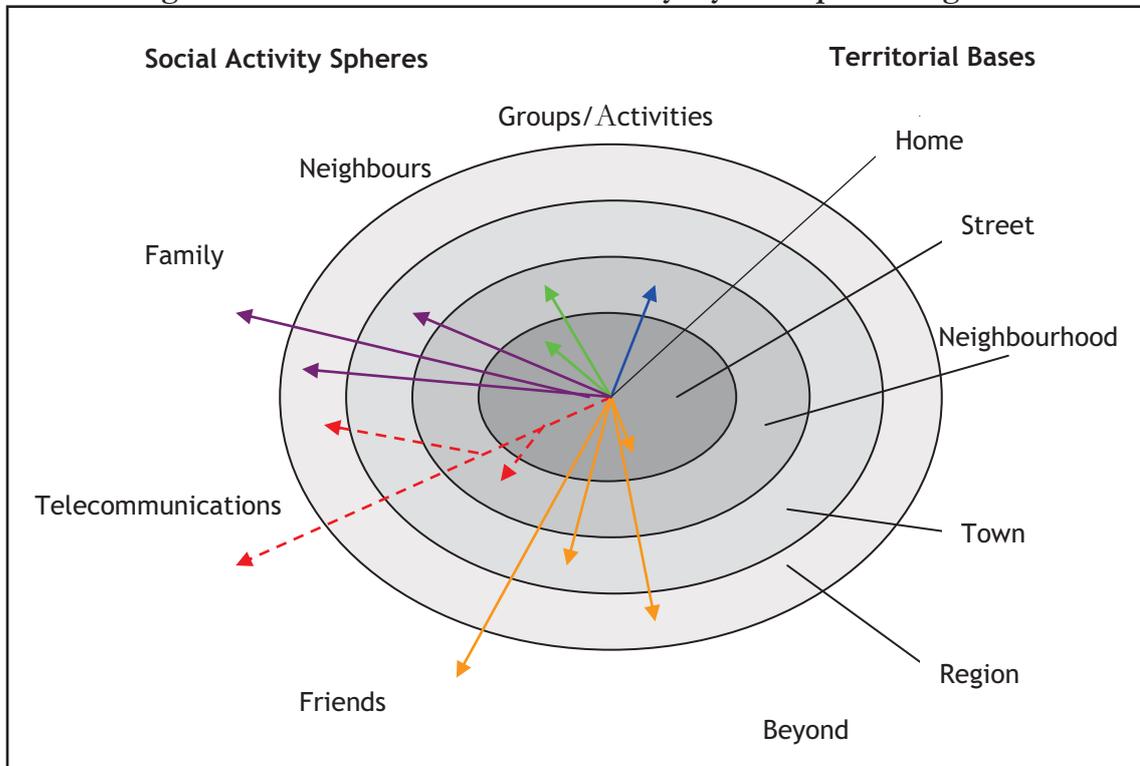
Recognition, memory and physical familiarity also add temporal dimensions to space, creating a sense of place (Tuan, 1974). Giddens (1984) suggests that time and space can be seen as being subjective and flexible indicating that they are not external to social relations, but instead are a product of those relations. It is this association between time and space, in the form of memory, experiences, social relationships, and living in the physical world that create a sense of place. Tuan (1977) describes three types of relationships between time and place:

- Attachment to place as a function of time. The more familiarity with a place, the more memories, experiences and intimacy with that place the greater the attachment to it.
- Place as a memorial to times past. This may be as simple as a series of family photos in a special corner of a room, or a more formal historical memorial in a town, a museum, a graveyard and so on.
- Place as motion and flow. Place in this sense represents a pause in the flow of time or 'temporal current' of human existence. Motion and flow represent how routines, destinations and places change as goals and aspirations change. Therefore people are not only moving through space in complex changing patterns, but also through time in the same way.

Massey (1997) conceptualised place as a product of interconnecting flows; as an open, dynamic system of connecting social relationships. 'What gives a place its specificity is not some long internalized history but the fact that it is constructed out of a particular constellation of social relations, meeting and weaving together at a particular locus' (Massey, 1997, p.321). This idea is also developed in Giddens' structuration theory (Giddens, 1984; Cresswell, 2004; Hubbard *et al.*, 2004) which describes the inter-relation between the physical spaces people inhabit and negotiate, the overarching social structures that influence their lives (such as capitalism, patriarchy, local laws and social norms) and individual ability to exercise agency and free will. Schnell and Yoav (2001) describe this

sense of place as ‘life spaces’ that reach out beyond a specific physical space to orbit around a person by providing connections to multiple networks, identities and ‘lifeworlds’, Figure 2:1.

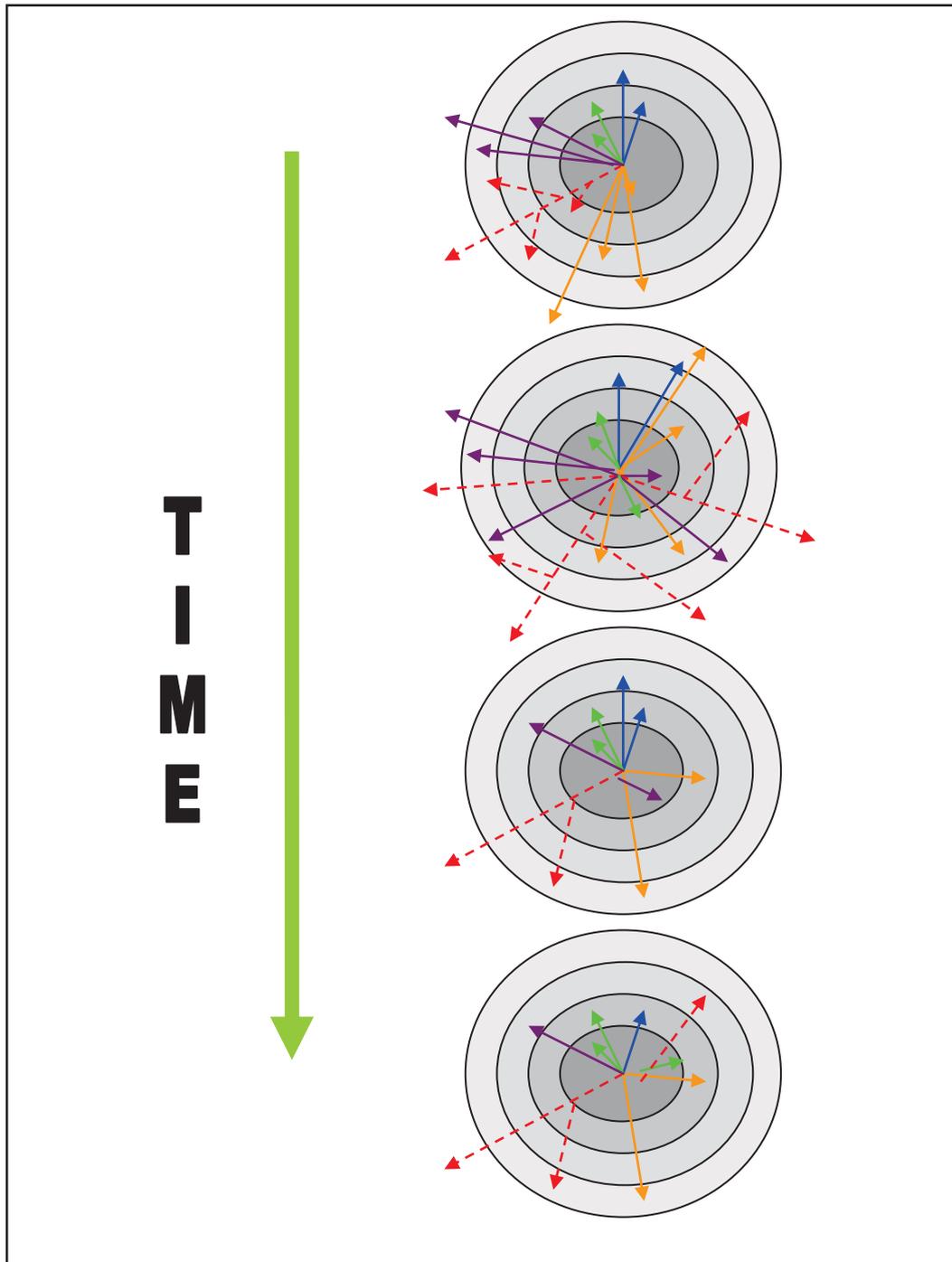
**Figure 2:1 A General Model of the Everyday Life-Space of Agents**



Source: (Schnell and Yoav, 2001, 625)

However, Schnell and Yoav’s model does not capture the influence of time on the process of place-making. In order to do this it is necessary to consider how the model would change over time. By adopting a lifecourse approach to place-making the concept of life-spaces can be developed further in order to more fully understand how place is a dynamic, fluid concept influenced by time, experiences and changing social structures as shown in Figure 2:2.

**Figure 2:2 A General Model of the Everyday Life-Space of Agents, Incorporating the Element of Time**



Adapted from Schnell and Yoav (2001)

Wahl and Lang's SPOT model (2004), outlined in Chapter One and described more fully in Chapter Four, follows on from the conceptual evolution on place outlined by Tuan,

Giddens and Massey<sup>6</sup> who see space and time as inextricably entrenched in both the physical and the social world, rather than ‘a priori’ concepts overlaid in realms of research. Also in keeping with Giddens’ and Tuan’s reflections on space and place Wahl and Lang emphasise the symbiotic relationship between space and time and an understanding that the entire lifecourse needs to be considered as influencing perceptions of place attachment and identity.

### 2.3 Place Attachment and Sense of Identity

An individual’s sense of identity is embedded in their history, memories and past experiences; their social connections and daily activities, and their sense of place. Identity is built on the convergence of physical places, time and social relationships (Fried, 2000; Cresswell, 2004). Individuals strengthen their sense of place attachment and identity through regular activity, experiences and memories (Smiles, 2006). This process is bound up in interactions with other people; the more ties with a place through connections, memories and experiences the stronger the emotional bond (Tuan, 1977).

Peace *et al* (2006) describe identity as how people see themselves, which impacts on relationships to their surroundings and other people. They distinguish between two types of identity: self-identity and social identity, with self-identity represented by inner values and self beliefs and social identity as a product of life experiences. This study focuses on the spatial aspects of social identity. For example: a woman born in 1920 in a small rural town to Australian farming parents will have some similarities to others from the same cohort, the same gender, class, socio-economic group and the same environmental background. In addition, the number of siblings she had, the location and size of her extended kinship and friendship networks, where she went to school, worked, if she married, had a family of her own and so on will all influence her social identity, creating differences between her own social identity and that of others in her cohort (Hockey and James, 2003; Peace *et al.*, 2006). It is important to remember that everyone has a unique social identity as each life course is unique, and that social identity is inextricably linked to an individual’s self-identity and sense of place.

Place attachment is bound up in an individual’s social identity through involvement in social activities and relationships – it is about affective ties with others, not just the physical

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<sup>6</sup> There are many other authors who have also influenced this conceptual theory of place, including Bourdieu (1977); Thrift (1983); Harvey (1990) and Cresswell (2004).

space of the community itself (Fried, 2000; Wiles, 2005a; Peace *et al.*, 2006). Massey (1997, p.320) describes this conceptualisation of place as ‘open and hybrid – a product of interconnecting flows – of routes rather than roots’. Fried (2000, p.195) suggests that place attachment is most profound when human relationships are embedded in social affiliations (both current and past) as well as a sense of identity based on cultural, class and/or racial affiliations and that often this sense of affiliation has developed over time, it has a temporal component to it.

Fried (2000) considers relationships and connections more important for place attachment than the actual physical nature of the place itself. However, the physical quality of places may also contribute to community attachment (Hidalgo and Hernandez, 2001; Smailes, 2006). Hidalgo and Hernandez (2001) aver that much place attachment research has focused only on the social bonds that create attachment and not the physicality of place. They argue that research often measures place attachment by the existence and strength of social relationships – assuming that these reflect an attachment to place. ‘From this perspective we might be led to assume that place attachment is in reality attachment to the people who live in that place’ (Hidalgo and Hernandez, 2001, p.275).

Smailes (2006) presents a more holistic view, suggesting that there are three different ‘bonding mechanisms’ working to create attachment to place: those that tie people to other people and social groups, those that tie social groups to a shared piece of the physical environment which it collectively inhabits, knows and uses; and direct bonds between an individual and the environment. Smailes’ model of place attachment, seen in Figure 2:3, highlights the need to view the process as a symbiotic whole, rather than each element in isolation. Rubenstein and Parmelee (1992, p.142) discuss three elements to place attachment that are not dissimilar to Smailes’ model: geographic behaviour (the physical environment), identity (the individual) and interdependence (social groups). The element of time is not explicitly incorporated into either concept of place attachment. However, Rubenstein and Parmelee (1992, p.142) suggest that ‘the very notion of place implies a conflation of space and time such that attachment to a particular place may also represent attachment to a particular time’.

**Figure 2:3 A View of Place Bonding**

NOTE:  
This figure is included in the print  
copy of the thesis held in the  
University of Adelaide Library.

Source: (Smailes, 2006 p. 67)

Rowles' (1978) concept of 'insideness', which could be equated with attachment to place as described above, has three main attributes of place bonding which are particularly relevant for older people:

- Physical insideness or being familiar with a physical setting, such as the home or community. Rowles suggests that individuals have the propensity to develop attachments to physical places over time, where an innate form of physical awareness is developed in familiar spaces (such that an individual will know where the light switches are without looking, or can traverse a room at night without turning on the light and so forth).
- Social insideness, being integrated within a local community, accepted and comfortable within family or social groups. This could also include feeling a part of an age cohort or peer group culture. This comes from a history of interactions associated or located with a place (such as the rhythms of social life within a family, knowing when neighbours are likely to be away, what are the busy days at work). Rowles (2003, p.66) suggests people develop social rhythms of life from this sense of familiarity.

- Temporal or autobiographical insideness is a sense of personal identity and history. People accumulate layers of meaning over time tied to certain locations and these locations come to assume a particular significance.

Place bonding, and the ability to sustain a sense of place, becomes increasingly significant at preserving a sense of identity and continuity as individual change occurs (both physically and emotionally) and as the world (both physically and socially) changes. People grow older: become physically frail, memory gets poorer, eyesight diminishes, friends and family die or move away, family structures change, neighbourhoods change, the community grows bigger (or smaller). It is a sense of place, of history and memories, of identity that provide the continuity individuals need to manage these processes (Rowles, 1993; 2003).

Discussion on the concept of place and place attachment thus far has centred on place as a singular phenomenon. This of course is not usually the case. People often identify with more than one place, just as they associate with more than one social group (a family, a friendship circle, a community, a region, a cohort) (Tuan, 1977; Giddens, 1984; Massey, 1997; Fried, 2000; Cresswell, 2004; Smailes, 2006). As such, when considering the model of place bonding above it is important to incorporate the changing nature of all three cornerstones of the model. The *individual* (who physically ages and has new experiences over time), the *social* (that may incorporate family, social groups, neighbours and other affiliations) and the *place* (work places, the family home, holiday and childhood places) all need to be considered as dynamic, multi-faceted concepts.

Smailes (2006) explains that it is possible to have a sense of community without spatial propinquity but has shown that a sense of local place identity still exists in rural regions. 'In most cases households, or individuals, will have both local, distance-dependent social links, *and* external social interactions' (Smailes, 2006, p.62). Therefore a sense of place attachment and identity (in this case with small rural towns in South Australia) appears to support the models above that suggest place attachment is a dynamic approach that is instilled from physical place, social structures and networks, and individual history and experience.

## **2.4 Ageing and Place, Ageing-in-Place**

Older people are portrayed as less likely to move, with most older people electing to grow older in familiar settings (Hidalgo and Hernandez, 2001; Rowles and Watkins, 2003;

Gilleard and Higgs, 2005). Attachment to place has been shown to be higher among older people, with ageing-in-place significantly increasing feelings of place attachment (Hidalgo and Hernandez, 2001; Gilleard, Hyde and Higgs, 2007). Rubenstein and Parmelee (1992) suggest three reasons why place attachment is increasingly important for older people: to keep the past alive (identity through history), to maintain consistency and continuity during times of change, and to maintain a sense of continued competence and autonomy.

Ageing-in-place has a strong tradition in human history. Since pre-industrial times in Western societies mobility was limited and people lived in, or close to, the small communities they were born in; where extended family resided over many generations, often in the same household (Rowles, 1993). It was not unusual for people to live their whole lives in the one dwelling, with multiple generations of family occupying the same space. For many non-Western societies this is still the case.

Although mobility increased dramatically over the 20<sup>th</sup> century in Western societies, dispersing kinship groups and community ties, attachment to place was given a new impetus through the rise in home ownership and the growth of suburbia in the post-World War Two period (Berry, 1999; Rowles and Watkins, 2003). Home ownership has long been a key aspect of Australian social life. In the early 20<sup>th</sup> century home ownership rates in Australia were around 50 percent (Berry, 1999). Home ownership rates rose dramatically after World War Two, rising to 70 percent by the 1960's, and have remained reasonably steady since then. In fact, more than 90 percent of present day middle aged and older Australians have been home owners at some stage in their lives (Berry, 1999; Olsberg and Winters, 2005).

The rise of 'specialised housing' for older people from the 1950's to the present day (in the form of nursing homes, assisted living units and more recently retirement villages and independent living units), along with gerontological theories such as disengagement theory, shifted notions of ageing-in-place as the social norm, creating an image of older people as needy, vulnerable and dependent (Rowles, 1993; Baltes, 1995; Estes, Biggs and Phillipson, 2003). With this shift came the assumption that older people would be willing to relocate readily. It is only more recently that gerontological theorists and policy makers have acknowledged that this is not the case and that for most older people their continued desire is to age-in-place (Rowles, 1993; Andrews and Phillips, 2005; Olsberg and Winters, 2005).

For many, the most familiar concept of place attachment is the idea of the home. 'Home is an exemplary kind of place where people feel a sense of attachment and rootedness' (Cresswell, 2004, p.24). Home provides a sense of security and comfort, a place where there is a sense of belonging and independence with benefits of familiarity, sense of safety, satisfaction, control, contentedness and autonomy (Cresswell, 2004; Kearns and Andrews, 2005; Oswald and Wahl, 2005; Gilleard *et al.*, 2007). This is particularly relevant for older people where the immediate home environment is often the primary living space. Ageing, particularly very old age, is associated with a reduction in activity range and an increase in the amount of time spent in the home (Sykes, 2000; Oswald, Schilling, Wahl and Gang, 2002; Gilleard *et al.*, 2007). The home can compensate for lack of function and capacity as people age, for example: the sense of spatial familiarity can compensate for both physical and memory loss (Oswald and Wahl, 2005).

Gilleard *et al.* (2007) argue that change at an older age can also be beneficial, offering more security (in the form of more suitable housing or proximity to necessary services and/or family), improved quality of life, and resistance to growing old through learning new things. Hence ageing-in-place can be an ambiguous position offering a sense of rootedness but also rigidity. 'As people grow older, they may be grounded by their area of residence or they may be trapped by it' (Gilleard *et al.*, 2007, p.591).

Olsberg and Winters' (2005) Australian Housing and Urban Research Institute (AHURI) study found a strong relationship between age and intentions to age-in-place; the older the respondent in this study the less likely they were to want to move. Seventy-one percent of their respondents aged 75 years and over had no intentions of moving in the future compared to 53 percent of baby boomer respondents (aged 50-59 years). This AHURI study (Olsberg and Winters, 2005) also found that many older people (44.5 percent of their respondents) had already moved in the last five years suggesting that adaptations to living arrangements to suit current needs, as an older person, are readily made. This highlights that older people are not merely 'victims' of space, time and change (Peace *et al.*, 2006). In fact, older people often make quite strategic decisions about residential moves and adaptations to assist with their changing bodies and changing environments.

Rowles (1993) suggests that ageing-in-place has been 'rediscovered', but perhaps since he made this statement it has been redefined as well. Ageing-in-place has shifted from the notion of ageing in the family home within a close familial circle, with a sense of

attachment to place in the form of home ownership in the post-war period. It is now a more fluid concept which denotes ageing independently in the community, with housing tenure and service delivery supporting a desire for independence and community attachment through conscious lifestyle choices (Olsberg and Winters, 2005).

Olsberg and Winters (2005, p.79) suggest that older Australians are more likely to consider ageing-in-place in terms of ageing in the community, rather than ageing in the family home.

‘Home-owners were most likely to want to age in place, although for many their attachment was not necessarily to the home but to the area in which they lived. Location was particularly important. Pleasure in and familiarity with the area and its facilities were regarded as important factors contributing to people’s day to day lifestyles. Proximity to people they know in the area was also important.’

This shift in thinking has occurred alongside the greater societal shift that promotes and fosters individualism and independence in society (Bauman, 2001; Beck and Beck-Gernsheim, 2002; Delanty, 2003; Hopper, 2003).

Ageing-in-place is still valued by older Australians, yet shifting values and priorities in the ‘younger old’ cohorts appear to be challenging traditional social norms around familial obligations, lifestyle choices and housing patterns (Olsberg and Winters, 2005). Older people are now more accepting of moving house; with problems of maintenance, gardens, divorcing families, changing kinship structures, new forms of identity formation and social expectations, and changes in service delivery with the home as a site for service provision, all being decision drivers (Oswald *et al.*, 2002; Olsberg and Winters, 2005). Extended family living has been overwhelmingly rejected in favour of independence, not being ‘a burden’ and personal lifestyle choices (Phillipson *et al.*, 2001). The concepts of individualisation, independence and lifestyle choices mean that living the remainder of your life in the family home or moving in with children are no longer commonplace choices for older people (Oswald *et al.*, 2002; Olsberg and Winters, 2005). The exception seems to be Aboriginal older people, where living arrangements incorporating extended family are not only important but also commonplace practice (Birdsall-Jones and Corunna, 2008).

As individual competence is compromised or challenged as people age, along with the increasing salience of home and community as the context for ageing-in-place, the ‘where’ of ageing becomes increasingly important (Robert, 2002). While the home gains more significance as a ‘place’ as people age also of significance is where that home is placed, in terms of services, social and support networks and in terms of physical surroundings, with

rural places providing one specific form of influence on ageing-in-place. Consideration of place identity and attachment as a process is important because it allows for critical thinking about the changing social and physical contexts of ageing and of rural environments (Wiles, 2005a).

## 2.5 Environment and Place as a Rural Construct

Examinations of Australian non-metropolitan environments have raised political, academic and public interest, particularly in the recent years of drought and more recently with the proposed changes to water allocation for irrigators and other food producers with the release of the Murray Darling Basin Plan (Murray-Darling Basin Authority, 2010). While some reference has been made to ageing rural populations (Black *et al.*, 2000; Burnley and Murphy, 2004; Hugo, 2005; Smailes, 2006) usually academic debate about rural issues is structured around population change, viability and sustainability of rural towns, service provision and/or transport issues (Joseph and Cloutier-Fisher, 2005). What also needs to be taken into account are the implications of restructuring and redefinition in rural settlements for those that live there; in this case for older residents of rural places. Stelhik (2001) suggests that there has been a failure in studies of rural Australia to examine the people, why they stay and their sense of community.

Many facets of change in rural communities have been examined: falling commodity prices, drought, floods, urban-centric economic and social policies, population migration, regionalisation, and closure of small business and services (Cocklin and Alston, 2003; Alston, 2007). These debates have centred on change and transition in both rural economic and social life, often relating to small rural communities<sup>7</sup>. A cycle of decline has been described (from lack of employment opportunities, farm amalgamations, drought or falling commodity prices) leading to decreases in population. Smaller populations lead to closure of services, businesses and a lack of investment in infrastructure; which then creates environments unlikely to attract new populations, and more people leaving through lack of services (Cocklin and Alston, 2003).

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<sup>7</sup> For example see: Ilbery (1998); Alston (1999); Baum, Stimson, O'Connor, Mullins and Davis (1999); Beer and Keane (2000); Black, Duff, Saggars and Baines (2000); Rogers and Ryan (2001); Cocklin and Alston (2003); Dibden and Cocklin (2005); Hugo (2005); Scharf and Bartlam (2006); Smailes (2006); Davis and Bartlett (2008).

This is a very different image of the Arcadian rural life that is often imagined. As Furuseth (1998, p.233) aptly described it:

‘For most residents of the industrialized world, who live in urban and suburban communities, the term *rural* conveys a comfortable image of picturesque small towns and open countryside populated by prosperous farmers and other middle-class or similar residents. Rural areas represent an idyllic community: an open and clean environment, free of the stress and pathologies associated with fast-paced urban living, simple face-to-face relationships and neighbourliness, and a local economy that thrives on nature’s abundance and hard work. ... Missing from these bucolic images are decaying homesteads, the small clusters of houses in disrepair, emptying towns with vacant store-fronts and crumbling infrastructure.’

In Australia it is more likely to be the inland rural communities with low population densities reliant on farming and traditional rural business (such as the wheat belt, dry farming and remote rural towns) experiencing the decline and hardship (Pritchard and McManus, 2000; Smailes, 2006). ‘These towns have tended to experience a contraction of local economic activity, rising unemployment, depopulation, and the breakdown of local social institutions and networks’ (Pritchard and McManus, 2000, p.52).

However, this assessment needs to be balanced with considerations of improved technology, transport and communication systems, which have allowed some business and services to improve and expand in rural, regional, national and international areas (Pritchard and McManus, 2000). Additionally, the growth in tourism and environmental businesses has seen growth in some rural areas. High amenity areas and coastal regions have experienced population increases from ‘sea changers’ and ‘tree changers’, and some peri-metropolitan areas have become desirable living alternatives for urban workers due to cheaper housing stocks and easy commuting accessibility (Burnley and Murphy, 2004; Burnley, 2005; Argent *et al.*, 2007).

Hugo and Smailes (2003), in their study of the Gilbert Valley in South Australia, argued against the simplistic notion of sustainability of rural towns being dependent solely on population numbers and economic activity. They suggest that small rural communities very rarely ‘die’ abruptly, however they may have an extended period of decline over many years. Most importantly for this study ‘they retain their role as the foci of social interaction long after they lose importance as shopping and business centres, and remain providers of

place identity and belonging for even longer after that' (Hugo and Smailes, 2003, p.100). This affirms Stehlik's (2001) argument that more attention needs to be paid to the role of rural communities as social spaces, lived communities with a strong role to play in place attachment and identity for those who remain there.

The Gilbert Valley study showed that rural communities, as social units, do have clear spatial dimensions and that once formed, the spatial dimensions of local social groups show high degrees of inertia (Hugo and Smailes, 2003). Smailes' (2006) study suggests that there has been very little change in the spatial patterns of belonging and community attachment in rural communities over the preceding three decades. Demographic patterns may have changed, but the sense of community and belonging are still present and stable, despite the changes in community itself. However Smailes' study does indicate that a sense of belonging and community attachment shows evidence of 'expansion' from the immediate small neighbourhood to a small community and from small communities to larger local areas (Smailes, 2006). He suggests this is partly the result of increased mobility and better accessibility to a larger regional area leading to expanded friendship and personal visiting networks, and cross-commuting for work, shopping and services. This is not to say that the local community is no longer important, rather that it is nested within a broader sense of place and belonging.

There are many ways to define a rural community including: objectively using Statistical Local Areas, Census Collectors Districts or Local Government Area boundaries, by the availability of services within a region, or utilising resident's identification of their neighbourhood in a more subjective manner (Stehlik, 2001; Smailes *et al.*, 2002; Hugo, 2007b). 'The process of devising sound operational definitions of the neighbourhood forces researchers to think more deeply about the essential characteristics of neighbourhood environments' (Krause, 2003, p.225). Smailes' study (2006) has challenged the traditional objective boundaries often used to define rural communities, redefining the local to more meaningful boundaries based on the social interactions and life patterns of rural dwellers as seen in Figure 2:4.

**Figure 2:4 Patterns of Community Identification**

NOTE:  
This figure is included in the print  
copy of the thesis held in the  
University of Adelaide Library.

Source: (Smailes, 2006 p. 119)

There is a need to differentiate between social networks, local ties and a sense of community (Walmsley, 2006). Community is often interpreted and described in terms of local solidarity instead of trying to understand how a sense of place attachment or identity can exist *alongside* social and family network ties (Wellman, 1979; Smailes, 2006; Walmsley, 2006). Walmsley (2006, p.5) infers that this requires us to tease out the 'salience of place in the notion of community'. This challenges Webber's 'community without propinquity', where intimate, close-knit networks of people are formed and held together through common interests and shared values, but are not spatially proximate (Webber, 1964). It is the duality of community as place attachment with proximal ties and a sense of belonging as part of a larger, possibly non-proximate social network that best describes an individual's sense of identity and connectedness. Argent (2008) suggests that despite access to faster/easier transport, advances in technologies, and a growth in spatially far-flung 'communities of interest' the spatial distribution of potential social contacts as part of the average daily routine can still be regarded as an indicator of the richness and vitality of local community life. In other words space still matters for a sense of community connection, despite the existence of other forms of social networks and connectedness.

Place attachment, and a sense of belonging to a larger social collective or community, is basic to human psychological wellbeing (Tuan, 1974, 1977; Walmsley, 2006; Argent, 2008). Smailes' conceptualisation of rural place making argues that 'despite the rising importance of the non-local, or external, element of social contact patterns, the need for the local

remains strongly entrenched in human society' (Smailes, 2006, p.94). This is particularly relevant in rural areas where time and distance still exercise constraints on interactions outside of the local, and even more so for older people who may have additional limitations on connecting with others outside the local from limited transport options, lack of knowledge and access to new technologies, and physical health limitations. The issue arises of what sustains place attachment and a desire to age-in-place in small rural communities amidst change; change as shifts in local demography, as structural changes in services and infrastructure and as personal change through ageing.

## 2.6 Ageing as a Rural Construct

Rural communities incorporate many spatial elements of diversity that influence the lives of older adults including landscape, distance, population density, migration patterns and changing communities. In recent years many gerontological discussions have incorporated environmental contexts<sup>8</sup>, some with a specific rural focus<sup>9</sup>. There is a need to 'draw attention to the situated meaning of rural change as it relates to the experience of growing old in rural communities' (Joseph and Cloutier-Fisher, 2005, p.134).

Incorporating an environmental element in ageing research provides a framework that is focused on the contexts in which people live their lives (Wahl and Lang, 2004). The main premise being that people exist through interaction with both the physical and social contexts in which they live (Keating, 2008). For example: physical elements such as population size or distance from a larger centre may impact on availability of formal services. In turn, service availability may influence patterns of service use and instrumental support from the family and friend network ties of older adults (Keating, 2008). Localism, a sense of place as community, is still an important part of social connectedness and everyday life and this is reflected in the social networks and community connections of older rural people. Older people are less mobile geographically and more likely to participate in, and see themselves as part of, a localised community (Le Mesurier, 2004).

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<sup>8</sup> For recent studies see: Phillipson, Bernard, Phillips and Ogg (2001); Krause (2003); Wahl and Weisman (2003); Wahl, Scheidt and Windley (2004); Andrews and Phillips (2005); Phillipson and Scharf (2005); Peace, Holland and Kellaher (2006); Gilleard, Hyde and Higgs. (2007); Hopkins and Pain (2007)

<sup>9</sup> For rural specific studies see: Foskey (1998); Golant (2004); Phillipson and Scharf (2005); Wahl (2005); Scharf and Bartlam (2006); Keating (2008).

Rozanova, Dosman and de Jong-Gierveld (2008) describe five characteristics of rural places that influence opportunities for community connectedness and participation:

- Remoteness from an urban centre - described as a lack of access to facilities and services available in large regional and urban centres.
- Population density - less people equating with less services, voluntary and community groups.
- Community economic diversity - having an impact on the range and number of available services and employment opportunities.
- Proportion of older adults - rural communities are generally experiencing higher proportions of older people, when this is a higher proportion of 'young old' or new retirees this may impact positively on community participation as this is when volunteering and helping levels peak. However, as these cohorts age-in-place the proportion of older people requiring assistance may surpass the ability of the community to provide assistance to them.
- Changing population size.

These last two points highlight the discussion in Section 2.5 on changing rural communities and places it within the context of an older population. Changing rural populations can impact on perceptions of community and social interactions. As young people leave and populations decline older people may feel a heightened responsibility to continue maintaining community groups and activities long after they feel able to (Rozanova *et al.*, 2008). Scharf and Bartlam (2008) suggest that community changes such as the loss of post offices and local stores also form barriers to community engagement for older people who are often already disadvantaged through health, poorer mobility and lack of income. Older people with strong attachments to place may be vulnerable to the changes associated with population turnover, economic decline, loss of services and amenities, and the general insecurity in that location (Scharf and Bartlam, 2006).

Alternatively rural towns with population growth may experience 'structural lag'<sup>10</sup> where small town services and groups cannot keep pace with rapidly growing populations (Riley *et al.*, 1994). Structural lag, as it relates to this discussion, takes two forms: small rural towns

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<sup>10</sup> Riley, Kahn and Foner (1994) discuss the dynamic relationship between changes in lives and changes in social structures, where structural lag refers to the inability of social structures (policies, services and community institutions) in keeping pace with population dynamics and social change.

not meeting the social, service and cultural expectations of new incoming retirees or limited service and activity opportunities for a growing population (for example: longer waits to see a doctor in a small rural surgery or a lack of volunteering opportunities).

While declining rural towns have a more obvious influence on older residents, the impact of developing rural places should not be underestimated. The UK Rural Disadvantage Report (Scharf and Bartlam, 2006) raised the issue of population growth having a negative impact on quality of life, in particular on the quality of social relationships in rural communities. There was a perceived loss of intimacy along with more positive views of community in the past from long term residents. Respondents nominated aspects of community they still enjoyed (attractive surroundings, local groups and activities, friends etc.) but also expressed concern about the negative effects of change: the deterioration of social relationships (such as new neighbours who work all day or less localised bonds with friends and family), a loss of services, and a lack of affordability and choice in housing alternatives because of rising housing prices (Scharf and Bartlam, 2006). Getting to know new residents, to forge relationships with new neighbours and shop keepers was also seen as difficult for many and 'seem[ed] to threaten fundamental personal assumptions about both individual identity and collective identity as a village community and, indeed, what it means to be a rural older person' (Scharf and Bartlam, 2006, p.50).

This is not to imply that older people are the source of all population change in rural regions; in-migration to high amenity and coastal rural places is by no means dominated by older people (Burnley and Murphy, 2004; Le Mesurier, 2004; Burnley, 2005). 'Older people, if anything, are more likely to witness migration, and the effects of migration, happening around them' (Le Mesurier, 2004, p.2). Older people are more likely to be 'left behind' as younger cohorts migrate out of more remote rural regions. Alternatively, long term rural residents in more Arcadian and coastal rural locations can easily become isolated and overlooked if the local population increases bring newcomers who effectively change the social character of the town and who have little in common with the norms, experiences and values of 'locals' (Le Mesurier, 2004).

Place has additional importance in the daily lives of older people, for the provision of 'at home' care, for access to community based services, and for the maintenance of localised social groups, informal support networks and proximal kinship ties (Wiles, 2005a). Studies which relate a social life and social connections to the physical environment have shown

that an increasing amount of time is spent in the home and local neighbourhood environment as people age (Rowles, 1978; Moss and Lawton, 1982; Krause, 2003; Rowles and Watkins, 2003). Geographical space, represented in this study as rural living, is an influence on social connections and social networks (Festinger *et al.*, 1950; Haagerstrand, 1957; Rowles, 1978; Kahana, 1982; Frankel and DeWit, 1989). However the social networks of people in rural regions are not necessarily spatially bounded.

Smailes argues that defined, socially meaningful rural communities do not negate the diversity and spatially indefinable fields of social networks that individuals have (Smailes, 2006). Smailes' research shows that individuals in rural communities may have diverse, spatially dispersed social networks but still maintain a sense of the local and community identity that is easily defined and 'bounded'. Peace, Holland and Kellaher (2006) also differentiate between neighbourhoods and social networks, suggesting that social networks can be dispersed and disparate yet a sense of neighbourhood still be important.

## **2.7 Social Networks and Ageing**

An enduring theme in social gerontology is the positive relationship between social engagement, participation and quality of life in later life. This relationship has been a significant theme of proponents of activity theory and theories of successful ageing and productive ageing (Butler and Gleason, 1985; Rowe and Kahn, 1985; Morrow-Howell *et al.*, 2001). The importance of social networks, particularly family and kinship relationships has consistently been reported by older people as an important factor in the quality of their lives (Bowling, 1997; Antonucci, 2001). Fast (2008) found that family and friends were ranked second in importance after health for older people. Farquhar (1995) states that older people reported family, activities and social contacts as the three most important factors giving 'quality' to their lives. Reduced social contact, being alone, isolation and feelings of loneliness have been associated with reduced quality of life (Victor *et al.*, 2000).

There has been a rising interest in the western world on the social implications of the ageing of the population (Fry, 2003). This is viewed by some as 'apocalyptic demography', with nations focusing concern on the social and fiscal costs of an ageing population (Fry, 2003; Healy, 2004; Katz, 2005). Images of family in western societies have also undergone change, with much debate about the rise of an individualised society and the transformation of kinship and community ties (Giddens, 1990; Bauman, 2001; Delanty, 2003; Fry, 2003; Hockey and James, 2003; Hopper, 2003; Harper, 2006).

Generally people in western countries no longer live as intergenerational, extended family groups. Families in western countries tend to be spaced out 'vertically' over the generations with fewer 'horizontal' ties (less siblings, cousins etc.), creating 'beanpole family structures' (Harper, 2006). Families are often mobile and dispersed, divorce rates are high, single families and new family structures (such as same sex couples, childless couples and blended families) have become more common (Phillipson *et al.*, 2001; Fry, 2003). 'By late twentieth century, the meaning of kinship emphasizes diversity in forms and individualism. Individuals reproduce individuals who are nurtured and developed as individuals and less as kin' (Fry, 2003, p.327).

This view of modern kinship ties and individualised societal structures begs the question 'who can I depend on when I am older'. Each individual will have a different set of resources available in later life based on history, personality, origins, exogenous circumstances and societal change (Bidart, 2005; Peace *et al.*, 2006; Wenger and Keating, 2008). This highlights the nature of change within personal social contexts of time and space. Understanding social networks temporally and spatially enables a greater understanding of the full complexity and changing nature of their composition (Bidart, 2005). While social networks have important implications for supporting and/or protecting the well-being of older people these contacts may not necessarily be localised or closely connected (Gilleard and Higgs, 2005). Older people with limited proximate network ties may have more difficulty ageing in their communities, while those with family nearby have more potential for assistance (Wenger, 2008).

Social networks are always going to be indicative of the life course history of the individual, however some generalisations about social networks have been made (Stein and Hunt, 2002; Wenger and Keating, 2008). Walker, Wasserman and Wellman (Walker *et al.*, 1993) suggests that the typical North American has an average of twenty significant active ties, based on frequent sociable contact, supportiveness and feeling of connectedness. Of these, five were considered to be close, supportive, intimate ties. Antonucci *et al* (2004) found that on average less than ten close relationships were nominated in social networks, and most of these were family members. Walker *et al* (1993) found that the most active members of a network were friends or neighbours, not family ties; although they agreed that kinship ties were more densely connected, with the parent-child relationship being the most intimate and supportive.

Family network ties make up about half of the average social support network (Antonucci, 1994). Women tend to have more extensive support networks than men, while men tend to receive more support from their spouses and less from other network contacts (Antonucci and Akiyama, 1987; Field and Minkler, 1988; Antonucci, 1994; Stein and Hunt, 2002). Married people tend to have larger networks than people who live alone, with men who have never been married having the smallest networks of all; and the 'old old' have smaller networks, with a greater proportion of family members, than the 'young old' (Litwin and Landau, 2000; Stein and Hunt, 2002).

Despite extensive examination of social network typologies of older people there is no uniform classification system. This is partly because of the different network components that have been examined (such as proximity, network roles, levels of instrumental and emotional support and reciprocity) (Wenger, 1997; Litwin and Landau, 2000; Stein and Hunt, 2002; Pahl and Spencer, 2004; Fiori, Smith and Antonucci, 2007; Wenger and Keating, 2008). A comparison of five different network classification systems relevant to this study can be found in Appendix Three. Of these, Wenger and Tucker's (2002) network classification, developed as part of the Bangor study in rural Wales provides the most useful comparison with this study. Their categorisation of the social networks of rural older people into five network types (localised family dependent, locally integrated, wider community focused, locally self-contained and private restricted) most closely relates to the typical networks found in this study.

Wenger and Keating (2008) suggest that support networks are influenced not only by the physical contexts in which people live (in this case a rural context) but also by the life course of their social relationships and their increasing frailty as they age. 'The capacity that older people have to cope with life and its problems is related to the structure and content of their social networks, as is access to resources which help them on a daily basis' (Wenger and Tucker, 2002, p.28). Network size, the numbers of face-to-face contacts and proximal ties have all been shown to be connected to the availability of emotional and instrumental support.

The importance of socialisation and social activities at a local level must not be overlooked as a requirement of good health and well-being amongst people ageing-in-place. Loneliness, unhappiness and isolation can be important contributors to depression and mental health issues in old age (Andrews *et al.*, 2003). Despite the emphasis on independence and

continued living at home most older people seek and need social integration, that is, a life with people. A current consensus among social gerontologists is that life satisfaction and psychological well-being among older people are influenced to some degree by their levels of social activity and contact (Beckingham and Watt, 1995; Klein and Bloom, 1997; Morrow-Howell *et al.*, 2001; Andrews *et al.*, 2003; Phillipson *et al.*, 2004).

The conceptual confusion between the inter-related concepts of living alone, social isolation and loneliness has long been recognised (Townsend, 1973). Living alone is the most identifiable of the three concepts and refers simply to people living in separate households. Social isolation relates to levels of integration of individuals into the wider social environment (Victor *et al.*, 2000). This notion can include quantitative, measurable outcomes such as the number, type, and duration of contacts between individuals and the wider social environment. A key component of isolation therefore is the size of the individual's social network (Wenger *et al.*, 1996). Loneliness, on the other hand, is a more subjective evaluation by an individual of their personal level of social contact (Andersson, 1998; Franklin and Tanter, 2008). The presence of large social networks is not necessarily evidence of a confiding relationship or decreased feelings of loneliness; here it is the strength of the social network ties that may be of more importance.

Being alone does not equate with loneliness. Loneliness is instead, a more complex issue often with no singular cause (Franklin and Tanter, 2008). Victor (2005, p.359) describes five sets of inter-related factors have been shown to be consistently associated with loneliness:

- Socio-demographic attributes (such as living alone, being female, not having any surviving children, living arrangements, being aged 75 or more years)
- Material circumstances (poverty, limited education and low-income)
- Health resources (disability, self-assessed health, mental health, cognitive function, anxiety and depression)
- Social resources (size and location of social network members, isolation, amount of time alone and presence of a confidant)
- Life events (recent bereavement, admission of a relative/spouse into care, relocation)

Franklin (2008), in line with Bauman's work on individualisation (Bauman, 2001), suggests that loneliness in more recent times is less about the size and frequency of social networks or the amount of social support received and is more about feeling wanted, feeling loved

and feeling cared for. 'We have certainly reached a point where the social relations of marriage, family, community, neighbourhood, even friendship etc. *persist* yet lack their previous (but defining) qualities' (Franklin and Tanter, 2008, p.6). Franklin is referring to social relationships in general here, not particularly to those of older people, where traditional qualities of family, marriage and community may be more prevalent. Of course, many older people experience the 'fall out' from changing relationships of younger generations around them (children getting divorced, grandchildren losing contact, family moving to distant locations or too busy to visit and so on).

This raises a point about proximal and distant network ties. If it is the quality of the relationship that influences feelings of loneliness then surely technologies such as the telephone and internet have made distance irrelevant. The telephone is often seen as a 'social catalyst' to keep network members connected; it tends to be a more voluntary mode of contact than face-to-face (and therefore is more highly correlated to strength in a relationship) (Walker *et al.*, 1993). Licoppe and Smoreda (2005) have observed how the telephone provides a means of maintaining permanent ties. '[P]resence is not simply the opposite of absence. In this new pattern technologies of communication are not just substitutes for face-to-face interaction, but constitute a new resource for constructing a kind of connected presence even when people are physically distant' (Licoppe and Smoreda, 2005, p.321). Perhaps, as Bauman suggests, it is the shifts in the nature of relationships (the strength of social bonds) that have changed rather than the shrinking and/or dispersion of social networks (Bauman, 2001, 2003). Is it the quality of the relationships, not the quantity, proximity or frequency of network ties that are related to loneliness (Victor *et al.*, 2005)?

Frankel and DeWit (1989) found that geographical distance was a strong predictor of frequency of contact with adult children, but not as closely linked to the experience of important conversations. Thus frequency of contact and levels of day-to-day instrumental support may be impacted by distance but familial relationships may remain strong and important to older people. The central core of family life is still very important for social networks *and* social support, particularly for instrumental support (especially from spouses and daughters) (Pahl and Spencer, 2004). Thus family, particularly proximal family members, play an important role in the social networks of older people. This highlights that the social and physical environment are inextricably entwined in a complex manner when

examining ageing, ageing-in-place, social networks and social support providing both opportunities and constraints within social networks (Wahl and Lang, 2004).

Studies have shown that geographic distance is influential on social networks, with people generally having more proximal network ties and more frequent contact with proximal network ties (Wellman, 1996; Thomese and van Tilburg, 2000). Wellman's study (1996) on the location of personal friendships found that despite technological advances most social ties were still localised, with an average of 42 percent of frequent network ties living within a one mile radius of the respondent, while the rest could be anywhere in the world. Place attachment, or loss of attachment, has also been linked to elevated levels of loneliness and loss of proximal network ties. In Franklin and Tanter's Australian study (2008) for example, Queensland had an elevated level of people attributing their loneliness to a move they had made recently and conversely, South Australia showed more people attributing their loneliness to others who had moved away. Through the simple concepts of opportunity and/or the need to minimise efforts to form and maintain a social tie, individuals tend to form ties with those who are geographically close (Wong, Pattison and Robins, 2005).

Wong *et al* (2005) found that proximity of social network ties was highly correlated to frequency of contact; although frequency of contact was not necessarily highly correlated to strength of relationship. Kinship ties were less likely to be proximal but were most likely to withstand long distances. Proximity and frequency of contact was highly correlated with the provision of services, goods and assistance; whereas emotional and financial support was also evident over longer distances. This fits with a notion of duality in social networks and community ties that will be explored further in this study; on the one hand a clear localised, spatially defined sense of community and on the other a dispersed/non-spatial, mainly family focused social network.

Studies have consistently shown that kinship ties are least likely to be localised, with localised friends and neighbours having significant roles for frequent contact (Walker *et al*, 1993; Phillipson *et al*, 1999; Thomese and van Tilburg, 2000; 2001; Pahl and Spencer, 2004). However this type of support can have limitations too, if friends and neighbours are of a similar age there will be restrictions to the type of support that can be offered. In addition, the strengthening role of friends and neighbours within social networks implies that service providers and policy makers should think more widely about support networks,

beyond traditional family ties (Walker *et al.*, 1993). Many older people are informal service providers as well as service users (Walker *et al.*, 1993). The assistance older people still offer their children, grandchildren, neighbours, friends, and in volunteering roles also needs to be acknowledged when considering community resources and service needs.

## **2.8 Ageing-in-Place as a Policy and Service Provision Construct**

The changes in rural communities have occurred at the same time as the rise in policy and service directions of privatisation, individualisation and ideals of family and community care first (Foskey, 1998). Strengthening social ideas about independence, individualisation and the value of ageing-in-place and changing kinship structures; along with political and financial agendas to stem health care costs, have all combined to contribute to a growing perception that the home is the most appropriate site for care for older people (Wiles, 2005b). Underlying current rural service provision and policy decisions is an assumption that older people in rural areas are embedded in supportive family and community networks, with a lower demand for formal services (Phillipson and Scharf, 2005). 'In reality in rural areas the burden on families for the care of frail older members is falling on the spouse and those few family members who may continue to live locally' (Foskey, 1998, p.3).

Home ownership has shown to be a strong predictor for older people choosing to age-in-place (Olsberg and Winters, 2005; Gilleard *et al.*, 2007). The Australian government has actively promoted home ownership as part of an overall housing policy directed at increasing self-reliance in housing since the 1920's; with home ownership rates peaking and then remaining stable since the 1970's at approximately 70 percent (ABS, 2008a; Baum and Wulff, 2003; Olsberg and Winters, 2005). Yet, it is only since the 1980s that it has been acknowledged that the cohorts of older people aged 70 and over, the same cohorts who became new home owners in the 50s and 60s, are reluctant to let go of this sense of ownership and attachment to place and would prefer to age-in-place in the community (Baum and Wulff, 2003).

This has coincided with a new concern for the fiscal costs to the state of an ageing population and the acknowledgement that ageing-in-place in the community has significant cost benefits over residential care (Estes *et al.*, 2003; Alston, 2007). New policies in the last two decades that focus on home and community care, outreach nursing services, assisted transition care from hospital to home, respite programs for carers, dementia care in the

community and community socialisation programs have strengthened the doctrine of ageing-in-place (AIHW, 2007b, 2008a). This has significance in rural areas where more dispersed populations (and proportionally older populations) coincide with urban centric aged care policies, more regionalised service delivery and a greater reliance on informal family and community care that may or may not be present (Foskey, 1998; Black *et al.*, 2000; Phillipson and Scharf, 2005). Much of Australia's population growth in rural areas has been concentrated in high amenity and coastal areas, with the regional or localised context often more important than broad national economic and demographic trends (Black *et al.*, 2000).

An Australian and international policy focus on positive ageing strategies has developed simultaneously with greater concerns about the cost of an ageing population and the potential societal burden imposed by this (Estes, 2001; Australian Treasury Department, 2002b, 2004; Healy, 2004). These have been recurrent themes in recent policy debates in line with an emphasis on market principles influencing welfare provision (Productivity Commission, 1999; Jamrozik, 2001; Australian Treasury Department, 2002b, 2004; 2005). There is a focus on family and community-based care as a contemporary solution to the crisis in the welfare state (Ife, 2002; Phillipson and Scharf, 2005; Wiles, 2005a, 2005b). The role of social capital and community capacity building, combined with a greater emphasis on self-reliance and the individual, is reflected in many human service policy areas (Ife, 2002; Productivity Commission, 2005). For older community members the need for security and belonging are heightened by new insecurities in society around the changing nature of family and kinship ties, the availability of services and the changing nature of traditional supports such as welfare, pensions and superannuation (Giddens, 1991; Beck and Beck-Gernsheim, 2002; Delanty, 2003; Hopper, 2003).

This is further compounded in rural areas where market forces driving policy reform have led to the downsizing, regionalisation, centralisation and privatisation of services (Joseph and Cloutier-Fisher, 2005; Tonts, 2005). Rural communities have traditionally been less well serviced than urban regions but the move to centralisation and regionalisation of services in recent years has meant many rural communities, particularly those in non-coastal regions of Australia, have not only lost existing limited services they have also lost their population base (through lack of employment opportunities and more recently drought), their local autonomy and often identity (Cheers, 2001; Joseph and Cloutier-Fisher, 2005). "Thus the different and distinct vulnerabilities associated with ageing and

living in rural communities creates a kind of ‘double jeopardy’ for elderly people living in rural places’ (Joseph and Cloutier-Fisher, 2005, p.137).

Despite the attention to changing, ageing demographics in Australia and the rest of the world, little attention has been given to rural ageing. The National Strategy for an Ageing Australia contains few references to rural and remote areas (National Rural Health Alliance, 2005). Within the conceptual understanding of ageing-in-place (outlined in Chapter One) this begs the question: does the current service and policy response for an ageing Australia have enough flexibility to cater for rural and remote older people? The types of services that older people need in their homes and communities, and their sources of support are place, space and person dependent. If policy concentrates on the service and not the person or the location, this diversity in people, their life courses and their spaces and places of ageing are discounted (Keating, 2008).

Rural service delivery generally draws on a lower population base spread over a dispersed area (Alston, 2007). Rural practitioners and service providers often work in isolation from colleagues and other service providers. National and state programs are developed on the basis of efficient service delivery, usually dependent on high population densities and short distances between services and clients, disadvantaging most rural regions; particularly the low density, dispersed communities of inland Australian regions (Ilbery, 1998; Alston, 2007; Keating, 2008). Alston (2007) states that rurality is often not a significant factor in resource allocation with issues of distance and cost of service provision often overlooked, leaving rural areas with a reduced level of servicing that struggles to cover extensive geographical areas.

‘The low incomes, poor health and restricted mobility of many elderly rural residents makes them particularly vulnerable to reforms in the provision of services and facilities’ (Tonts, 2005, p.60). Provision of services to rural communities raise important challenges to governments, communities and individuals alike as the balance between efficient and effective service delivery in a market-orientated environment and equitable services for older rural people is addressed. Not only is this a challenge for policy makers and service providers, but also for service users; with the ability of older people to travel *to* services and resources often challenged by poor mobility and dispersed informal support systems (Bevan *et al.*, 2006). For many older people localised services are limited and access to services is difficult, through lack of transport, physical discomfort in travelling long

distances, cost, and dispersed family support, and therefore they tend to access services less often (Bevan *et al.*, 2006).

Distance and time are issues of concern for both providers and recipients of rural aged care services, within a wider context of challenges to accessibility and service delivery in rural regions (Sims-Gould and Martin-Matthews, 2008). Privacy and confidentiality are other issues that have been raised; it can be hard to find service providers in rural areas who are not already well known to the service user. This can create resistance to accepting services. Issues of privacy also arise in small communities where most of the residents know who service providers work for and who their clients are, sometimes initiating inappropriate casual inquiries and volunteered information about a client's family, activities or circumstances (Sims-Gould and Martin-Matthews, 2008).

For service providers who live locally the separation of work and personal life becomes difficult in a small community. 'Living in the same social and physical spaces mean that chance meetings between clients, workers and their families are more than likely creating a dynamic where either or both may feel exposed and vulnerable' (Sims-Gould and Martin-Matthews, 2008, p.46). Of course there are also benefits to a close rural community life; the service provider and the client may already have a long established association and the service provider is more likely to have intimate knowledge of the local community, the client's social network and family resources and other available local resources.

Common beliefs about rural hardiness, stoicism and independence come from older people themselves, the general community, and often the service providers who are providing care in rural regions (Keating, 2008). These qualities have been associated with delayed seeking of in-home services and receiving less home based services than urban older people (Casey *et al.*, 2000; Forbes and Janzen, 2004). 'Older clients, family members and home support workers all characterise self-reliance as a key issue accounting for many of the refusals of services or lack of interest in receiving them' (Keating, 2008, p.48). However Sims-Gould and Martin-Matthews (2008) point out that two other factors may come in to play when assessing the take up of home care services in rural areas: firstly it may be purely an economic consideration and secondly, the types and/or location of services available may not meet the needs of the client.

Structural and economic change in small communities in decline means a greater dependence over time on outside resources for the provision of services and community

activities (such as church services, social or sporting groups) (Foskey, 1998). The concepts of centralisation and regionalisation rest on the assumption of mobility and ease of transport. Older people tend to be marginalised by this process for many reasons; including poorer mobility as they age, dispersed informal support ties, and localised support systems (friends and neighbours) who are also ageing (Foskey, 1998; Joseph and Hallman, 1998; Casey *et al.*, 2000; Forbes and Janzen, 2004; Bevan *et al.*, 2006; Scharf and Bartlam, 2006). Older people may be 'locked in' to ageing-in-place, not only because of long-term residence and attachment to place but because changing housing market prices mean they are unable to afford alternative accommodation in a nearby larger town or regional centre, let alone capital city, even if they did want to move (Foskey, 1998).

People will make decisions about their lives based on what is available in their communities, such as health services, transport availability, and opportunities for socialisation (Keating, 2008). Attachment to place and the benefits that come from attachment to place (familiarity, identity, independence and so on) are often balanced with a lack of choice, unmet goals and plans, lack of support and limited social network connections (Keating, 2008). Therefore place may provide both opportunities and constraints in all aspects of daily life and future life choices (Wahl and Lang, 2004).

## **2.9 Conclusion: Space, Place and Rural Ageing**

The term 'environment' can be interpreted and defined in many ways. This study has chosen to look at three types of environment: *location* as a rural setting in South Australia; *accommodation* as living in the community or ageing-in-place and the *social environment*, defined by the activities, groups and people that make up a social network, all within a temporal context (Wahl *et al.*, 2004; Peace *et al.*, 2006). The Socio Physical Over Time model suggests that an older person's behaviour, social relationships and daily routines are embedded within physical and spatial surroundings (Wahl and Lang, 2004). These 'places of ageing' are meaningful to older people for a number of reasons: long-term place attachments, a sense of history and biography, and the familiarity of the space enabling independence and autonomy (Tuan, 1977; Rowles and Watkins, 2003; Wahl and Lang, 2004). Thus, our social lives are spatially constructed, but it is also important to view places as being socially constructed. A sense of place identity and place attachment comes not only from the physical characteristics of those places but also from the events and people that people

associate *with* those places, relationships that might be defined because of those places (Rowles and Watkins, 2003).

Wahl and Lang (2004) suggest that Carstensen's Socio Selectivity Theory (1995) could also be applicable to a sense of environmental limitations. The understanding that our feelings of identity and wellbeing arise from a sense of place links emotional meaning not only to other people and social networks, but also to the familiarity of everyday living and places. 'Going further, it can be asked whether the adaptive processes leading to changes in social motivation are not only depending on perceived time limitations, but also the individual's personal or environmental resources in general' (Wahl and Lang, 2004, p.15).

Many rural older people have long-term experiences of living in the same location, resulting in an intense physical, social and autobiographical attachment to a particular place (Rowles, 1993). However, for younger cohorts, with a greater history of mobility and use of information and communication technologies, a sense of place and a preparedness to relocate to a more suitable environment in later life may be more evident, as seen with 'tree change' and 'sea change' migration patterns (Olsberg and Winters, 2005). It is important not to exaggerate the role of place attachment, emotional affiliation and familiarity as the reasons for ageing-in-place. For many older people ageing-in-place is a more pragmatic residential preference that may be adapted and changed as needed. With ageing-in-place becoming a strengthening policy and service direction, and independence and choice modern day societal values, there is a need to incorporate flexible ideas on ageing-in-place that may involve housing shifts, individualised concepts of support and funding, and diverse kinship and community situations (Rowles, 1993).

Phillipson (2007) suggests that place; place attachment, community change and social networks can be better understood today through a lens of globalisation. Globalisation impacts at the local level (glocalisation) have two main influences on many older people. Firstly, taking the argument that time (through length of residence) strengthens attachment to place and therefore sense of identity, then change within that community (often the result of global change) is going to have an impact on identity. The second point is that globalisation influences older people's connections to the world, often creating more varied and dispersed network ties, and manifesting as new choices about ageing – new migratory patterns of ageing, new social network patterns and therefore people choosing 'place' to suit their perceived identities rather than place shaping their identities (Phillipson, 2007).

These links between globalisation and a sense of rootlessness, of a disengaged, 'placeless' community, and identity shaping place suggests that community may lose its focus in the lives of older people (Beck and Beck-Gernsheim, 2002; Bauman, 2003; Phillipson, 2007). While this may be the case for future generations of older people it is perhaps best reflected for today's older people in their sense of kinship structure and ties, which do seem less localised. It is the mobility and diversity associated with *where other people are* that seems to impact on the lives of the current generation of older people, rather than their own sense of where they are.

Ageing represents complex combinations of individual, societal, social and environmental change over time (Scheidt and Norris-Baker, 2003). Some changes are inevitable, some are exogenous and cannot be controlled or predicted and other changes are made by choice. Where possible individuals should be able to move through the various stages of ageing in the location of their choosing (National Rural Health Alliance, 2005). The challenges involved in ageing-in-place in a rural environment may be problematic, or ideal, depending on the older person's 'place in the lifecourse, on the community settings in which they live, and on the ways they construct their relationships to people and place' (Keating, 2008, p.129).

By taking a localised perspective of rural ageing it is possible to explore the way in which social support and a sense of community are produced through interactions in places with specific histories and identities; hence the importance of place. It is this synergistic relationship between a sense of place identity, the influences of rural living and rural change, and social networks that this study has focused on. There is a need to look at place attachment as a process that is influenced by the individual, the physical world, the social world and time concurrently (Wahl and Lang, 2004; Smailes, 2006). This highlights the extent lifelong experiences of place (and changing places) have on how older people relate to where they live, and who they connect with, in later life (Peace *et al.*, 2006). One element of this sense of change is the changing demographic structure of many rural places. These population and migration trends are explored further in Chapter Three, setting the scene for a micro-level examination of ageing-in-place and changing communities through the survey data in the following chapters.

## CHAPTER 3: AGEING POPULATIONS

### 3.1 Introduction

This chapter will develop a demographic analysis of ageing populations at both the macro-level of the nation and state and the meso-level of the region and community in order to ‘set the scene’ for a more in depth examination at the micro level of the family and individual in later chapters. Firstly, global trends in population ageing are explored; secondly, an Australian perspective of ageing is provided; and finally, an in-depth examination of state and regional population trends is provided.

Population change is the result of three key demographic processes: mortality, fertility and migration. Generally, individuals aged 65 years and over are considered to represent old age or older people, while those under 15 years of age are classified as young (Harper, 2006; ABS, 2008c). There are some exceptions to these categories; for example, the Australian Government often refers to the number of Indigenous Australians who are 50 years and over as a proxy for old age (ABS, 2008j). The ageing of the population is in many ways a predictable phenomenon, simply because those who are going to make up the future older population have already been born. Thus, it is possible to calculate the expected population of older people in 2025 by examining the numbers of people born in the years preceding 1960, taking into account the expected mortality rates for this cohort. This provides good estimates on absolute numbers of older people but does not mean that national or global *proportions* of older people are as predictable. As life expectancies<sup>11</sup> have increased and fertility rates decreased the proportion of older people to other population categories is growing; with some areas growing more rapidly than others.

Globally, fertility and mortality rates will determine ageing rates. However when examining one region more closely it is migration – in-migration and out-migration – that can impact on a population more quickly and less predictably (Hugo and Smailes, 2003; Temple, 2006). Aggregated global and national statistics on population ageing tend to conceal the

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<sup>11</sup>Life expectancy is the average number of additional years a person of a given age and sex might expect to live if the age-specific death rates of the given period were to continue throughout his or her remaining lifetime (ABS 2008a).

complexities of demographic ageing and the impacts of migration and ageing-in-place at the regional and local level (Hugo, Rudd and Downie, 1984; Temple, 2006). Examining the spatial distributions of population ageing-in-place, and residential mobility by age and gender, at regional and sub-regional levels enables better planning of services, communities, infrastructure and support systems. This is particularly important for the older cohorts of the population who have lower levels of personal and physical mobility and who are less likely to relocate than younger cohorts (Hugo 2009, p.25).

Ageing-in-place, as highlighted in Chapter Two, is a well documented phenomenon for many older people and in Australia is strongly linked to home ownership (Olsberg, 2005, Beer and Faulkner 2009, Andrews 2005). This sense of residential inertia means that this group of the population tends to remain stable. However, older people ageing-in-place are still influenced by migration through the higher mobility of younger cohorts within the population. This is particularly the case in rural settings where the out-migration of younger people to urban settings for education and work opportunities is commonplace. Where people live is an important factor shaping their wellbeing and other aspects of their economic and social lives. Issues related to localised population ageing are often more significant than ageing issues at the national level (Hugo, 2005, 2007b).

Australian Bureau of Statistics 2006 Census of Population and Housing and intercensal data are used in this chapter to examine in detail the pattern of growth of the older population of both South Australia, and more specifically, the Murray Mallee region, in order to gain an understanding of the spatial dynamics of change in the older population. The focus is mainly on the four Statistical Local areas (SLAs) that form the study region in order to investigate localised population differences.

### **3.2 An Ageing Society – Worldwide**

More people are living into old age than at any other time in history, and this is true for most of the world. In 1950, eight percent of the global population was aged 65 years and over. By the year 2000 this had increased to 10 percent and is expected to rise to 22 percent by the year 2050, when for the first time in human history older people will outnumber young people (Kinsella and Velkoff, 2001; Harper, 2006). In fact, this is already the case in some countries, such as Italy, Greece, Japan and Germany (Kinsella and Velkoff, 2001). It is expected that within the next 40 years there will be over two billion older people (65+ years) in the world (Harper, 2000).

Fertility decline and urbanisation have dominated global demographic trends in the second half of the twentieth century, along with a continued steady increase in life expectancy over the Twentieth Century (Kinsella and Velkoff, 2001). Europe has the highest proportion of older people, and will remain the 'oldest' region globally well into the 21<sup>st</sup> Century while Africa is still the 'youngest' region and, due to continued high fertility rates, will age more slowly in the coming decades, as seen in Table 3:1 (United Nations, 2008). Overall it is the countries in the developing world that are ageing most rapidly (Harper, 2006; United Nations, 2008).

**Table 3:1 Regional Proportions of Older People (60 Years+): 2006 to 2050**

NOTE:  
This table is included on page 53  
of the print copy of the thesis held in  
the University of Adelaide Library.

Source: (United Nations, 2008)

It must be remembered that regional proportions, such as those represented in Table 3:1 do not highlight two important factors, the first being 'within region' variations. For example, Bangladesh and Thailand are geographically close and a part of the same regional statistics for Asia, yet their expected rates of population ageing are very different. Secondly, regional rates do not necessarily reflect the impact of an ageing population in terms of absolute numbers. For example Table 3:1 shows an estimated five percent point gain in older people in Sub-Saharan Africa from 2006 to 2050, yet in terms of absolute numbers of older people this represents an almost doubling of the 65 years and over cohort, from 48 million to almost 93 million older people (United Nations, 2008).

A third factor not apparent in global and national population figures is the rural/urban differences in ageing populations. In 1900 approximately 14 percent of the world's population lived in urban settings, and this percentage was still below 20 percent by the 1950's (Kinsella and Velkoff, 2001). However, since this time there has been a rapid rise in the urbanisation of the world's population and by the year 2000 46 percent of the

population globally lived in urban settings; with approximately 75 percent of people in developed countries living in cities compared to about 33 percent for developing countries. Urbanisation is often driven by youthful migration from rural regions to cities thereby influencing the population distributions at both the source and destination locations. 'Despite the increasingly urban nature of today's elderly population, rural areas remain disproportionately elderly in a majority of countries' (Kinsella and Velkoff, 2001, p.50).

### 3.3 An Ageing Australia

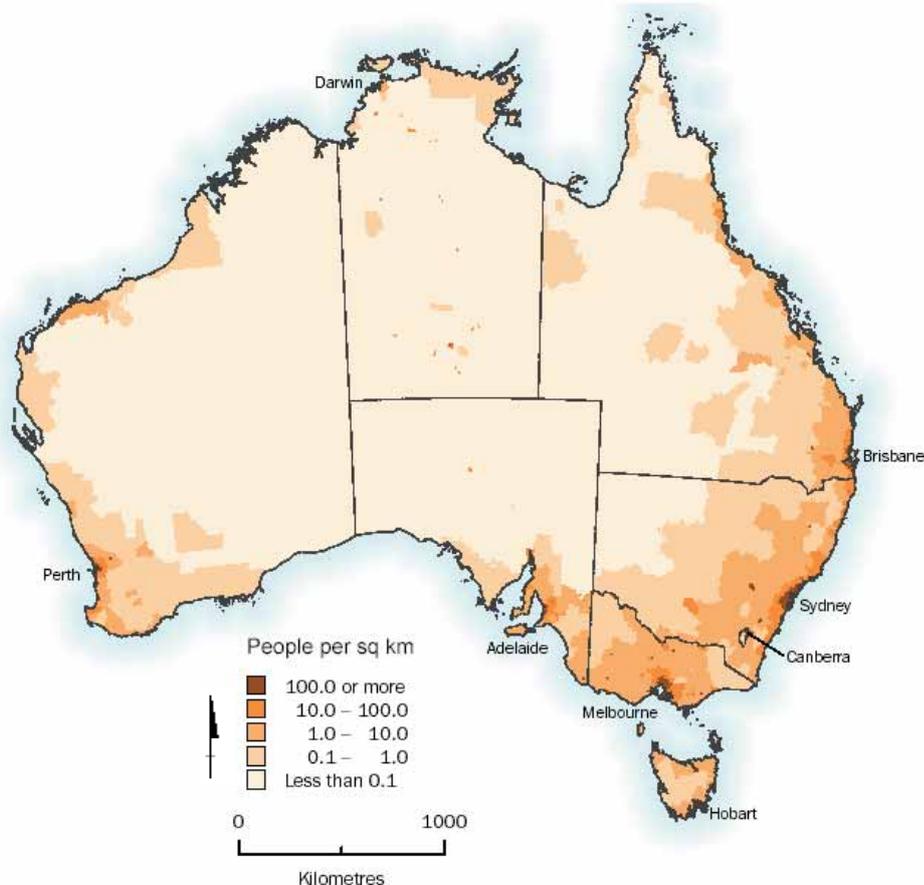
Australia's estimated resident population passed the 21 million mark in 2006-07, with an average annual growth rate of 1.5 percent over the last 25 years, see Table 3:2 (ABS, 2008h). The Eastern and South-Eastern states have the largest proportions of Australia's population, with Queensland experiencing the highest growth rate in the 1981 – 2006 period. Within each State and Territory, the areas with the largest or fastest population growth tended to be in outer suburbs, inner areas of capital cities and some coastal areas (ABS, 2009a).

**Table 3:2 Population Growth and Distribution, Australian States and Territories**

	2006 '000s	2006 %	Change 1981-2006 %
New South Wales	6 816.1	32.9	1.1
Victoria	5 126.5	24.8	1.1
Queensland	4 090.9	19.8	2.3
South Australia	1 567.9	7.6	0.7
Western Australia	2 059.4	9.9	1.9
Tasmania	490.0	2.4	0.5
Northern Territory	210.6	1.0	2.2
Australian Capital Territory	334.1	1.6	1.5
<b>Australia</b>	<b>20 697.9</b>	<b>1.6</b>	<b>1.5</b>

Source: (ABS, 2009a)

While Australia has remained sparsely settled with much of the country having a low population density, reflecting the global trend, as shown in Figure 3:1, it has become increasingly urbanised over time (United Nations, 2008; ABS, 2009a). As of 2007, around two-thirds (64 percent) of Australia's population resided in a major urban Statistical Division (SD), accounting for 66 percent of Australia's annual growth (ABS, 2008h).

**Figure 3:1 Population Density by Statistical Local Area 2006**

Source: (ABS, 2009a p251)

Excluding capital city SDs, the most prominent growth in 2006-07 continued to be along the coast of Australia. In particular, several Queensland Local Government Areas (LGAs) located along the coast and outside of capital city SDs had large growth, with the Gold Coast experiencing the largest growth among all LGAs in Australia (ABS, 2008h).

### ***3.3.1 Residential Mobility***

Not only is Australia an urbanised nation, it is also a mobile nation. In the five years preceding the 2006 Australian Census, 43 percent of the population aged 5 years and over had changed place of residence. Of this group, 86 percent moved within the same state or territory, and 62 percent were aged 25 to 29 years. People aged 75 to 79 years were the least likely to have changed address in this period (ABS 2009a). As can be seen in Table 3:3, while 49.8 percent of Australians aged 15 to 64 years remained at the same address since the 2001 Census, 71.4 percent of the 65 years and over population had remained at the same address.

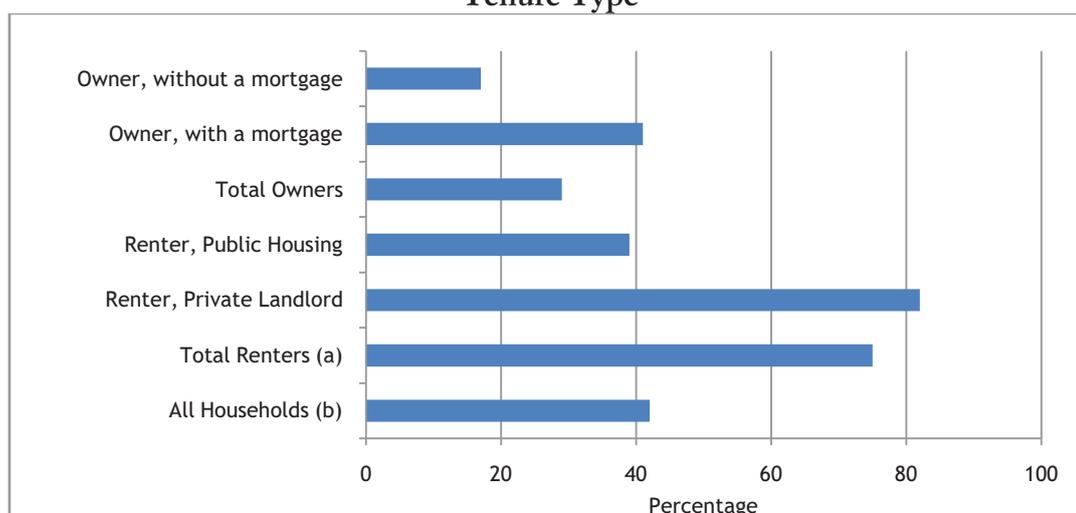
**Table 3:3 Place of Usual Residence 5 Years Ago by Age and Sex, All Australian States and Territories 2006 Census\***

		% of All 15-64 Years	% of All 65+ Years
Same Address as 5 Years Ago	Males	49.0	72.0
	Females	49.9	70.7
	Total	49.8	71.4
Same SLA, Different Address as 5 Years Ago	Males	11.0	5.8
	Females	11.6	6.6
	Total	11.3	6.3
Different Address, Different SLA to 5 Years Ago	Males	26.1	12.7
	Females	27.1	12.6
	Total	26.6	12.6

\*Figures may not add up to 100% as the “Not Stated” category has been excluded from the table

Source: (ABS, 2008d)

Length of residence and propensity to move are strongly related to age and tenure. Older people and home owners are less likely to move, with higher rates of home ownership amongst older people compounding this likelihood (Howe, 2003; Olsberg and Winters, 2005; Beer and Faulkner, 2009). Figure 3:2 highlights the proportion of respondents in the Australian Bureau of Statistics 2007-08 survey of income and housing who had moved in the last five years by tenure type. Note the much lower percentage of total home owners compared to total renters, with ‘owners without a mortgage’ being the least likely to move.

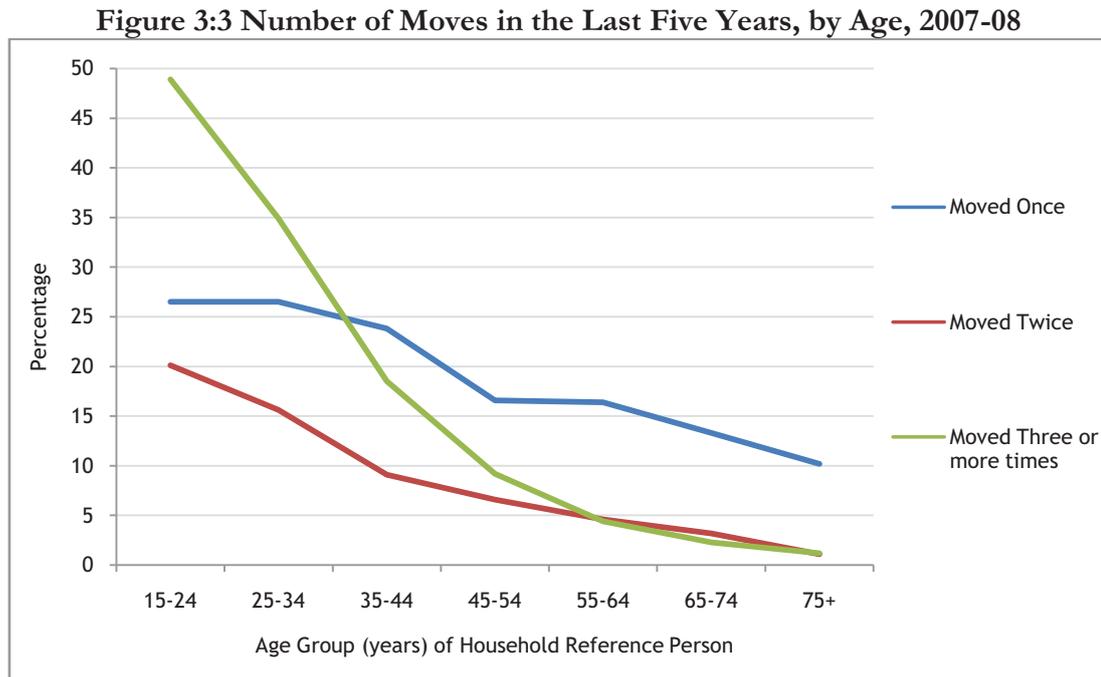
**Figure 3:2 Proportion of Households who had Moved in the Last 5 Years, by Tenure Type**

(a) Includes other landlord types, which accounts for about 4% of all renters

(b) Includes other tenure types, which accounts for about 2% of all households

Source: (ABS, 2009b)

Figure 3:3 shows the decreased likelihood of moving by age, particularly multiple moves, from the same survey.



Source: (ABS, 2009b)

Choices about moving or staying can also be constrained for current home owners by property prices and location. Home owners in rural regions may have limited opportunities for utilising housing assets for relocation, with the value of their current assets often small compared to the costs of relocating to newer accommodation (Howe, 2003). Older people can find it difficult to relocate from rural areas (where housing prices can be considerably lower) to larger rural and regional towns or urban centres that are able to offer the services they may require. Additionally, the availability of suitable accommodation for older people wanting to age in their own community may be limited in many rural regions (Hugo *et al.*, 2009).

For all older people, and for older people in rural areas in particular, home ownership and age may be drivers for ageing-in-place but there are other drivers that may influence decisions to move. Many older people make decisions to move as their age increases – these decisions may be based on the increased likelihood of living alone due to widowhood, increased poor health, reduced mobility, cessation of driving, a desire to live in smaller, more manageable housing, to be closer to the informal support provided by other family members, or to be closer to formal supports such as medical services, allied health services and formal aged care services (Howe, 2003; Beer and Faulkner, 2009; Hugo *et al.*, 2009). Marital status and living alone have an impact on space needs, attachment to

the home, affordability and the need for assistance with home maintenance and personal care (Beer and Faulkner, 2009). '[I]t can be estimated that around half of the lone person household at older ages result from widowhood, and that widowhood is also the major precipitator of moves from separate houses to higher density, more compact housing' (Howe 2003 p.15).

Increased poor health can have 'flow on effects' into reduced mobility, cessation of driving, and increased need for both formal and informal services and alternative housing choices. Beer and Faulkner (2009) found in their report on Australian housing careers that only nine percent of Australians aged 60 to 64 years had profound or severe limitations to core activities compared to 58 percent of those aged 85 years and over. Within these 'younger old' age groups many people were still living in couple or family households where assistance can be provided by other family members. However, in those households of people aged 75 years and over the likelihood of living alone meant that most assistance was sourced from outside the home. Therefore the choice of housing location in relation to access of both formal and informal care and suitable housing options becomes a major factor in decisions around moving.

### ***3.3.2 Rural Demographic Change***

The increased urbanisation of the Australian population, combined with a relatively stable, sedentary older population, has particular significance for older people in rural regions. At the time of the 1911 Australian Census the main focus of Australia's economy was primary production, and 42 percent of the population were living in rural areas. By the 2006 Census only 12 percent of Australia's population lived in rural regions, with 77 percent living in towns and regional cities with populations over 1,000 people within 50 kilometres of the Australian coastline. 'This pattern reflects the attraction of coastal environments to contemporary Australians, but perhaps more importantly it highlights the fact that the large coastal towns and cities are now the centres of employment and provide many other desirable opportunities, and goods and services' (ABS, 2009a, p.16/17). Table 3:4 highlights the concentrated growth of Australia's population in capital cities and inner regional areas in the 2002-07 period, with a much slower growth rate in outer regional and remote regions (ABS, 2008h).

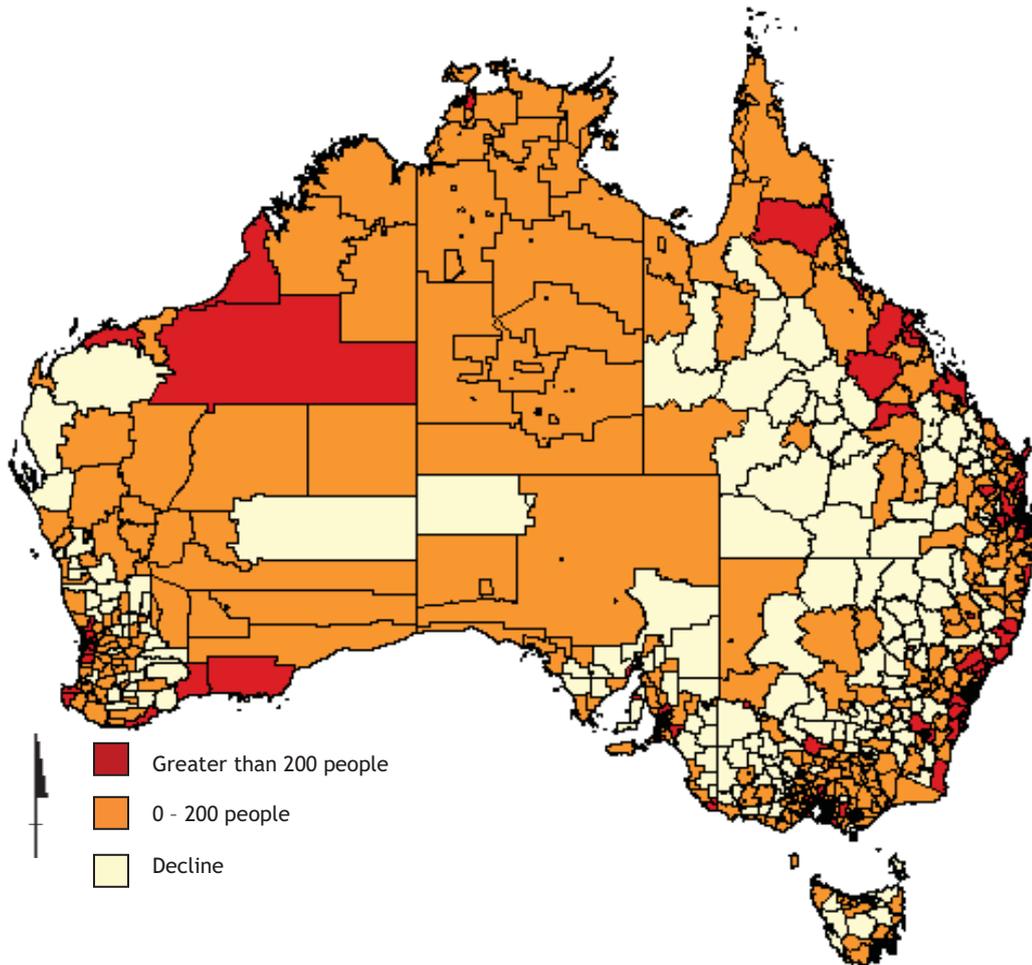
**Table 3:4 Estimated Resident Population by Remoteness Structure, 2002/2007**

	ERP at 30 <sup>th</sup> June		Change
	2002	2007	2002-2007 %
<b>Australia</b>			
<b>Major Cities</b>	13 417 985	14 398 791	<b>1.4</b>
<b>Inner Regional</b>	3 851 065	4 144 378	<b>1.5</b>
<b>Outer Regional</b>	1 898 815	1 986 607	<b>0.9</b>
<b>Remote</b>	315 131	316 464	<b>0.1</b>
<b>Very Remote</b>	169 566	170 982	<b>0.2</b>
<b>Total</b>	19 652 562	21 017 222	<b>1.4</b>
<b>South Australia</b>			
<b>Major Cities</b>	1 107 256	1 151 905	<b>0.8</b>
<b>Inner Regional</b>	175 605	191 660	<b>1.8</b>
<b>Outer Regional</b>	178 801	181 810	<b>0.3</b>
<b>Remote</b>	44 174	45 478	<b>0.6</b>
<b>Very Remote</b>	15 283	13 660	<b>-2.2</b>
<b>Total</b>	1 521 119	1 584 513	<b>0.8</b>

Source: (ABS, 2008h)

Figure 3:4 clearly shows that rural regions in Australia experienced the highest declines in population in the 2006-07 period, with the exception of areas associated with the mining industry such as in northern Western Australia. Many rural areas experienced population declines during 2006-07, with large population declines in the drought-affected north-west of New South Wales (ABS, 2008h). The fastest declines in LGA populations in 2006-07 continued to occur outside capital city SDs (this data excludes LGAs with populations of less than 2,000 people). The LGA of Bourke, in rural New South Wales, recorded the fastest decline during 2006-07, down 3.9 percent (ABS, 2008h).

Figure 3:4 Population Change by Statistical Local Area, 2006-07



Source: (ABS, 2008h)

When population density gets too low it can have adverse impacts on rural areas (Smailes *et al.*, 2002). Population density can decrease due to several reasons: out migration of younger people to urban locations for work and education, farm amalgamations (a common feature of the recent Australian rural landscape), and lower numbers of births (although this is a global phenomenon it is exacerbated in rural regions by the out migration of young, child bearing age, adults). In 2006, young people aged 15 to 24 years made up 26 percent of people leaving inland rural regions, well above the average of 19 percent of younger people who moved Australia wide (ABS, 2009a). Low population densities are influential on rural infrastructure and service provision; as the density drops the local population levels may fall below demand thresholds for some services (Smailes *et al.*, 2002).

### 3.3.3 Australia's Ageing Population

Australia has clearly become an urbanised, mobile population but it is also an ageing population. In 1901 children aged 15 years and under represented 35 percent of the total population, and older people aged 65 years and over only 4 percent. In 2006 the proportion of children had declined to 20 percent and older people now represented 13 percent of the total population (ABS, 2009a). The number of people aged 65 years and over is projected to outnumber children aged 0-14 years in 2018 and by 2050, 27 percent of the population is projected to be aged 65 years and over, in comparison to 14 percent of the population being aged 0-14 years. Of particular note is the rise in the proportion of the population aged 85 years and over (ABS, 2008g), as seen in Table 3:5. At 30 June 2007, Australia's median age was 36.8 years; Tasmania had the oldest population of all the states and territories with a median age of 39.1 years and South Australia had a median age of 38.9 years (ABS, 2008g).

**Table 3:5 Australian Population Summary Indicators 1901 – 2101**

	Units	1901	1947	1971	2002	2021*	2051*	2101*
<b>Total Population</b>	'000	3 773.8	7 579.4	13 067.3	19 662.8	23 368.4	26 421.5	26 355.7
<b>Proportion of Pop.</b>								
<b>0-14 years</b>	%	35.1	25.1	28.7	20.3	16.1	14.0	13.8
<b>15-64 years</b>	%	60.8	66.8	63.0	67.1	64.9	58.9	57.2
<b>65-84 years</b>	%	3.9	7.7	7.8	11.2	16.5	21.1	22.0
<b>85 years +</b>	%	0.1	0.4	0.5	1.4	2.5	6.0	6.9
<b>Males per 100 Females</b>	No.	110.1	100.4	101.1	98.4	98.7	98.7	99.4
<b>Median Age</b>	Years	22.5	30.7	27.5	35.9	41.2	46.8	47.5
<b>Proportion living in Capital Cities</b>	%	36.8	51.2	63.2	63.9	64.5	66.6	n.a.

\* From ABS Series B Population Projections

Source: (ABS, 2008g)

Australia's States and Territories have always experienced diversity in population size, primarily the result of differing levels of interstate and international migration. For example, international immigrants, who are generally free to settle where they wish in Australia, are disproportionately represented in Western Australia, New South Wales and Victoria, although they were also over-represented in South Australia in the post war period (Harding, 2005). Additionally, Australia's States and Territories are experiencing

(and it is estimated will continue to experience) substantial temporal differences in the ageing of their populations.

These projected temporal trends highlight not only which regions will age most rapidly, but also the estimated widening gap between regions in terms of projected aged populations. For example: between 2000 and 2051, the gap between youngest and oldest regions will open from 11 percent to around 24 percent, Figure 3:5. ‘Temporal disparities of this magnitude have a number of implications, among them, the indication that Federal-level, one-size-fits-all policies will become increasingly anachronistic’ (Harding, 2005, p.6).

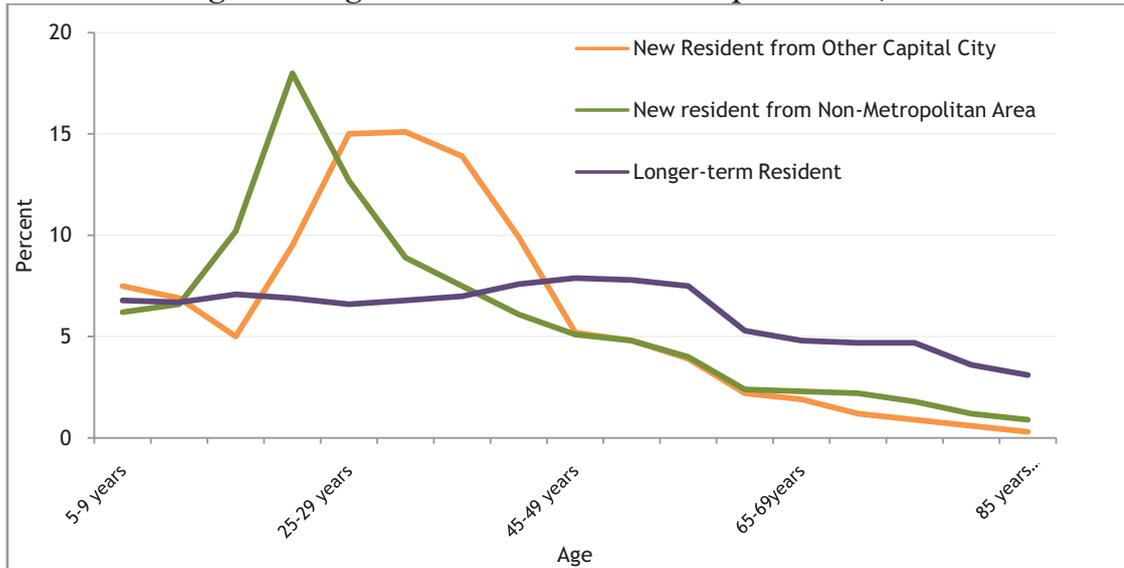
**Figure 3:5 Projected Percentage of People Aged 65+ Years, by State and Territory, 2000 – 2051**

NOTE:  
This figure is included on page 62  
of the print copy of the thesis held in  
the University of Adelaide Library.

Source: (Harding, 2005)

The age profile of Australia varies not only by state and territory but also by regions within states, and these variations are more likely to be the result of intrastate migration trends (Temple, 2006). Figure 3:6, Figure 3:7 and Figure 3:8 highlight the age profiles of different types of regions of Australia, separating population into new residents from capital cities, new residents from non-metropolitan areas and longer term residents (ABS, 2009a).

**Figure 3:6 Age Profile of Residents of Capital Cities, 2006**



Source: (ABS, 2009a)

When comparing the age profile of capital cities, Figure 3:6, to those of both rural coastal areas, Figure 3:7, and rural inland areas Figure 3:8, the trend for those in the 15 to 35 year old age cohorts to move to urban locations becomes apparent; with corresponding drops in proportions of long term rural residents in the 15 to 30 year cohorts.

**Figure 3:7 Age Profile of Residents of Country Coastal Areas, 2006**



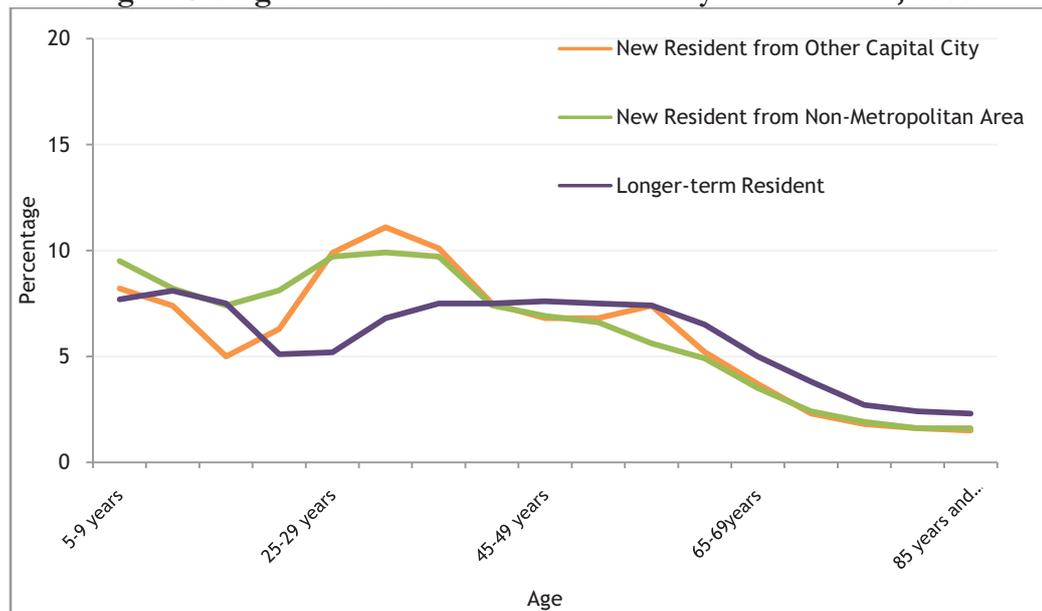
Source: (ABS, 2009a)

When comparing the age profile of capital cities, Figure 3:6, to those of both rural coastal areas, Figure 3:7, and rural inland areas Figure 3:8, the trend for those in the 15 to 35 year

old age cohorts to move to urban locations becomes apparent; with corresponding drops in proportions of long term rural residents in the 15 to 30 year cohorts.

Figure 3:7 shows two peaks in migration to rural coastal areas – in the young family cohort of 25 to 35 years old and again in the retiree cohort of 55 to 65 years, mainly from capital city locations. It is also clear that the age profile of long term residents is much higher for rural inland residents, Figure 3:8.

**Figure 3:8 Age Profile of Residents of Country Inland Areas, 2006**



Source: (ABS, 2009a)

It is evident from the representations of age profiles for both rural inland and rural coastal regions that population profiles can vary not only by rural/urban differences but also within rural regions. This becomes clearer when examining regional differences within one state, such as South Australia.

### 3.4 South Australia

South Australia has approximately 7.5 percent of Australia's population, with higher proportions of the 65 years and over population (8.7 percent), and the 80 years and over population (9.4 percent) (ABS, 2008i). As expressed in the introduction to this chapter, the age profile of a nation or state is related to its history; those people who currently fall into the older age demographic are, to a large extent, already here. In South Australia the population grew faster than the rest of Australia during the period from the 1950s until the 1970's, due to a high fertility rate and a high overseas in-migration rate (Hugo *et al.*, 2009).

This resulted in a comparatively large baby boom cohort in the state, which was further exacerbated by a slower rate of fertility and in-migration in the 'baby bust' years after this and a reduction in South Australia's proportion of the overall national population, as shown in Figure 3:9.

**Figure 3:9 Rate of Population Growth for Australia and South Australia, 1947 to 2006**

NOTE:  
This figure is included on page 65  
of the print copy of the thesis held in  
the University of Adelaide Library.

Note: Data are for Calendar Years  
Source: (Hugo *et al.*, 2009)

Around the same time as fertility rates were falling, life expectancy was increasing, lengthening the time an adult could expect to live in old age (Harding, 2005). As this large baby boom cohort now approaches retirement age, with an expectation of living for another 20 years, an exacerbated ageing of South Australia's population has emerged as the state's demographic future over the coming decades.

South Australia continues to have a slower rate of population growth compared to the rest of mainland Australia. For the intercensal period of 2001-06 the rate of population growth for South Australia was 0.7 percent, compared to 1.3 percent for Australia wide (ABS, 2009a). The lower rate of population growth is partly attributed to the loss through net interstate migration, as shown in Figure 3:10.

Migration, as an influencing factor on the size and proportion of state and regional ageing populations, is often underestimated (Hugo *et al.*, 2009). Yet net migration has been an important element in South Australia's population growth. Migration comprises two components – overseas migration trends and net gains or losses with other Australian states and territories. Figure 3:10 shows that while overseas migration had the greatest

impact on South Australia's population in the post-war period, this has markedly decreased since the 1970s. Net migration with other states, on the other hand, has been largely negative since the 1960s. Migration tends to be selective of particular age cohorts, mainly concentrated in young adults aged 15-29 years, especially young women; exacerbating its effect on state and regional ageing (Bell, 1997; ABS, 2008i).

**Figure 3:10 South Australia: Components of Population Change, 1947-54 to 2001-2006**

NOTE:  
This figure is included on page 66  
of the print copy of the thesis held in  
the University of Adelaide Library.

Source: (Hugo *et al.*, 2009)

The incremental increase in South Australia's older population, see Table 3:6, highlights the growing proportion of the older population for the 1976 to 2006 period. Of particular note is the increase in the numbers of 'old old' aged 80 years and over, where the proportion has increased by 150% in 30 years.

**Table 3:6 SA Total Populations, 1976 – 2006**

Year	Total Population	65+ Population	65+ as % of Total	80+ Population	80+ as % of Total
1976	1,200,114	117,008	9.7	21,791	1.8
1986	1,383,550	161,384	11.7	30,166	2.2
1996	1,474,253	206,637	14.0	46,577	3.1
2001	1,511,728	221,000	14.6	56,784	3.7
2006	1,567,888	236,561	15.1	68,794	4.4

Source: (ABS, 2008e)

Like most minority groups in any population, older people in South Australia are not distributed spatially in the same way as the total population, they tend to be concentrated in some areas more than others and these patterns of distribution are in a constant state of change as various cohorts relocate (Hugo *et al.*, 2009).

South Australia has high proportions of older people in non-metropolitan regions. The changing distribution of the older population outside of the major metropolitan region is easily measurable over time in South Australia, partly because there has been no reclassification of the status of any 'other urban' areas as major urban (Hugo *et al.*, 2009). Currently more than 30 percent of South Australians aged 65 years and over live outside of the Adelaide SD (ABS, 2008i).

Table 3:7 shows the shift that has occurred in South Australia between 1981 and 2006, with the proportion of all persons aged 65+ years living in the Adelaide SD decreasing from 72.7 to 69 percent despite the actual population numbers increasing by almost 60,000. On the other hand the numbers of older people living in 'other-urban' areas (towns and cities of 1,000 to 99,999 persons) more than doubled in this same period, increasing the proportion from 16.4 to 20.1 percent.

**Table 3:7 South Australia: Population Growth, 65+ years Population 1981-2006**

NOTE:  
This table is included on page 67  
of the print copy of the thesis held in  
the University of Adelaide Library.

Source: (Hugo *et al.*, 2009)

Many South Australian coastal and rural regions show higher proportions of older people. The Statistical Local Areas (SLAs) with the highest proportions of their populations aged 65 years and over were mainly coastal and rural areas such as Victor Harbor (31.9 percent),

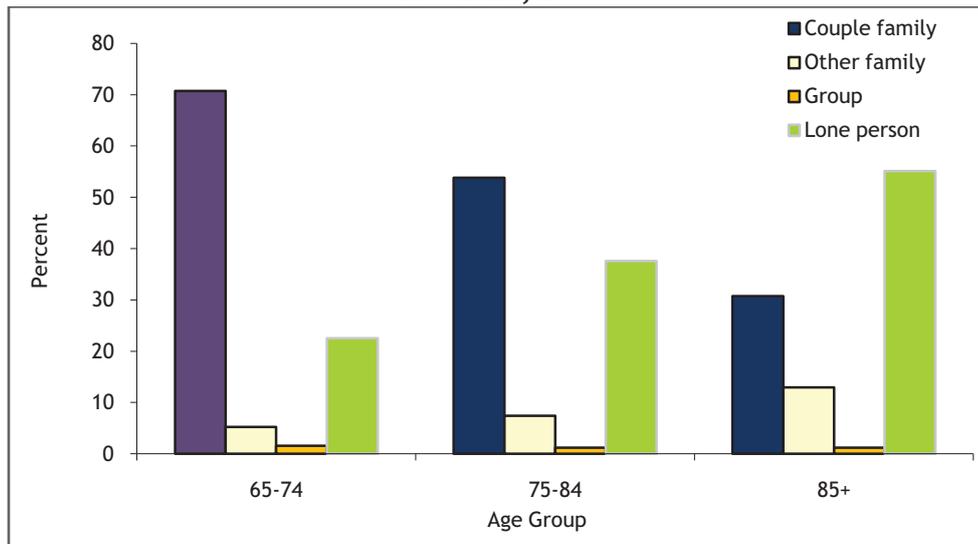
Yorke Peninsula (24.6 percent) and the Copper Coast (22.7 percent). Within the Adelaide SD, Holdfast Bay (21.8 percent) had the highest proportion of people aged 65 years and over. The smallest proportions of older people were reported in the mining region of Roxby Downs (0.5 percent) and the remote, chiefly Aboriginal, region of Anangu Pitjantjatjara (5.2 percent) (ABS, 2008i).

The proportions of people aged 65 years and over in localised regions are susceptible to change through two processes: migration (both interstate and intrastate migration), and through an 'ageing in place' process, as described in Chapter One. Where higher population numbers of a particular cohort exist, and age together, rapid population ageing can occur; this is the dominant process involved in ageing populations in Australia (Hugo *et al* 1984; Hugo *et al.*, 2009). Migration is more likely to impact on non-metropolitan ageing in two ways: coastal and high amenity retirement locations will be more heavily influenced by in-migration of older cohorts; while wheat and sheep belt inland farming regions will be more influenced by the out-migration of younger people and families (Hugo *et al.*, 2009).

The current Australian policy focus on ageing-in-place and home as the site for provision of aged care services has implications for informal support from carers, usually spouses and other family members. Therefore, knowing where older people live is important, but knowing who older people live with is especially valuable. For older people living alone in the community opportunities for this type of informal support may be limited, particularly for those who never married (and by inference for this cohort, therefore never had children). For this group of older people ageing-in-place has additional challenges.

It is clear that as people age the incidence of widowhood increases. While older people are more likely to be married in the 65 to 74 years age cohort, in the 85+ years cohort the reverse is true and the majority of older people are likely to be widowed and female. Nearly a third of all South Australians aged 65 years and over live alone (ABS, 2008i). Figure 3:11 shows the higher incidence of living alone as people age, as well as the decrease in likelihood of being married. Note also the slight increased likelihood of living with other family members as people age.

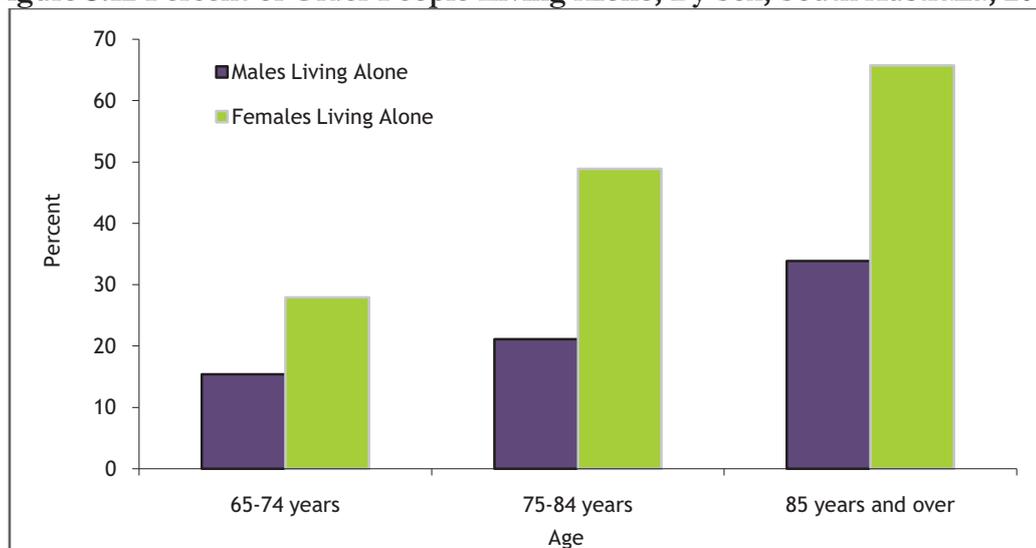
**Figure 3:11 Living Arrangements of Older Persons in Private Dwellings, South Australia, 2006**



Source: ABS Census of Population and Housing, 2006

Women show higher rates of widowhood, and are therefore more likely to live alone than men for two reasons: men are likely to marry younger women and they also have lower life expectancies than women (Olsberg and Winters, 2005; Hugo *et al.*, 2009). Figure 3:12 shows the percentages of older people living alone by gender. While men are more likely to have a spouse for companionship and to care for them in later life, women are much less likely to have this same access to informal support in later life and therefore are more likely to seek assistance from formal services to age-in-place or move to supported accommodation (Hugo *et al.*, 2009).

**Figure 3:12 Percent of Older People Living Alone, By Sex, South Australia, 2006**



Source: ABS Census of Population and Housing, 2006

Positive ageing-in-place is dependent on a wide range of factors, including the environment in which older people live (Rowles, 1993; Rowles and Watkins, 2003; Wahl *et al.*, 2004; Wahl *et al.*, 2006). Geographical context has considerable impact on the opportunities that older people have to age successfully in their homes and local communities. It is important to understand the complexities of population change at the broader national and state levels, but it is equally important to understand this at the finer detail of the local level.

### **3.5 The Murray Mallee Region**

An outline of the Murray Lands Statistical Division and the study region is provided in Chapter One. The following population overview is provided, in part, for the Murray Lands SD as a whole with more particular information provided about the four selected SLAs for this study: the Karoonda-East Murray, the Mid Murray, the Southern Mallee and The Coorong.

#### ***3.5.1 The Murray Lands***

The Murray Lands SD covers approximately 48,200 square kilometres of the South Australian region between the Mount Lofty Ranges and the state border with Victoria and New South Wales. The region is dominated by the River Murray and the Lower Lakes, with most of its population located along the river. The main regional centre, the rural city of Murray Bridge, is located in the lower south western area of the SD and has a population of over 14,000 people (ABS, 2008b). Other major centres include Renmark, Berri and Loxton in the north eastern region. Almost half the region, 49.4 percent, is classified as ‘other urban’ (towns and cities of 1,000 to 99,999 persons); while a further 41.7 percent is classified as rural balance. The remainder is classified as remote.

The Murray Lands SD has a total population of approximately 69,480 people, giving it a population density of 1.4 people per square kilometre compared to the Australian average of 2.8 people per square kilometre (ABS, 2008h). As with many rural areas in Australia, most of the population is Australian born; with only 13.7 percent born overseas. The main countries of birth outside of Australia are the United Kingdom, Italy, Greece and Germany, as shown in Table 3:8.

In contrast the region has a higher Indigenous population (3.2 percent) than South Australia as a whole (1.8 percent). Approximately 15.9 percent of the Murray Lands SD

population is aged 65 years and over, with 1.8 percent being 85 years and over (ABS, 2008b).

**Table 3:8 Country of Birth, Murray Lands Statistical Division 2006**

Country of Birth	Percentage of the Murray Lands SD Population
Australia	76.0
United Kingdom	6.7
Ireland	0.1
Italy	1.5
Greece	1.7
Germany	1.3
Other	4.9
Not Stated	7.8

Source: (ABS, 2008b)

Table 3:9 highlights some of the key population figures for the four selected SLAs and compares them to South Australian figures. Note the negative growth rate in three of the SLAs during this ten year period, with only a very small growth rate in the Mid Murray SLA. Despite the negative population growth all of the SLAs experienced marked increases in the proportions of their populations aged 65 years and over; with median ages increasing by an average of 5.5 years in this period. Karoonda-East Murray has shown the most marked increase in median age, seven years, and has also shown the largest decline in population growth during the same period.

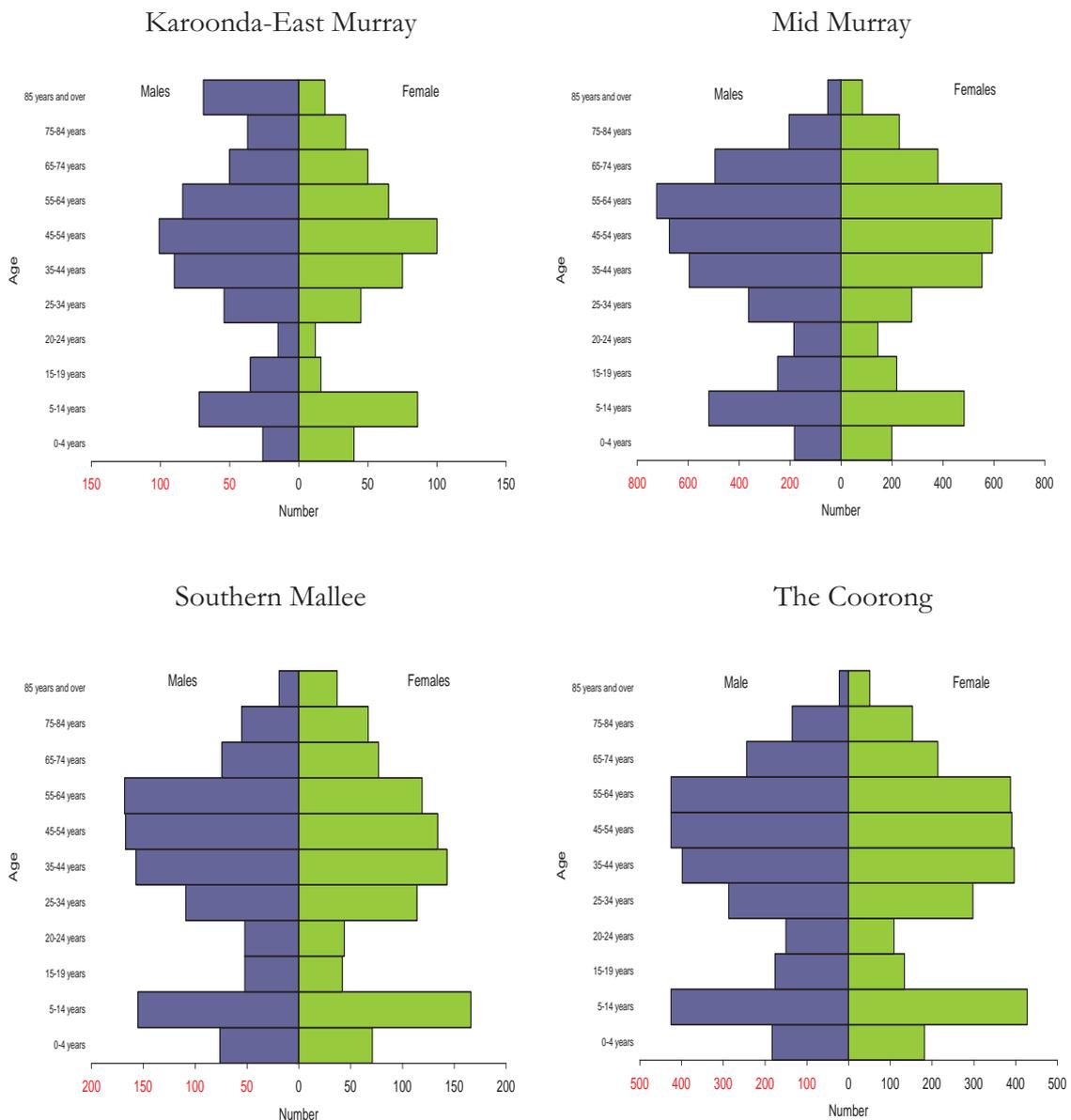
**Table 3:9 Population Figures by SLA, 1996 and 2006**

	Karoonda-East Murray	Mid Murray	Southern Mallee	The Coorong	S.A.
<b>Total Population 1996</b>	1,323	7,970	2,304	5,951	1,474,253
<b>Total Population 2006</b>	1,112	8,045	2,098	5,616	1,567,888
<b>Growth Rate % 1996 - 2006</b>	- 1.59	0.09	- 0.89	- 0.56	0.63
<b>Median Age 1996</b>	37	39	36	35	35
<b>Median Age 2006</b>	44	45	40	40	39
<b>Proportion of Pop. 65+yrs, 1996</b>	13.8	14.6	15.2	11.5	14.0
<b>Proportion of Pop. 65+yrs, 2006</b>	17.8	17.9	16.4	15.3	15.1

Source: (ABS, 2008g)

The ageing population structure of each region is best portrayed utilising 2006 Census data as age-sex pyramids, as can be seen in Figure 3:13. Each SLA shows a similar aged structure. Note the smaller numbers in the 15 to 24 year age cohorts in each SLA, depicting the out-migration of younger people from the regions for work and study and the larger cohorts in the 45 to 54 years and 55 to 64 years cohorts, indicating the baby boomer populations who have remained in the region. Unusually, the Karoonda-East Murray SLA shows a larger number of males aged 85 years and over compared to women, but this is based on low population numbers.

**Figure 3:13 Age-Sex Pyramids by SLA, 2006 Census Data**



Source: (ABS, 2008g)

As with the national and state statistics for marital status, older people in this population sample were more likely to be married in the 65 to 74 years cohort and more likely to be widowed in the 85 years and over cohort. Table 3:10 shows the much higher incidence of widowhood amongst females than males, and the greater likelihood of males being married compared to females. Differing from the general population statistics is the higher incidence of males who have never been married than females in these rural regions.

**Table 3:10 Marital Status by SLA, 65+ Years, 2006**

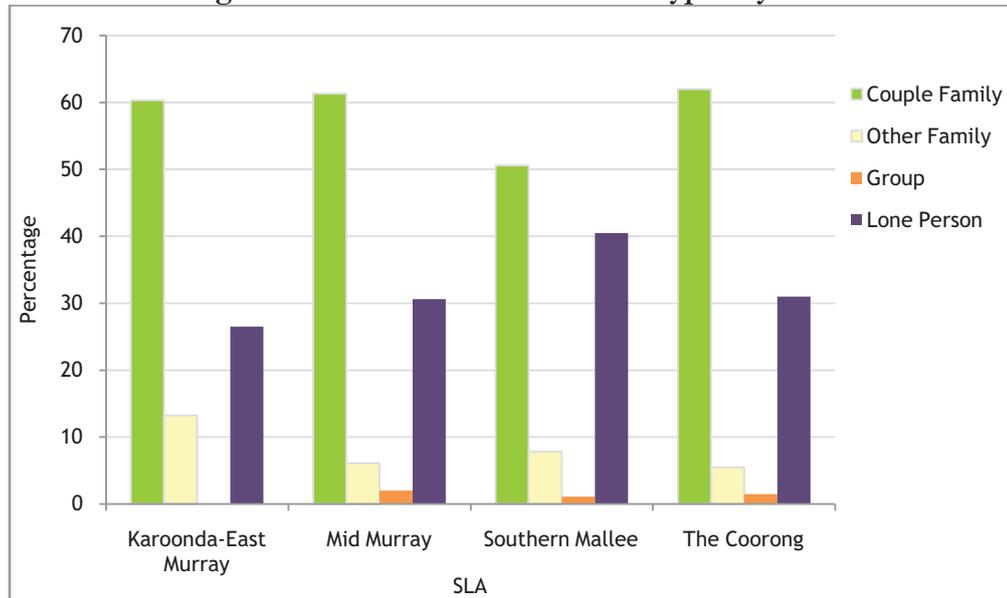
	Married	Divorced Separated	Widowed	Never Married	Total (percent)	Total (number)
<b>Karoonda-East Murray</b>						
Males	70.9	11.6	17.5	0	100	86
Females	39.4	3.6	53.3	3.7	100	109
Total	53.3	7.2	37.4	2.1	100	195
<b>Mid Murray</b>						
Males	64.7	17.0	12.6	5.7	100	749
Females	52.7	5.5	39.8	2.0	100	689
Total	58.9	11.5	25.7	3.9	100	1438
<b>Southern Mallee</b>						
Males	68.9	4.2	9.7	17.2	100	145
Females	38.2	9.4	47.5	4.9	100	181
Total	51.8	7.1	30.7	10.4	100	326
<b>The Coorong</b>						
Males	66.4	15.5	12.6	5.5	100	405
Females	46.6	6.2	44.0	3.2	100	418
Total	56.4	10.8	28.6	4.2	100	823

Source: (ABS, 2008d)

The figures for lone person households, as shown in Figure 3:14, were similar to those at a state and national level, with an average of a third of all older people in the four SLAs living alone. As expected, this figure increased with age (however the numbers are small and therefore are not represented here). For example, in the Mid Murray SLA 30.5 percent of all people 65 years and over were living alone, and this rate increased to 58.4 percent for the 85 years and over cohort (ABS, 2008d). The small proportions of older people living

with family are also present in the 85 years and over figures. This may be because living in a small town means family are able to support an older person more easily without co-residence, or it may imply that for many older people the option of living with family is not available because younger family members have migrated out of the region.

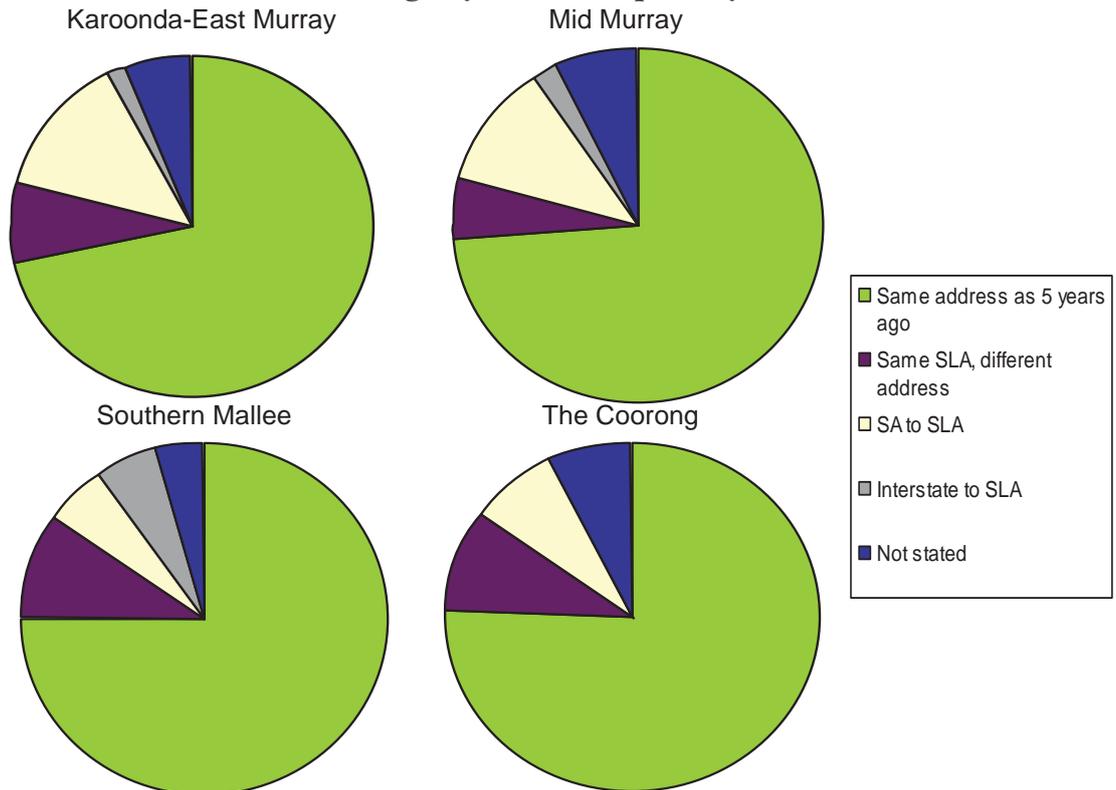
**Figure 3:14 65+ Years Household Types by SLA**



Source: (ABS, 2008d)

Figure 3:15 shows the stable nature of the older population in these four SLAs. The areas in green represents those people aged 65 years and over who have remained at the same address for the last five years. The area in purple depicts those who have moved but remained within the same SLA in the last five years. Combined these two figures account for the majority of people aged 65 years and over in each SLA.

Only a small proportion of older people in each SLA have moved from other areas of South Australia and an even smaller proportion have moved from interstate. The slightly higher proportion of older people moving from interstate in the Southern Mallee region can be explained by its proximity to the Victorian border.

**Figure 3:15 Address Five Years Ago by SLA for Pop. 65+ years, 2006 Census Data**

Source: (ABS, 2008d)

The impacts of demographic change is not only important for policy makers at the national level but is also important at the community level; influencing infrastructure, services and local economic activity as well as the experiences of everyday life for the individual. Older people in rural regions are not evenly dispersed across regions. Just as with national and State figures, the population demography at the SLA level only provides a partial view of population ageing. While some older people reside on farms and in more remote regions the majority are located in towns and settlements. In order to understand the impact of spatial variations in population ageing it is important to examine the finer detail of population distribution. This is important because the location of services and infrastructure are usually decided at a local level, therefore understanding where older people are located aids in the assistance of service delivery (Hugo *et al.*, 2009).

In order to examine the impact of concentrations of older people at the community level the following discussion explores population distributions for the study's four SLAs at the town level. This looks at the proportions of older people (65 years and over), and the proportions of the next generation of older people (the 50 to 64 years old cohort),

highlighting much higher concentrations of older people in towns, particularly those with medical facilities and hospitals across the region.

### ***3.5.2 The Mid Murray SLA***

The Mid Murray SLA area comprises 6,266 square kilometres between the eastern slopes of the Mount Lofty Ranges and the River Murray, with 220 kilometres of the river passing through the district, Figure 3:16. The total population of the SLA is approximately 8,000 people, the largest of the four study regions. The area has a mixture of dry farming and irrigated fruit blocks along the river. The Mid Murray Council was formed in 1997, following the amalgamation of the District Councils of Mannum, Morgan, Ridley-Truro and part of Mount Pleasant.

**Figure 3:16 Map of the Mid-Murray SLA**



Mannum is the main town in the Mid Murray SLA with a population of 2,040 people. It is the site of the only hospital in the SLA and also has an aged care hostel and large group of independent living units located next to the hospital. Mannum is a very picturesque, historical town, located on the River Murray. Older people currently represent almost one third of the town's population (27.7 percent); compared to 17.9 percent for the SLA as a whole. In addition to this, a further 23.5 percent of Mannum's population is aged 50 to 64 years. Therefore over 50 percent of Mannum's population is aged over 50 years of age, as shown in Figure 3:17.

This population demographic will only be strengthened in coming years with the current development of a large retirement village (over 30 homes, including future plans for an onsite hostel and aged care accommodation) and the development of a large marina on the river (offering over 600 new homes), which is expected to double Mannum's current population. Both of these developments have been aimed at, and are expected to attract, retirees to the community (see Appendix Four for development plans, press and advertising material). The future demand on aged care services, community groups, and the regional hospital will be high and require additional resources. At the 2006 Census, eight percent of Mannum's population was aged 80 years and over. When taking into consideration Mannum's availability of aged care facilities and its location of the only hospital in the SLA, the presence of high numbers of older people who are likely to stay and continue to age-in-place or move into the area because of the proposed new developments, this proportion of the population can only be expected to increase in future years.

Three other towns in the Mid Murray SLA also show high proportions of older people, Blanchetown, Morgan and Swan Reach, with service implications for these communities greater than for Mannum. All exist with limited supporting aged care services and without infrastructure of a hospital or supported accommodation facilities. Currently there are no plans within the Mid Murray Council's Development Plan (Mid Murray Council, 1995) to allow further development of these smaller towns. In fact, the Development Plan actively discourages further development of any town within the flood plain of the River Murray, preferring to develop Mannum as the main centre for the SLA.

As can be seen in Figure 3:16, Blanchetown, Cadell, Morgan and Swan Reach are all situated on the River Murray. All have populations under 500 people. Cadell is the largest

of the four; it is the site of a youth reform prison and intensive fruit block farming and therefore has a higher proportion of its population aged under 50 years (70.2 percent) and a relatively low proportion of people aged 65 years and over (9.1 percent), as shown in Figure 3:17. Blanchetown, Morgan and Swan Reach are all scenic, small 'holiday shack' riverside communities that also service the surrounding farming community. Each has a caravan park, a large proportion of non-permanent population as holiday house owners/users and limited town services. Swan Reach, Morgan and Blanchetown have a medical centre operating two to three days a week as well as ambulance and police services. Town populations rise on weekends and in school holidays as shack owners and holiday makers inhabit these towns, creating tourist focused services such as take-away shops, boat rentals and other holiday activities.

Using 'place of usual residence' 2006 Census data (not including the non-permanent holiday population) it can be seen in Figure 3:17 that Morgan's older population accounts for 18.8 percent of the total population, with a further 27.3 percent aged 50 to 64 years, showing that almost half of its population is aged over 50 years. Swan Reach shows a similar pattern, with 20.2 percent of its population being aged 65 years and over, and a further 30.8 percent aged 50 to 64 years. Blanchetown shows an even more exaggerated ageing population with 28.4 percent of its population aged 65 years and over, with a further 34 percent aged 50 to 64 years; accounting for over 62 percent of Blanchetown's entire population. However, all four towns show low proportions of people aged 80 years and over; all less than four percent, with both Cadell and Swan Reach having less than two percent. This could indicate that older people are choosing to relocate to be closer to family and/or better medical facilities and amenities as they reach very old age.

Of most concern for future planning within these communities are the high numbers of older people that each town is going to have in the next ten to twenty years. Assuming that older people in these towns will continue to choose to age-in-place, all of these towns will have very high proportions of older people with limited facilities to support this demographic.

**Figure 3:17 Population Proportions for Mid Murray SLA Key Townships, 2006 Census Data**



Source: (ABS, 2008b)

Similar patterns can be seen for older populations in the other SLAs but not the high proportions of 50 to 64 year olds. This suggests that the picturesque, high amenity river townships are more of a ‘draw card’ for early retirees (often long-term holiday makers who have then chosen to retire to these communities) than are the other inland, farming regions.

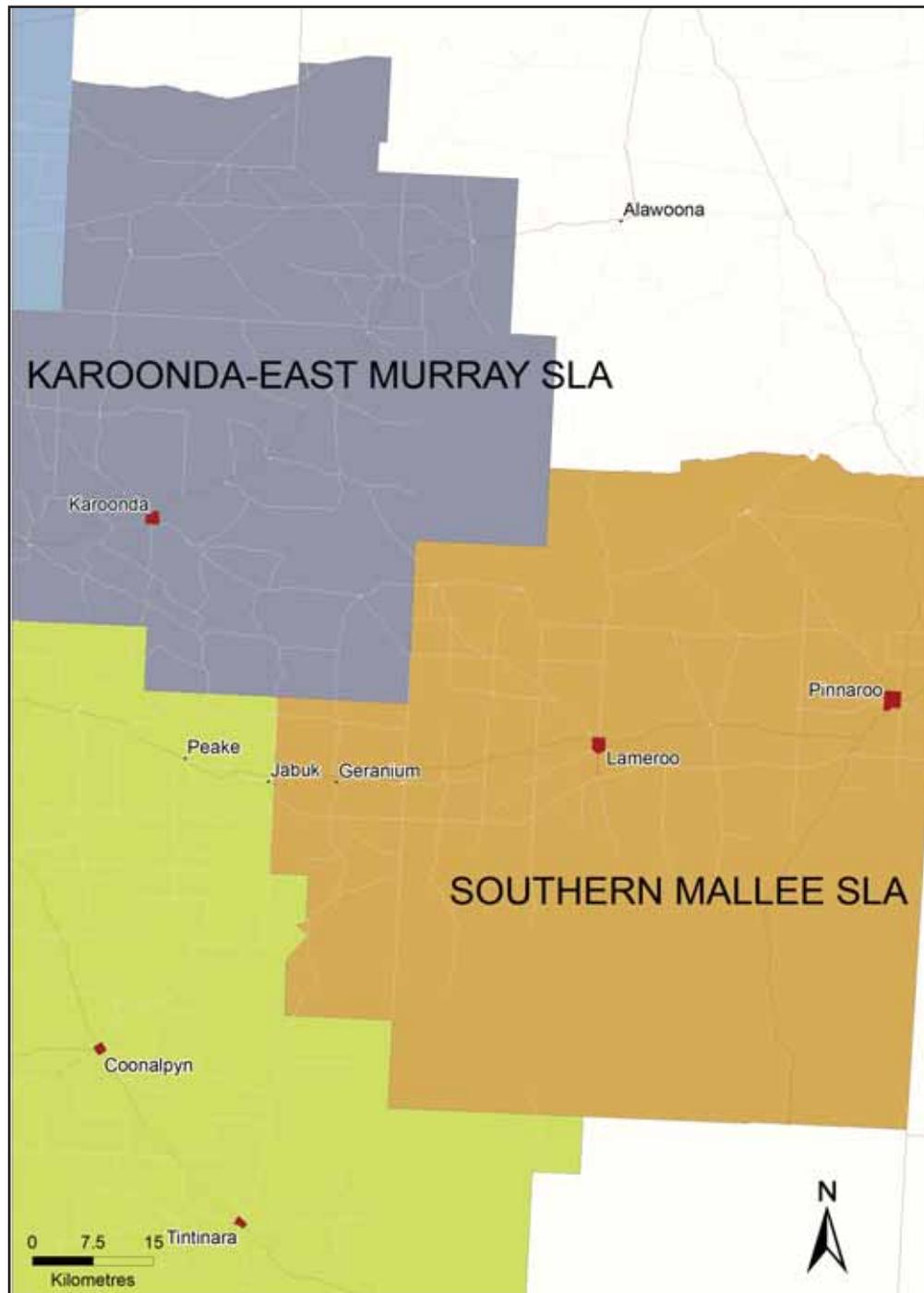
### ***3.5.3 Southern Mallee and Karoonda-East Murray SLAs***

The Southern Mallee SLA is located approximately two hours drive east of Adelaide, bordering the state of Victoria. The Southern Mallee has a population of approximately 2,700 people over an area of 6,000 square kilometres, which includes 336,000 hectares of conservation parks. Agricultural and service industries supporting farming are the major forms of employment in the area. Farming generally consists of cereal grain crops, potatoes and sheep. The District Councils of Lameroo and Pinnaroo merged in 1997 to form the Southern Mallee District Council.

The two main towns in the region are Lameroo (pop. 520) and Pinnaroo (pop. 587); both towns have small district hospitals, banks, pharmacies, supermarkets and other services. Both Lameroo and Pinnaroo also have high proportions of people aged 65 years and over (25.4 percent and 22.5 percent respectively) compared to the SLA as a whole (16.4 percent). Both these towns also have over nine percent of their populations aged 80 years and over, reflecting the availability of age specific services and housing. Other settlements

in the region include: Geranium, Parrakie and Parilla all with populations below 100, as seen in Figure 3:18. These towns are located along the Mallee Highway, which is the shortest travelling route between Adelaide, Canberra and Sydney. All have very limited services, such as a general store/post office.

**Figure 3:18 Map of the Karoonda-East Murray and Southern Mallee SLAs**

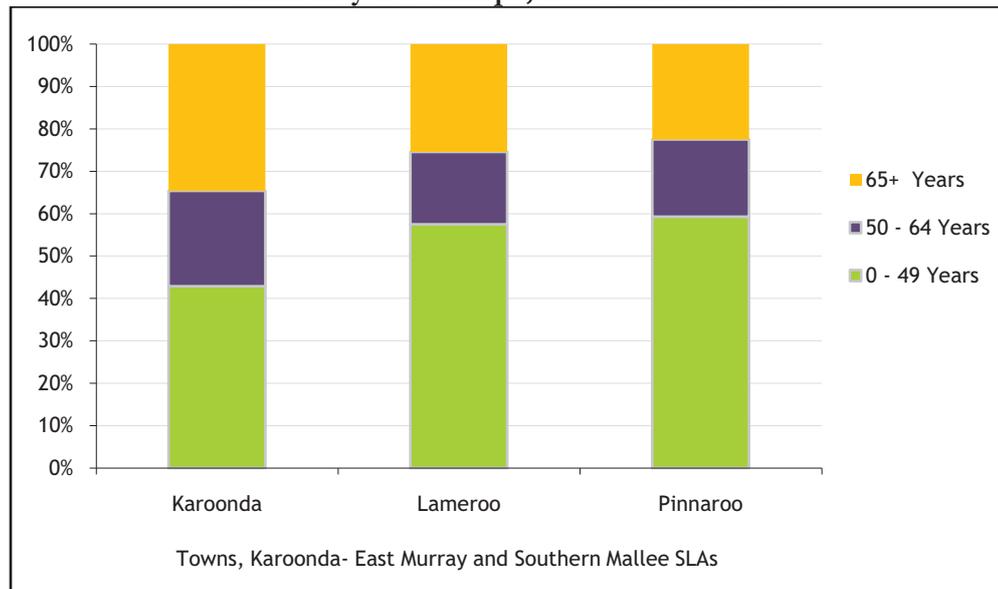


The Karoonda-East Murray SLA is approximately 150 kilometres from Adelaide, in the heart of the Murray Mallee between Murray Bridge and Loxton, Figure 3:18. This is the smallest SLA in the study region with a population of approximately 1,100 people (ABS, 2008b). The area's primary industries are broad acre production of wheat, barley and sheep. Mining is a recent industry with the discovery of Zircon at Mindarie and surrounding areas; however this is not an established industry at this point in time. The main town in the SLA is Karoonda, with a population of 355 people (ABS, 2008b).

Karoonda is the location of the hospital, police station, main area school, council offices, and other major services. Karoonda is the focus of retirement for those people from farming locations who wish to retire in the local community. This is reflected in the high proportion of the population aged 65 years and over (34.6 percent), compared to the SLA average of 17.8 percent, Figure 3:19. It also has the highest percentage of people aged 80 years and over of all the towns and SLAs in this study at 11.5 percent. The town also has 22.5 percent of its population aged 50 to 64 years. Therefore 57.2 percent of the total town population is aged 50 years and over. Other very small settlements in the region include Wynarka, Sandalwood, Halidon, Mindarie, Wanbi, Galga and Copeville, all with populations under 50 people and most with no operating services at all anymore.

The figures for Karoonda have been shown in Figure 3:19 with Lameroo and Pinnaroo, the major towns for the other inland farming SLA, the Southern Mallee. All three towns are relatively small compared to the major towns for the other SLAs. All three are located the greatest distance from Adelaide and the regional centre of Murray Bridge. Karoonda is one hour travel from Murray Bridge, Lameroo one and half hours and Pinnaroo two hours. It is a further hour to drive from Murray Bridge to Adelaide. This has important implications for older people living in these regions who need to access medical specialists located in Adelaide, of whom only a selected few visit Murray Bridge.

**Figure 3:19 Population Proportions for Karoonda-East Murray and Southern Mallee SLAs Key Townships, 2006 Census Data**



Source: (ABS, 2008b)

#### **3.5.4 The Coorong SLA**

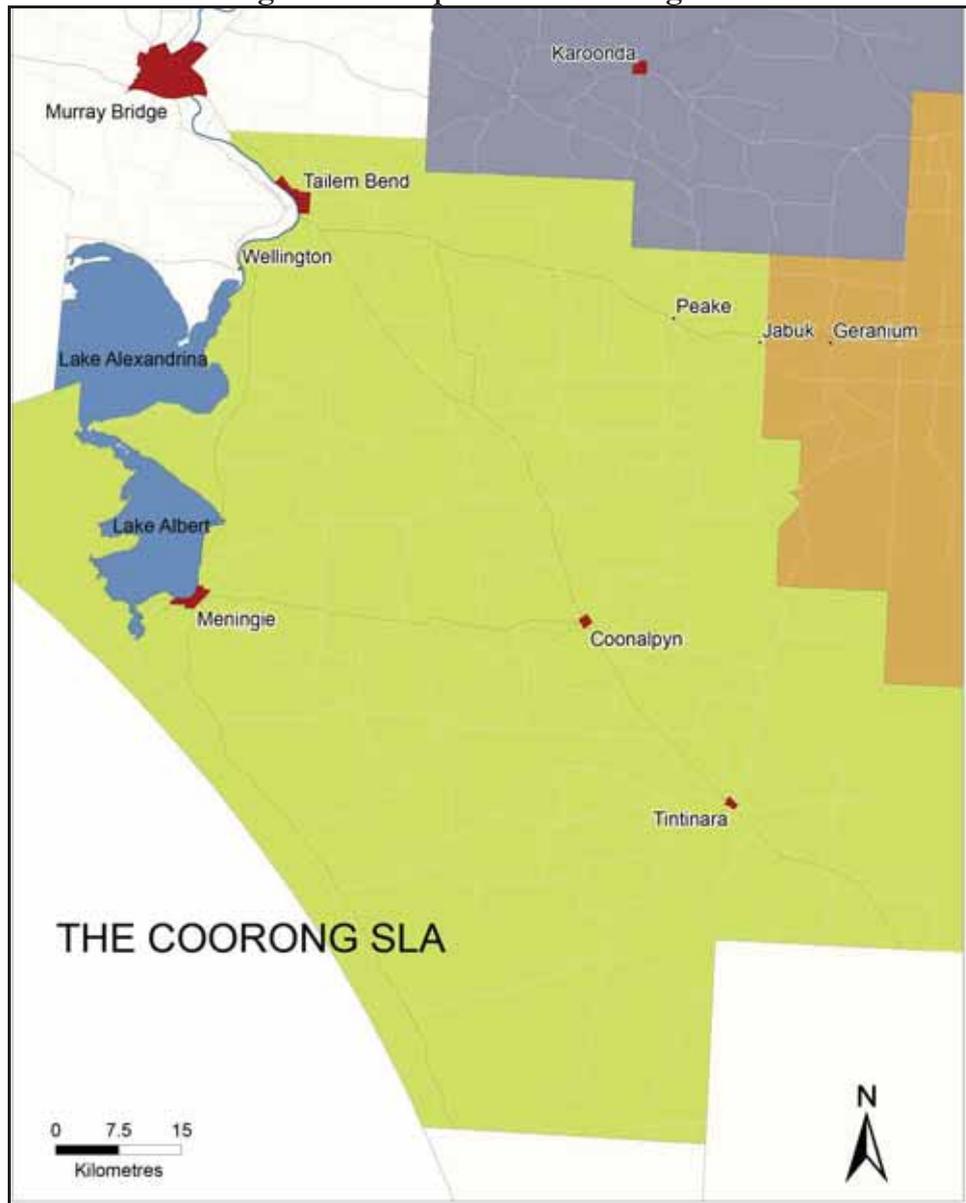
With a total area of 8,836 square kilometres, The Coorong SLA has a population of approximately 5,600 people. The Coorong SLA incorporates the lower regions of the River Murray and borders the Lower Lakes (Lake Albert and Lake Alexandrina) as well as the upper portion of the Coorong National Park. The Coorong District Council was formed in 1997 following the amalgamation of the District Councils of Peake, Coonalpyn and Meningie. Primary production industries operating in the region include cropping, livestock (sheep, cattle, pigs), dairying, commercial fishing, aquaculture and mining. Much of the region's settlement pattern is determined by the major freight/highway routes, including the Dukes, Mallee and Princes Highways and the Adelaide to Melbourne rail line.

Figure 3:20 shows the key towns for The Coorong SLA. While Tailem Bend is located on the River Murray, historically it has developed more as a rural transport hub over the years with the railway and main highway to Melbourne passing through the town. It is located only 20 minutes from the regional town of Murray Bridge, making it an affordable alternative to living in the regional centre itself; it is also the largest town in The Coorong SLA with a population of 1,450 people (ABS, 2008b).

Meningie would be considered a more attractive town, located on the shores of Lake Albert and close to the top of the Coorong National Park, however it is more isolated from Adelaide and Murray Bridge than most of the other towns in the SLA. Meningie has

a population of 940 people. The other two main townships, Tintinara and Coonalpyn, are located on the main highway to Melbourne, towards the Victorian border, and are mainly service towns to passing traffic and local farming families. They are considerably smaller at around 250 people each. Both Meningie and Tailem Bend have regional hospitals and some aged care specific housing (independent units and residential care facilities). Tintinara also has five council owned ‘old age’ independent units located near the medical centre.

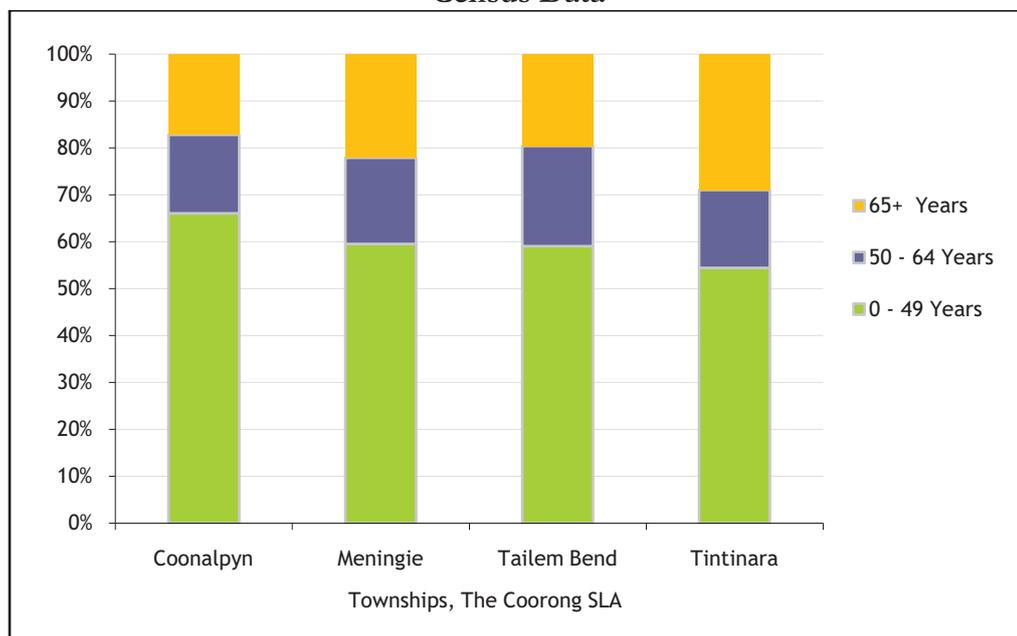
**Figure 3:20 Map of ‘The Coorong’ SLA**



The Coorong SLA has the lowest proportion of older people of the four selected SLAs (15.3 percent) and this is reflected in the lower proportions of older people in each of the towns compared to the Mid-Murray figures. Similarly to the other SLAs in the study each of the main towns in The Coorong has higher proportions of older people than the SLA

average. Given the location of the hospitals and other associated age specific housing, it is not surprising that Taillem Bend and Meningie have the highest proportions of people aged 65 years and over, at 19.6 and 22 percent respectively. Meningie also has the highest proportion of people aged 80 years and over at 7.2 percent, as shown in Figure 3:21. Again this is not surprising considering it is the location of the largest residential aged care facility in the SLA. The location of the medical centre and independent units in Tintinara also mean that it has a high proportion of people aged 80 years and over (6.9 percent) and people aged 65 years and over (29 percent).

**Figure 3:21 Population Proportions for The Coorong SLA Key Townships, 2006  
Census Data**



Source: (ABS, 2008b)

### 3.6 Conclusion

There is no doubt that globally there is an ageing of the population (Harper, 2006). While this is of great significance both globally and nationally, it is often at the finer level of region and community that the impacts of ageing communities are felt the most – the areas where service provision and informal assistance occur on a daily level, where the nature of infrastructure is most important. For example, if over 60 percent of a small community like Blanchetown in the Mid Murray are aged over 50 years, some thought needs to be put into the condition of the pavements, adequate street lighting, available transport, medical services, provision of other services such as a pharmacy or bank, reasonably priced

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groceries available locally for people on fixed incomes and availability of informal support systems *at this local level*.

Population statistics highlight the spatial variations in where people live, who they may live with and how often (and where) they are likely to move. However what they cannot portray are where the social and support networks older people rely on are located, or how older people interact and are connected to their local community. There is a need to further understand not only where people are located now but also what their intentions are for the future and how their communities and social networks may need to adapt to support these intentions. The following chapters go on to look more closely at the finer details of these networks and community connections through the survey component of this study. Chapter Four will outline the research methods and approaches used to collect this data.

## CHAPTER 4: RESEARCH METHODS AND APPROACHES

### 4.1 Introduction

This study has developed a mixed methods approach that utilises a number of appropriate methods and techniques from several sources and disciplines. Gerontological studies tend to be multi-disciplinary in nature and therefore can be eclectic in their methods and approaches (Fennell, 1990). Social network analysis is traditionally associated with mathematical disciplines (Qureshi, 1990). There is some history of social and support network analysis in gerontological areas, although very little of this research has incorporated any form of spatial analysis.<sup>12</sup>

Spatial analysis, utilising Geographical Information System (GIS) techniques is relatively new in social science (LeGates, 2005; Okabe, 2006), and the use of GIS has been limited in gerontology (Hirshorn and Stewart, 2003). Space and place in relationship to ageing have emerged as a field of interest<sup>13</sup>, but with no reference to social networks in particular. Only two studies could be found that included the use of GIS in relation to spatial analysis and ageing, and neither of these examined social networks in particular (Wong and Meyer, 1993; Hirshorn and Stewart, 2003).

This chapter begins by examining the ontological and theoretical approaches that frame the implementation of utilised methods and analytical concepts. It then outlines the practical approaches to sampling, recruitment and study design and provides an overview of data collection and methods of analysis; and concludes by considering limitations of the study design.

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<sup>12</sup> See the following studies for an overview of social network and ageing: Fiori (2007); Giles (2006); Moorer (2001); Morgan (1988); Pahl (2003); Phillipson (2004); Phillipson (2001); Wenger (1997); Wenger (2002). Of these, Wenger (1997) has looked more specifically at ageing and support networks in rural areas. Some of these have also incorporated elements of place, however none of these have incorporated spatial elements to social network analysis.

<sup>13</sup> See in particular the following publications: Callahan (1992); Rowles (1993); Krause (2003); Wahl and Lang (2004); Wahl, Scheidt and Windley (2004); Andrews and Phillips (2005); Wahl (2005); Wiles (2005a); Gilleard, Hyde and Higgs (2007); Hopkins and Pain (2007).

## 4.2 Ontological Framework

Ontology can be described as the analysis of the nature of being, the question of what is real. Epistemology, an understanding of the nature of knowledge, is shaped by the ontological position. Traditionally the study of environment and ageing has stemmed from two distinct ontological positions that have been viewed as dichotomous, if not conflicting (Lawton, 1998; Weisman and Moore, 2003):

1. A **separatist ontology** of the person-environment relationship views the physical environment as objective, external to the person. The individual in turn is viewed as a mechanism that responds to given exogenous stimuli determined by the environment. Therefore the epistemology associated with this ontological view is one of cause and effect – defined external stimuli (independent environmental variables) and observable, measurable responses (dependent human variables).
2. A **holistic ontology** of the person-environment relationship suggests that the person-environment system is completely inseparable, integrally entwined. Therefore the epistemology drawn from this approach is generally comprised of subjective accounts of personal experiences, not generalisable to the wider population.

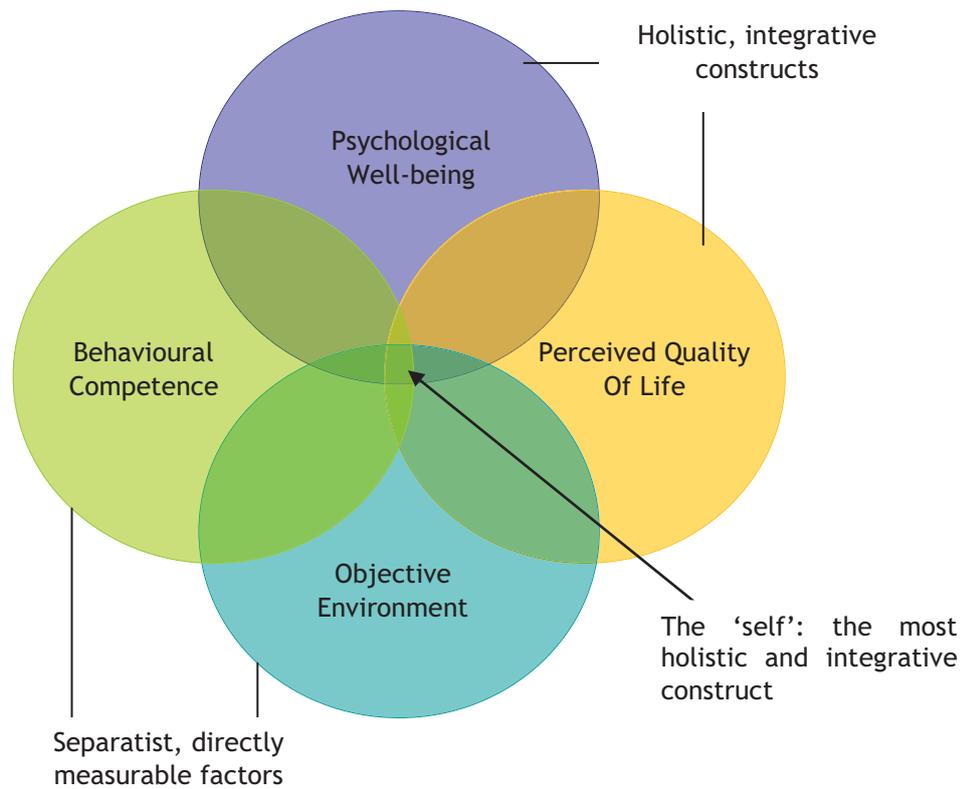
Lawton (1998) considered this a false dichotomy, although he did acknowledge the tensions between the positions. His work tended to oscillate between both ontological positions, considering both to have valid places in research.<sup>14</sup> Lawton's (1983) 'Quality of Life' model, see Figure 4:1, shows that he saw validity in a synthesis of both positions, whilst also maintaining that analysing person-environment systems holistically *or* separately were equally valuable in their own right.

This highlights that an exploration of any aspect of the person-environment system can become a multi-dimensional evaluation. Lawton generally advocated a mix of qualitative and quantitative methods that allows person and environment to be measured both separately and transactionally (Parmalee and Lawton, 1990). Multiple levels of analysis – utilising subjective and objective ways of knowing, lends itself to the use of both quantitative and qualitative, or mixed method, research, as is the case with this study.

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<sup>14</sup> Lawton's earlier work tended to have a greater separatist position, for examples see Lawton (1980). Later work adopted a more holistic approach Parmalee and Lawton (1990); Lawton (1998). However Figure 4.1 highlights most completely his holistic approach to environment and ageing research Lawton (1983).

Figure 4:1 Lawton's Quality of Life Model



Source: (Lawton, 1983, pp.349-357)

### 4.3 Conceptual Framework

The aim of this study is to explore the socio-temporal-spatial influences on the social networks of older people in rural South Australian communities. This requires understanding and exploring ageing as a concept in relation to the influences of space, place and time by examining social networks as social, temporal and physical constructs. Wahl and Lang's (2004) Socio-Physical Over Time (SPOT) model suggests that consideration of person-related or environment-related characteristics alone provide an inadequate basis for understanding individual differences in outcomes such as health, autonomy and well-being. Aligned with Lawton's model (Figure 4.1) this framework bridges key theoretical elements from both ecological research on ageing (Lawton, 1985; Kahana *et al.*, 2003; Andrews and Phillips, 2005) and social ageing theories (Carstensen, 1995; Lang and Carstensen, 2002; Schaie and Carstensen, 2006).

The SPOT model (Wahl and Lang, 2004) combines three major elements of an older person's everyday life:

- Place: acknowledging that day-to-day behaviour and actions are always embedded within physical and spatial surroundings. These may be meaningful in many ways, represented as physical layouts of rooms, homes and other places that impact on daily living, the location and layout of the surrounding community, the location and distance of meaningful people, and long-term place attachments.
- Social: understanding that all places are socially constructed and socially defined environments that occur with other people, around a range of social activities and interactions.
- Time: change and adaptation over the lifecourse is inevitable. The places people live, the activities and events that make up people's lives, even their physical bodies are all dynamic, changing over time.

An examination of the socio-temporal-spatial influences on older people living in rural settings through their social networks is inextricably concerned with both person-related and environment-related attributes. Social and physical environments contribute in a closely interwoven manner throughout an individual's lifecourse, and the theoretical basis for any study of ageing, space and place should address all these elements equally.

In this study the social environment is encapsulated through the data collected on social networks; in particular the people, activities, groups and services that respondents nominate as being important to them at this time in their lives. Additionally the social environment is considered through data collected on living arrangements (living alone, with family or a partner), volunteer and work roles, and where participants live (farm, small or large town); as this provides some socio-spatial data about presence of others. These additional elements act as variables within the social environment context of analysis.

The physical environment is represented by the collection of location data (farm, small town, and large town) and spatial data through the geocoding of social network tie locations. Qualitative and quantitative data about the physical environment was collected through community audits carried out before the commencement of interviews and through the process of interviewing respondents in their own homes. These processes enabled the interviewer to contextualise survey data to the immediate physical location of respondents and within a local community context. For example: a respondent living on a farm 30 kilometres from the nearest town mentions a daughter who lives in that town and a regular group he attends in the main regional town a further 20 kilometres away. The

interviewer understands not only where these locations are but also what the towns are like, what the roads between the participant and these towns are like, what other facilities are available for social, service and support opportunities, thereby contextualising the information the respondent has provided.

Of equal importance to this study is the element of time. Time has been examined in several different ways: time as an element of age and lifespan, time represented by length of residence and future residential intentions. Age is seen as an important independent variable in the examination of size and content of social networks. Socio-selectivity theory (Carstensen, 1995; Lockenhoff and Carstensen, 2004; Dudley and Multhaup, 2005) suggests that social networks will change as people age becoming predominantly more focused on emotionally important contacts and less on 'horizon-expanding' contacts. The interplay between this tendency and the distance from, and changing locations of, important social contacts make both time and physical location important factors in the examination of social networks. For example, the migration of family members to urban or regional places or the relocation of older family members, neighbours or friends to residential care outside of the local community.

Length of residence is significant in this study as it can be seen as strengthening place attachment for some people (Hidalgo and Hernandez, 2001; Gilleard *et al.*, 2007) but also it can mean that older people who have lived in these areas for shorter periods of time may have social networks that bridge both the local 'new' community and also their 'old' community. As mentioned in Chapter One, ageing-in-place refers not only to ageing within a household setting but also to ageing within the community setting. Therefore time as length of residence may impact on the participants' approach to ageing-in-place and future residential choices.

## **4.4 The Study**

### ***4.4.1 Study Region***

Chapter Three outlined the demographic profile of the study area. SLAs were chosen as research units for the study because overall population data are easy to access and local government boundaries align with SLAs for this region. The four SLAs selected for this study included a range of rural settlements types, including farm households, small rural settlements, larger towns and river holiday communities (places that have increasingly become 'tree change' locations for retirees). This captured the diversity of ageing-in-place

experiences within rural regions. However, it was anticipated that the social networks mapped and examined in this study, as well as participants views and perceptions of their communities, would vary spatially from the demographic and political boundaries assigned to these regions (Smailes, 2006).

As described in Chapter Three, all of the selected SLAs have significant proportions of older people compared to South Australian and national figures. Within these four SLAs there were also examples of significantly ageing communities at more spatially refined levels than the SLA. Therefore some of the results presented are not at the SLA level but are presented at the township level to highlight particular influences of space and place within ageing communities.

Two of the selected SLAs have significant Aboriginal populations compared to other regional areas, as shown in Table 4:1. Indigenous older people were not specifically targeted (rather they were acknowledged as a component of the whole sample population), but this was seen as an opportunity to further contextualise personal social networks for older people at a qualitative level in what is otherwise a relatively homogenous cultural population sample (ABS, 2008b). A proportion of the collected data (approximately 3.5 percent) relates specifically to Aboriginal participants, these data are included in all the general statistics within the study, unless otherwise specified.

**Table 4:1 Total Population, Indigenous and Non-Indigenous, by Local SLAs 2006**

Location (SLA)	Indigenous	Non-Indigenous*	Indigenous as a % of Total SLA Pop.
Alexandrina (DC) - Coastal	132	11,376	1.15%
Alexandrina (DC) Strathalbyn	83	9,120	0.90%
Victor Harbor (DC)	114	11,898	0.94%
Loxton Waikerie (DC) East	126	7,005	1.76%
Loxton Waikerie (DC) West	99	4,378	2.21%
Mid- Murray (DC)	129	7,906	1.61%
Karoonda East Murray (DC)	11	1,152	0.95%
Murray Bridge (DC)	749	16,928	4.24%
Southern Mallee (DC)	11	2,123	0.52%
The Coorong (DC)	311	5,359	5.49%

\* Includes 'not stated' figures

Source: ABS – Census of Population and Housing, 2006

#### 4.4.2 Sample Population

Non-probability sampling was adopted for this study, in part because of the lack of a comprehensive database of older people in the Murray Mallee region. Probability sampling is more desirable for generalisations to the wider population (de Vaus, 1995; Neuman, 2000) however this study focuses more on exploratory examinations of socio-spatial network patterns and applications of spatial analysis to social network data. It was seen as more important to select a wide variety of cases within the sample than to select a representative sample. A purposive sampling technique was utilised, where cases are not selected randomly but instead are deemed as being typical to the categories of interest to the researcher (de Vaus, 1995). Neuman (2000, p.198) suggests that purposive sampling is appropriate in three situations:

- For the selection of unique cases that are especially informative to the study
- To select members of difficult to reach, specialised populations
- To identify particular types of cases for in-depth investigation.

The sample population was defined as those people that were ageing-in-place aged 70+ years (50+ years for Aboriginal participants in line with HACC and Commonwealth age eligibility criteria). This sample group was considered more likely to consider themselves to be ageing. Additionally, this group was considered to be more likely to be experiencing external impacts to social networks and their sense of community connectedness, for example through cessation of driving, health changes or loss of partner. The targeted population also provided manageable numbers for sampling, as seen in Table 4:2.

**Table 4:2 Total Population 70+ years by SLA, 2006 Census**

	Karoonda	Southern Mallee	The Coorong	Mid Murray	Pop Totals
<b>Males 70 +</b>	63	109	253	460	885
<b>Females 70+</b>	86	151	306	434	977
<b>Region Totals</b>	149	260	559	894	1,862

Source: (ABS, 2008d)

Within this selected population the following groups were excluded: people with a diagnosis of dementia, people living in residential care and people who were hospitalised or considered to be unwell at the time of data collection. Numbers of people aged 70 years and over in the community who were unwell or who were hospitalised at the time of data collection could not be accurately predicted and so they were not removed from the total

sample population base. It was also considered that the length of data collection time (12 months) meant that most interested people who were unwell would be able to participate at a later date.

This study was focused on older people living independently in rural communities therefore all persons aged 70 years and over, living in supported accommodation, were removed from the sample population. Numbers of people living in all forms of supported accommodation (hostels, nursing homes and permanent hospital beds) were obtained by identifying all residential care settings within the four SLAs, contacting each facility individually and enquiring about the number of available beds and average occupancy rates. This data was not identified by gender and therefore only total figures for supported care were gained for each SLA, as shown in Table 4:3. These population numbers were removed from the 2006 Census population for each SLA, see Table 4:5.

**Table 4:3 Population Levels in Supported Care across the Study Area, 2006**

Residential Accommodation Site	SLA	Number of Residents
Aminya Hostel	Mid-Murray	30
Mannum Hospital	Mid-Murray	16
Jallarah Homes	The Coorong	24
Meningie Hospital	The Coorong	10
Tailem Bend Hospital	The Coorong	16
Kyeema Hostel	Southern Mallee	8
Lameroo Hospital	Southern Mallee	8
Pinnaroo Hospital	Southern Mallee	23
Karoonda Hospital and Hostel	Karoonda East-Murray	25
		Total: 160

The numbers of community-dwelling people with dementia in the region can also not be accurately measured. Figures based on AIHW ‘Older Australians at a Glance’ statistics (2007b) were used to estimate the proportion of people who may be living with dementia and residing in the sample population regions. The AIHW estimate that 6.5 percent of the total population aged 65+ years has dementia, with the prevalence rising to 22.4 percent for

people aged 85+ years. Of this population with dementia 56 percent are living in the community Australia wide (AIHW, 2007b, p.87). Therefore as a conservative estimate of the prevalence of dementia across these regions it was assumed that 6.5 percent of each SLA's 70+ years population would have dementia, and of this proportion with dementia 56 percent of them would be ageing-in-place in the community, as shown in Table 4:4. These figures were then rounded to the nearest whole number and removed from the total ABS Census population numbers for each SLA, see Table 4:5.

**Table 4:4 Estimated Sample Population Numbers with Dementia, 2006**

	Karoonda-East Murray	Mid Murray	Southern Mallee	The Coorong
<b>Original Sample Population</b>	149	894	260	559
<b>6.5 percent with Dementia</b>	10	59	17	36
<b>56 percent of this 6.5 percent</b>	6	33	10	20

Source: (AIHW, 2007b; ABS, 2008g)

Table 4:5 shows the adjusted sample population figures by SLA and the number of survey participants for each SLA.

**Table 4:5 Sample and Participant Population by SLA, 2006**

SLA	Total Sample Frame	Less Community Dementia Population	Less Residential Accom. Population	Total Adjusted Sample Frame	Total Participant Population	Proportion of Sample Frame
Karoonda-East Murray	149	6	25	118	32	27.1 %
Southern Mallee	260	10	39	211	37	17.5 %
The Coorong	559	20	50	489	69	14.1 %
Mid-Murray	854	33	46	775	85	10.9 %
<b>Study Area as a Whole</b>	<b>1,862</b>	<b>69</b>	<b>160</b>	<b>1,633</b>	<b>223</b>	<b>13.6 %</b>

#### *4.4.3 Community Audits and Media Content Analysis*

This study relied on multiple recruitment strategies, but initially required a more intimate understanding of the regions selected for study. Prior knowledge of the region was supplemented by a more detailed reconnaissance before recruitment of respondents began. This involved the compilation of community audits across the four SLAs. Community audits have been used for many years and usually refer to the quantification of available services and physical resources within a community. Cox (2002) takes this process further

by examining the social aspects of such resources; not only what services, institutions, physical resources and groups are within a community but also levels of utilisation, how people feel about them and who is using them and/or driving them. Community audit information not only provided quantification of each community or settlement within the study area, but also helped to provide a qualitative understanding of the region, including the physical and social resources. The use of community social audits provided secondary data that was used to inform and contextualise the survey and social network information collected. As suggested by DiBartolo and McCrone (2003, p. 77):

‘The way in which a researcher approaches a community and attempts to gain entry can significantly influence the outcome of a project. Sensitivity to the community’s structure, as well as working with those identified, well-established community groups with strong community ties is essential when gaining entry for interventions and research. The identification and involvement of trusted, accessible rural community members gives research local legitimacy, and can better ensure adequate participation and effective data collection.’

In this study this included becoming familiar with the layout, size and amenity of each town in the selected SLAs by recording physical and social resources as well as services and institutions in a database. This was followed up with observations of community group meetings; on-going content analysis of local papers, community newsletters and notice boards; collecting anecdotal information on membership numbers and profiles of community groups and organisations from key informants, and on-going participation in several local committees associated with aged care provision in the region. The qualitative process of contextualising local communities continued throughout the research process providing a deeper understanding of the region, adding richness to the survey and social network data.

#### ***4.4.4 Recruitment of Participants***

Key variables taken into consideration when recruiting were: residential location, gender, living arrangements, length of residence and physical mobility (specifically driving). Ensuring that all variables were represented rather than have a statistically random sample population allowed the study to explore a variety of cases within the specific dimension of rural ageing-in-place. The in-depth demographic analysis carried out in Chapter Three has ensured that the sample population has also been considered as a whole and that similarities and/or extreme variations between the whole sample population and the

participant population have been acknowledged. This process has helped to strengthen and triangulate the survey data.

Recruitment and engagement of older people in research has been previously described as being difficult, with accessing older people in rural areas even more challenging (Harris and Dyson, 2001; DiBartolo and McCrone, 2003). Several reasons are offered for this: physical challenges such as impaired vision and/or hearing, increased prevalence of chronic health issues, reduced mobility, increased fatigue and lack of physical stamina, lower education levels and lack of access to transportation (particularly in more remote locations) (DiBartolo and McCrone, 2003). DiBartolo and McCrone (2003, p. 78) suggest that other common difficulties with recruitment of older rural adults in research include the underestimation of the time needed for attracting participants, slow recruitment rates and insufficient numbers of participants.

With these observations in mind, random mail-out and telephone surveys would have, in all likelihood, produced much lower response rates than the more targeted, purposive sampling and recruitment methods employed. The sparse nature of the rural populations across the four selected SLAs for sampling, the lack of a specific comprehensive database of older people within this region, combined with the desire to recruit a variety of cases to match the variables of interest meant that the recruitment processes employed ensured a diversified, but purposive participant sample.

After University Ethics approval (see Appendix Five) recruitment processes included:

- Promoting the study through local media: this included several local radio interviews and local press articles (see Appendix Six for an example of the press articles released). Across the four SLAs in this study there are three larger regionalised newspapers: the Border Times in the Southern Mallee Region, the River News in the northern region of the Mid-Murray and Riverland region and the Murray Valley Standard which covers the whole of the Murray Mallee region. In addition to this there are numerous smaller local town newsletters, usually printed monthly by the local council or volunteers, and distributed within particular townships. Overall, the response rate through media was limited.
- Letterbox drops of a recruitment flyer were used in three larger towns where groups of retirement units were located (Pinnaroo, Tailem Bend and Mannum) and in one housing estate (Wellington East) where many retirees were purported to be living.

Again, this recruitment method produced small, but limited results. See Appendix Seven for a copy of the recruitment flyer.

- Key community informants were used in four towns (Tailem Bend, Swan Reach, Morgan/Blanchetown and Meningie). This involved local community members offering to distribute information sheets to potential participants. This proved to be a reasonably successful recruitment strategy.
- In order to reach larger groups of older people several local community groups were approached with the offer of the researcher being a guest speaker. This was very beneficial at many levels – it enabled engaging with larger numbers of older people in the research process, it gave something back to the communities involved in the research in some small way and enabled the researcher to hear many anecdotal stories and experiences of living and ageing in rural settings. This proved to be a very successful way of recruiting participants into the study. Once people had engaged with the researcher personally and understood what the research was about and how it may be of benefit to rural communities and older people they were more inclined to agree to be a part of the study. A variety of community groups were spoken to, including Probus, Health and Community Centre Day Activity programs, Home and Community Care (HACC) socialisation programs, Lions Clubs, Progress Associations, and informal craft/social groups across the region.
- The final method of recruitment was targeted specifically at more isolated, frail community members. This involved asking service providers (in-home carers, Community Aged Care Package providers, Outreach Nurses and medical car transport volunteers) to distribute the information sheet and a little bit of information about the researcher to potential participants across the four regions. This was a very successful method of reaching many frail, isolated older people.

Table 4:6 shows the demographic profile of the participant population highlighting the variety of cases recruited to explore the nature of socio-temporal-spatial influences on social networks.

**Table 4:6 Sample Population Characteristics by SLA**

	Karoonda- East Murray	Mid- Murray	Southern Mallee	The Coorong	Total
<b>Gender</b>					
Male	13	32	19	31	95
Female	19	53	18	38	128
<b>Age</b>					
70-74	8	21	7	23*	59*
75-79	9	36	11	25	81
80-84	6	15	12	15	48
85-89	4	5	4	4	17
90-94	4	4	3	2	13
95+	1	4	0	0	5
<b>Living Status</b>					
Alone	13	34	15	23	85
With Partner	13	49	18	42	122
With Family	6	2	4	4	16
<b>Location</b>					
Farm	8	10	8	16	42
Small Town	2	50	8	21	81
Large Town	22	25	21	32	100
<b>Length of Local Residence**</b>					
<15 years	4	19	0	15	38
16 - 40 years	9	24	10	19	62
41 - 65 years	10	32	23	27	92
66 + years	9	10	4	8	31

\*Includes Aboriginal respondents below 70+ years

\*\* For a full explanation of the length residence categories see Chapter 5

Some statistics for the study population are comparable to the ABS 2006 Census data for the Murray Lands Statistical Division. ABS Census data shows that males represent 45 percent (females 55 percent), of the 70+ years population within the Murray Lands region which is comparable to the study population's of 42.6 percent males and 57.4 percent females. Additionally, the study's population proportions represented by the five year age groups are also comparable to ABS statistics for the Murray Lands region as seen in Table 4:7.

**Table 4:7 Comparison of Population Data for Study Region and Murray Lands  
Census Data, 2006**

Age Groups	% of Total Sample Population	% of Total Murray Lands 70+ years population
70-74 years	26.5%	33.4%
75-79 years	36.3%	28.8%
80-84 years	21.5%	21.6%
85-89 years	7.6%	10.3%
90-94 years	5.8%	4.3%
95+ years	2.2%	1.5%

Source: (ABS, 2008d)

#### ***4.4.5 Survey Design***

The terms interview and survey are used interchangeably in this study. Most of the survey data collected was quantitative in nature, however the process of data collection, whereby the interviewer asked questions face-to-face and recorded all responses, allowed for inclusion of observations, quotes, comments and other qualitative information and can be interpreted as being of an interview style (Neuman, 2000).

Face-to-face surveys were used in this study for a variety of reasons. Face-to-face data collection is purported to have higher response and completion rates, enable clarification of questions and responses to questions and allow for lengthier surveys with more complex questions (de Vaus, 1995; Neuman, 2000). The first section of the survey was straightforward and brief but the complexity and qualitative nature of the social network data required both extra time and interaction with respondents. Of the members of the sample population who indicated an interest in participating in the study there was a 100 percent completion rate.

In addition, as previously highlighted, the likelihood of age related issues such as impaired vision or hearing, chronic health issues, reduced mobility, increased fatigue and lack of physical stamina, lower education levels and transportation limitations implied that face-to-face data collection would be more suitable in this study (Harris and Dyson, 2001; DiBartolo and McCrone, 2003). Herzog, Rodgers and Kulka (1983) suggest that older people are less likely to take part in telephone interviews because of a sense that telephone interviews take longer, are more demanding, tiring and stressful than face-to-face interviews. In addition, they suggest that older people who are less healthy are more likely to decline a telephone interview than a face-to-face interview. This is not to suggest that

there were not distinct disadvantages in carrying out face-to-face surveys. They can be both time consuming and less cost effective, particularly in this study where conducting face-to-face surveys involved extensive travelling across large areas. Table 4:8 highlights a summary of the advantages and disadvantages of face-to-face data collection.

**Table 4:8 Advantages and Disadvantages of Face-to-Face Data Collection**

Advantages	Disadvantages
Higher response rates	Time consuming
Permits longer survey instruments	Higher costs involved
Permits more complex questions	Influence of the interviewer on the process
Able to use extensive probes and clarifying questions	
Overcomes possible physical impairments of older respondents	
More acceptable medium for older respondents	
Able to include qualitative observations of surroundings	
Able to observe non-verbal responses	
Able to simplify the process for respondents	

Source: (de Vaus, 1995; Neuman, 2000)

The influence of the appearance, tone, manner, age and gender of the interviewer must be acknowledged in the responses (Neuman, 2000). The researcher is a female of European descent, aged in her mid-forties. She has extensive professional experience working with older people (including interview and focus group research experience) and comes from a rural, South Australian background originally. The researcher's age can be seen as offering some 'credibility' as a researcher as she does not appear very youthful or inexperienced and is therefore more likely to be trusted as a professional (de Vaus, 1995; DiBartolo and McCrone, 2003). Being able to draw on her own biography enabled the researcher to establish a rapport with respondents (Neal and Walters, 2005). Her experiences working in aged care services across the Mallee region, thereby knowing the region, the communities and the local service providers by name, meant that she was given credibility for local knowledge (Neal and Walters, 2005). Her own rural background, being able to say where she was born and where her extended family still lived, meant many respondents were able to engage with her about different rural regions in South Australia. These traits all became an asset in engaging older people in the research process.

Added advantages in this study came from the researcher being the only interviewer for all respondents. This gave consistency to both question asking and interpretation of the responses. It also meant that any influences of the interviewer on the data collection process were consistent across all respondent interviews. A slightly different approach was adopted for the recruitment and interview processes with Aboriginal participants. A lot of time was spent attending regular Ngarrindjeri Aboriginal Elders social events and meetings in the company of a colleague who worked closely with these groups as an aged care provider. This colleague has worked with this community for over 10 years and has a lot of respect within the local Aboriginal community. By associating closely with her the researcher was able to gain better acceptance within the Elders groups over time. The time invested in attending social functions and Elder's meetings (in excess of 12 months) meant that the researcher was able to become better known and accepted to the group. The colleague was also able to recruit participants on the researcher's behalf and attended all interviews as an added measure of acceptance and respect to those taking part.

Not only can the interviewer influence the interview process but also the setting or place of the interview can influence the outcome of the data collected (Elwood and Martin, 2000; Neuman, 2000; Sin, 2003). Participants in this study were given the option of choosing where they would like the interview to take place. They were aware of the time involved and the general nature of the questions before they made this decision. They were also reassured that the researcher was willing to meet them anywhere that would be suitable for them, no matter how remote that setting may be. Elwood and Martin (2000, p.656) suggest that:

'Participants who are given a choice about where they will be interviewed may feel more empowered in their interaction with the researcher, and the researcher has an opportunity to examine participants' choices for clues about the social geographies of the places where the research is being carried out.'

The majority of respondents chose to be interviewed in their own homes. Eight respondents chose an alternative setting for the interview process, one had a partner at home with advanced dementia who didn't like strangers in the house, three chose to be interviewed 'in situ' immediately after recruitment at a group meeting, four were interviewed in an office building in the regional centre of Murray Bridge as this was more convenient for them. For these four participants the interviews were carried out in the

kitchen area of the office (a converted old house). This provided a more relaxed, friendly home-like environment.

There were distinct advantages in conducting the majority of interviews in respondents' homes:

- The interview site becomes an opportunity for participant observation and gathering of additional qualitative information about participants, their physical surroundings (how far out of town do they live, what level of mobility do they have in their own home, what is the home environment like, evidence of hobbies, pets and other interests), and their social identities (Sin, 2003).
- Qualitative information could be gathered about the wider spatial area, (are there neighbours nearby, is the home isolated from services in the town – perhaps across a busy highway, when the participant says he walks to the shops everyday, where are they in relation to the home and so forth).
- Interactions with any other people in the home could be observed.
- Being in the participant's home assisted in disrupting the power imbalance between the researcher and the participant (Elwood and Martin, 2000).

This last point is of importance to research with older people. Older research participants are reported as not valuing their own experiences and are more likely to try and provide the answers they think the researcher may want to hear, or engage in what de Vaus calls 'social desirability' (de Vaus, 1995, p. 111; van den Hoonaard, 2004). Many comments were received from potential participants during the recruitment phase such as: "*I don't know if I'll be of any help*" (Participant C015) or "*I'm not sure if I will be able to tell you anything new*" (Participant M069). Respondents were reassured both during the recruitment phase and immediately prior to the interview commencing that all questions related to them and their experiences and that there were no right or wrong answers; that they were the real experts in the interview process. Respondents positively engaged in the process of telling their own life stories, particularly in relating the social network information as this gave them the opportunity to talk about their family, friends, interests and activities in some detail.

#### ***4.4.6 The Step by Step Process***

After recruitment, members of the sample population indicating their desire to be a part of the survey process were encouraged to consider a time and place that would be convenient for them for the survey to take place. As indicated before-hand, most chose to be

interviewed in their own homes. Each respondent was sent a letter, thanking them for their participation and confirming the arranged date, time and place of the interview, including an information sheet describing the survey content and process, see Appendix Eleven. Information about the study was included and was written simply, succinctly and in large print to ensure older people would find it easier to read and comprehend, see Appendix Eight for a copy of the information sheet. On the day before the interview was due to take place the interviewer would contact the respondent and remind them of the date and time of the interview, confirming that this was still convenient for them. If necessary, this is when the interviewer would ask for relevant directions, particularly important for farm locations.

The interview process commenced with general introductions and a short friendly chat to establish rapport. The information sheet was then read aloud and the interview process explained to respondents (including a general overview of the types of questions asked) before the consent form was signed. This ensured that each participant had clearly understood the information and their role in the study. Each participant, as agreed to by the University's Ethics Committee, was also given a University Complaints procedure (Appendix Nine) with relevant telephone numbers on it at this time. The consent form (Appendix Ten) was then read aloud and signed before the interview commenced.

Surveys took between forty and ninety minutes to complete. The time varied considerably depending on the nature of the respondent (some were very keen to share many life stories) and the length of the social network list. Obviously larger social networks take longer to record. Time was also taken soon after the interview process, to record any observations about the respondent and/or their location, specific comments they may have made and any other relevant remarks about the survey process..

#### **4.5 The Questionnaire**

The questionnaire was designed to collect several areas of information and was divided into four sections: participant and household profile information (including patterns of residence), general health information, levels of loneliness and social network information. See Appendix Twelve for a copy of the questionnaire. De Vaus (1995, p.81) suggests that there are four distinct types of survey questions: attribute (information about respondents' characteristics), belief (what respondents' feel is true or false), behaviour (establishing what respondents do) and attitudes (what respondents think of as ideal or desirable). This study

employed mostly attribute questions in the first half of the survey instrument. However the social network data can be seen as a series of behavioural questions.

Section one of the survey instrument contained questions relating to participant and household profiles. Information on age, gender, marriage status, living arrangements, household income, housing status, place of birth, driving, volunteering and work, length of time at current address, previous place and length of residence, reasons for moving and future residence intentions was collected. These data provided the variables used when examining the social network information.

Section two utilised the SF36 health score as a broad-based measure of health status that incorporates aspects of physical, psychological, and social health and wellbeing. This instrument was used as it is a short, comprehensive, easy to administer tool that has proven to be reliable across a wide range of social and demographic groups (Hayes *et al.*, 1995; Ware, 2002). It is also time-effective and therefore easily incorporated into larger surveys (Hayes *et al.*, 1995). The SF-36 is designed to be used as either a self-completed, telephone or face-to-face interviewer administered tool, although previous research has highlighted some areas of inconsistencies with its use as a postal survey instrument (Hayes *et al.*, 1995; Mallinson, 1998; Walters *et al.*, 2001). However its status as a reliable and valid health and well-being survey tool when used with older adults has been well documented (Lyons *et al.*, 1994; Hayes *et al.*, 1995; Walters *et al.*, 2001).

At the commencement of this study there was a greater focus on the relationship between social networks, health and well-being. As such the SF-36 health score was incorporated as an integral component of the survey. As the study progressed the spatial distribution of the rural, older population and the socio-temporal-spatial attributes of social networks became the focal point of the research. The information gathered from the SF-36 health score has still provided valuable information. In particular the self-rated health question, and the physical health and mental health summary scores have been used. Two specific temporal questions have also proven valuable; one comparing self-rated health today to one year ago and the second relating to future expectations of self-rated health.

The third section of the survey instrument incorporated the Revised UCLA Loneliness Scale (Version 3) (Russell, 1996) – again a survey instrument with high internal validity and extensive use internationally. It is short, only 10 questions, and easily incorporated into a

larger survey instrument. This enabled comparisons between loneliness scores and physical social isolation through variables such as geographic location and number of people in a social network. As highlighted in Chapter Two it is important to differentiate between measures of social isolation and loneliness, one does not necessarily equate with the other (Wenger *et al.*, 1996; Andersson, 1998; Victor *et al.*, 2000).

The fourth section was the most qualitative part of the survey and involved a lot more time. Participants were asked in advance (through the information sheet) to think about the people, groups and activities that were most important to them at this time in their lives. At the time of data collection the interviewer outlined how the recording process would work, that there were no 'right or wrong' answers and that it didn't matter how long or how short the list was, as long as they thought it was complete. Participants were encouraged to begin anywhere they liked. Six pieces of information were needed about each nominated network tie: a first name, a general location (the location of the farm, town or city where they lived, not a street address), their role within the network (a family member, friend, group, activity, service provider or neighbour), the average frequency of contact, the usual mode of contact (by phone, in person, by mail, e-mail, or a mixture) and the 'flow' or reciprocity of contact (who was more likely to contact who or if contact was both ways). Appendix Thirteen shows a typical social network sheet.

As participants began to exhaust their network lists questions were used by the interviewer to prompt any further avenues. These may have included things like: "*You have mentioned your children, do you have any other family members that you would consider important to you, such as brothers or sisters?*" or "*Do you follow any of the local sporting teams?*", or just simply "*Is there anybody else in your neighbourhood who you would consider important?*". Social network lists varied a great deal in length from 4 responses to in excess of 40 responses. Most respondents were quite firm about when they had exhausted their lists and had clear ideas about who was important enough to be on the list. Many responded to clarifying questions with comments such as

*"Well there are people in the neighbourhood I could list but I wouldn't consider them my friends"* (C056) or "*I know just about everybody in town to say hello to, but you don't want all those names on this list ... just the ones important to me"* (S003).

There were several opportunities throughout the interview process for gathering qualitative responses. The social network process in section four of the survey encouraged the telling

of many life stories and incidental pieces of information such as: children who had passed away, siblings they had, memories of previous places of residence, family living overseas, neighbours and friends who had moved or passed away, and why they enjoyed certain activities. Information was also collected during this process on social and community groups they belonged to – membership numbers, how long groups had been running for, what activities they carried out and so on.

Other questions in the survey also prompted anecdotal information and life stories.

Questions such as:

*“Where were you born?”*

*“How long have you lived here”*

*“Where did you live before?”*

*“Why did you move?”*

*“What sort of work did you do in the past?”* or

*“Are you involved in any work (paid, unpaid or voluntary) at the moment?”* all prompted additional qualitative information which was recorded in the margins of the survey sheet.

#### **4.6 Data storage**

Each respondent was assigned an individual code according to the SLA they were from, such that: C001 to C069 were in The Coorong SLA, M001 to M085 were in the Mid- Murray SLA, K001 to K032 were in the Karoonda-East Murray SLA and S001 to S037 were in the Southern Mallee SLA. Each survey instrument was coded before completion and no identifying data (names, addresses, geocoded locations) were attached to the completed survey instruments. The geocoded locations of participants were entered into ARCMAP as de-identified data using the corresponding participant survey ID. All information was stored on a password secured personal computer in a locked University office. Consent forms were stored separately from the survey data in locked filing cabinets.

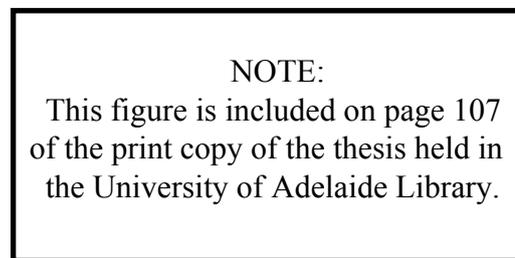
#### **4.7 Analysis Processes**

Three key analytical processes informed this study: analysis of social network properties, spatial analysis of data using GIS and general analysis of variables using SPSS.

#### ***4.7.1 Social Network Analysis or Analysing Social Network Properties?***

Social network analysis is one method of examining social structures. Network analysis traditionally utilises mathematical graph theory to represent a respondent (ego) and their network (actors), as a series of points (nodes) that may or may not be connected to each other (relational ties), represented by lines (edges) (Hawe, Webster and Shiell, 2006). The resulting *aspatial* two or three dimensional structures that emerge from plotting the nodes and edges are labelled, defined and interpreted (Qureshi, 1990). A typical social network structure is shown in Figure 4:2.

**Figure 4:2 Graphical Display of a Complex Organisational Network**



Source: (Robins and Pattison, 2005)

Network analysts are interested in the structural properties of social network data and how these demonstrate, or impact on, behaviour more so than the attributes of the network members (Hawe *et al.*, 2006). The simpler examination of attributes or properties of a network is not classed as true social network analysis. However, it does provide valuable information about structure, composition and the social attributes of social networks. More importantly for this study, it allows for the spatial analysis of variables within social networks.

Examining network attributes is only part of the complete social network picture. This approach does not incorporate information on the complex web of the network; how other network actors are connected to each other and how these relational ties work to support (or not support) a central ego. Information about network density, the position of any one

person within the network, or strong and weak ties would provide further information to complete a traditional analysis of a social network (Hawe *et al.*, 2006). Accepting that social networks are important because of the way they influence people, communities and other groups ideally involves observing, recording and analysing complete networks that are not defined from the perspective of one member.

This study did not collect or analyse data on complete social networks. The study explores the properties of ego-centric social networks, where the respondent is at the centre of the social network and the data collected relies solely on his/her interpretation of the social network. Therefore other relationships that may exist within this network, or that support this network, are not taken into account. This may mean that people, even though they are not central to the participant but who work to support that person, may be absent from the network data (Phillipson *et al.*, 2004). This is evident with several respondents in this study who were identified as having in-home services through the recruitment process and yet who did not nominate a carer or service provider on their social network lists.

The purpose of concentrating on the attributes of simple, ego-centred social networks was to focus on the influence of space and place of the properties of rural older persons' self-perceived social networks. In order to do this it was considered more important to understand the simple network attributes, including network actor role, frequency of contact, mode of contact, reciprocity and geographical location of relational ties, for a variety of older people living in a range of rural settings. This allowed for a larger number of individual social networks to be explored spatially, rather than a few in-depth complex social networks structurally. In-depth spatial analysis of complex social networks would further this research at a later date.

Broad social network analysis can provide a framework for understanding the importance of different relationships. It enables study of the collective properties of a personal social network. (Phillipson *et al.*, 2004). As McPherson *et al* (2006, p.354) explain:

‘Much of what we know about these core confidants comes from surveys that measure ego-centred networks – relationships from the point of view of a single person. These data describe the interpersonal environment of an individual. They allow us to measure the degree to which that person is directly connected to different parts of a social system and integrated into it at the individual level.’

Many examinations of ego-centred networks have looked at specific types of network ties such as kinship ties, support networks or friendship networks.<sup>15</sup> Being able to assess a range of typical relationships and activities within a network, as multi-layered data, to find common patterns and compare variables offers a better understanding of the attributes of a complete ego-centric social network. (McPherson *et al.*, 2006).

The personal network is centred on the individual; it is a representation of an individual's history and biography as well as reflecting their life course, personal choices and any exogenous social, physical and geographical influences. Therefore the examination of an ego-centred social network can serve two purposes: it can connect the person to their lifecourse or personal biography as well as revealing how an individual is connected to their wider community and society as a whole (Bidart, 2005). This study has asked respondents (egos) to list all types of network ties – family, friends, activities, groups, service providers, neighbours and so on in order to build up a richer representation of the ego's social and community connections.

Respondents' self-reported connections with other network ties are not always perfect reflections of their actual interactions (Walker *et al.*, 1993; McPherson *et al.*, 2006). Several studies have highlighted the inaccuracy of reporting on past interactions with other people (Killworth and Bernard, 1976; Bernard *et al.*, 1985). Other studies have shown that people are better at recalling long term or typical patterns of interaction with other people (Freeman and Romney, 1987; Kogovsek and Ferligoj, 2005; Hawe *et al.*, 2006). Therefore, the network ties that respondents give on surveys will usually represent their typical interpersonal connections. 'Respondents report frequently contacted, close, core network ties with those whom they have many types of relationships more reliably than they do more distant, simple relations' (McPherson *et al.*, 2006, p.355).

Shared or group activities are an important facet of social networks. They reflect a sense of belonging and shared identity with the wider community. Members of the group may not be nominated as network ties individually, but identity with a group or certain activity is established (Bidart, 2005). This also occurs with some more informal activities, such as collecting the mail everyday or meeting people in the street. Respondents in this study

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<sup>15</sup> For examples of these network studies see: Wenger (1997); Litwin and Landau (2000); Phillipson, Bernard, Phillips and Ogg (2001); Wenger and Tucker (2002); Young, Russell and Powers (2004); Fiori, Smith and Antonucci (2007).

would discuss ‘saying hello’ to lots of people they knew at these times, without necessarily nominating any one person in particular. This highlights respondents’ affiliation and connection with their wider neighbourhood or community as well as with individual network ties.

Network connections can vary in many ways. The frequency of exchanges, the importance placed on the activity or other network actors, the types of activities two people may perform together (giving a friend a lift to Church, having coffee at a neighbour’s house every morning, chatting with the shopkeeper when picking up the mail, watching a grandson play football) all explain a lot about the nature of the respondent, their connection to community and the identity or ‘shape’ of their community. Consideration of geographical distance also tells us a lot about the nature of different relational ties with the social network – how relationships are maintained despite distance, how distance and physical separation impact on the nature of social network ties and the importance of network actors to the ego.

Proximity of network ties has been shown to be correlated with frequency of contact; with more frequent contact occurring, both by telephone and in person, with network ties that live close by. ‘Although modern transportation has allowed contemporary relationships to move beyond the confines of the immediate environment proximity continues to play a role in personal networks. Typically 10 percent to 25 percent of active ties are local’ (Walker *et al.*, 1993, p.78). Most people will be connected with those who are most like us – leading to a sense of homogeneity within our personal networks. ‘While we clearly tend to befriend those who are like us, there are many situations where having a lot of friends like us is simply because we are *stuck* with people who are like us in the first place’ (Wong *et al.*, 2005, p.100). McPherson *et al.* (2001) refer to this as baseline homophily, where people have a limited ‘pool’ for forming relational ties due to exogenous factors such as demography, foci of activities and *geographical space*. Thus, in support of Tobler’s first law of geography (Tobler, 1970; Miller, 2004), it is anticipated that individuals will form ties with people who are geographically proximal (Wong *et al.*, 2005).

This emphasises the need to take into consideration the spatial attributes of respondents’ personal networks through a mapping process as a way of contextualising other properties of their networks. This method of creating socio-spatial networks has become much easier in recent decades with the use of Geographical Information Systems (GIS) technology.

#### ***4.7.2 Using GIS to Map Socio-Spatial Networks***

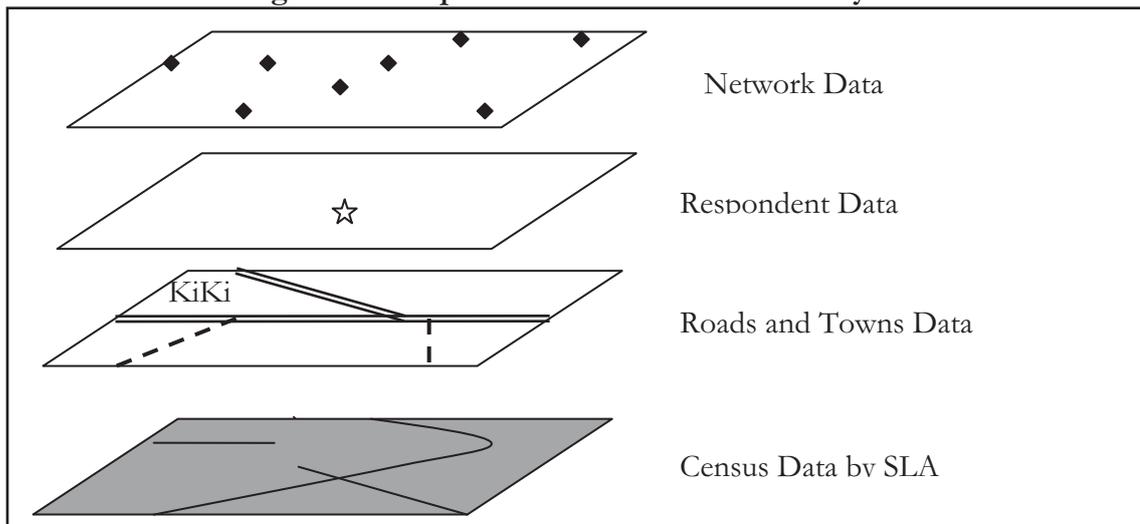
As older people continue to choose to age-in-place identifying the spatial distribution of both the older population and their support and social networks becomes important. This helps to identify where support is needed and what those localised needs are. The implementation of GIS in the study of older people has been limited, particularly in specific community settings such as rural environments (Hirshorn and Stewart, 2003).

‘GIS is a set of database, mapping, and statistical tools that allow visual and quantitative assessment of geographic information. (Geographic in the broad sense, meaning any type of information that has a physical location.) Although the production of maps is a common end result of GIS methods, GIS can also be used to construct contextual variables and statistically analyze spatial relationships’ (Luke, 2005, p.188).

GIS tools are valuable for the visualisation of many forms of data, and are appropriate for assessing the spatial attributes of a variety of social phenomena that are typically associated with social networks, communities and neighbourhoods. Two types of GIS can be used, vector and raster. This study utilises vector data which is ideal for integrating demographic data, survey data and other data arranged into polygons, or spatial units. Raster data is more suitable to natural environment geographic explorations, such as continuous surface analysis or land use (LeGates, 2005). In this study GIS is used to integrate participants’ subjective interpretation of their social networks with objective environmental and respondent demographic information to form a socio-spatial profile of their personal networks.

Geodesic distances are computed between the homes of participants and the locations of social network ties such as the family members, friends, groups, activities and services they identified. The end result of the GIS analysis is the development of a series of data that can be combined and/or layered to create maps representing individual network information, region or community network information and information by variable and/or network role, Figure 4:3. This analysis reveals differences and similarities among groups, cohorts, towns and regions as layers of spatial data.

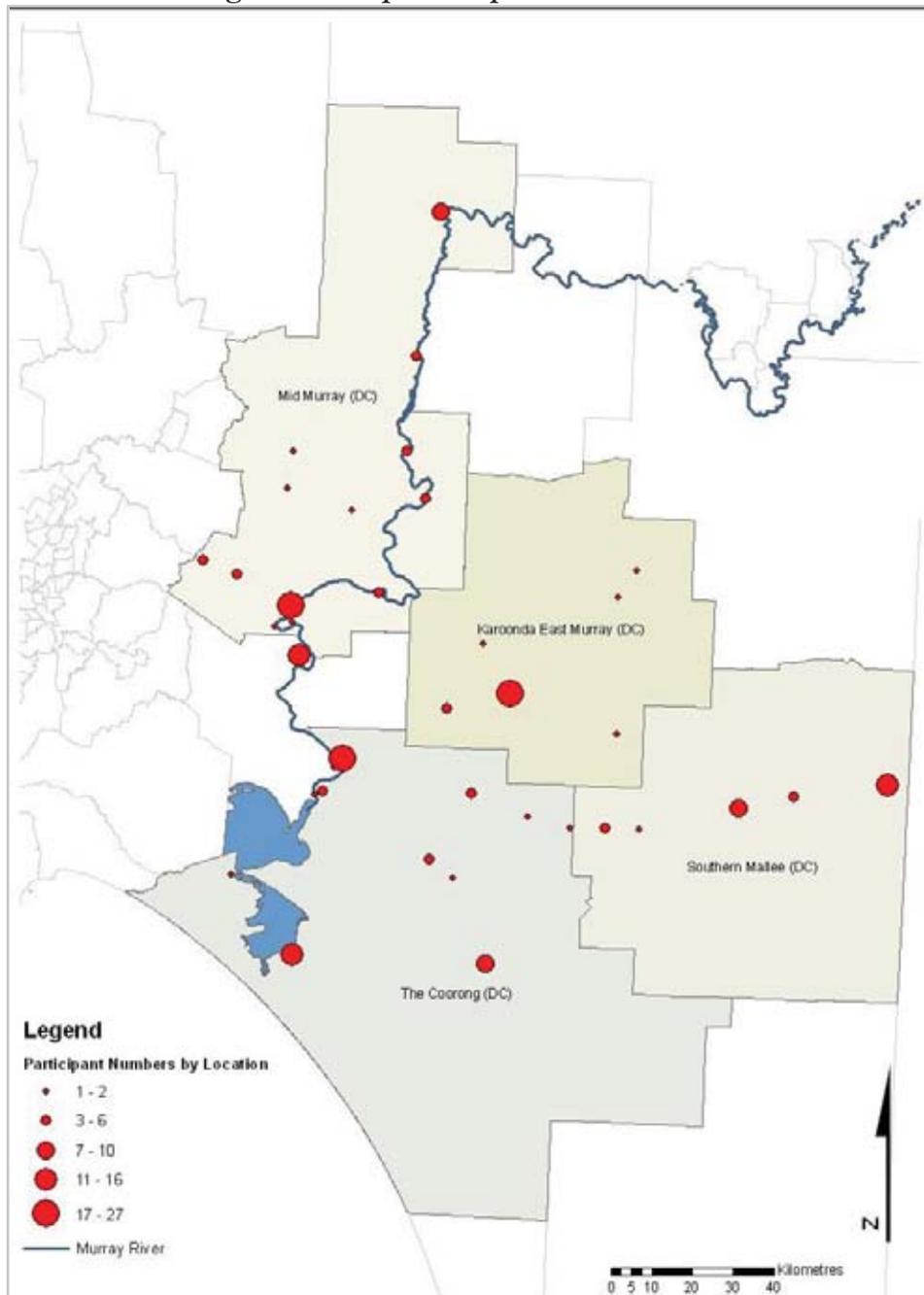
Figure 4:3 Simple Illustration of GIS Data Layers



The process of data collection for GIS analysis begins with the collection of the exact position of respondents using a Global Positioning System (GPS). At the time of the interview the interviewer geocoded each respondent with a hand-held Garmin unit as the reference point for the social network data. Figure 4:4 shows the geocoded locations of participants.

The small number of respondents who were not interviewed in their own homes were asked to provide addresses so the information could be entered later. The location of all network actors was essential for the completion of spatial data for the mapping and analysis processes. While information was needed on the location of network ties and activities care was taken to ensure that this information was also confidential and de-identified. This was especially important in terms of ethical process. Informed consent had been received from all respondents but the people and groups nominated in their social networks had not provided informed consent.

Figure 4:4 Map of Respondent Locations



At the time of data collection only first names were provided for all network contacts and locations were kept broad; for example the name of town or city where the person lived but not a street address. For network contacts that lived on farms the general region where the farm was located was used, for example: “*they live 10 kilometres east of Coonalpyn*”. When the social network information was recorded for analysis each network actor nominated became a coded link to the respondent, removing all identifying characteristics. For an example of social network information as coded data see Appendix Fourteen, where

K005\_1 may represent the respondent's daughter, who lives in the same town, has contact with her mother daily, mostly in person and the contact has a high level of reciprocity.

In order to ensure that respondent confidentiality and privacy were maintained all geocoded respondent information was randomised within a two kilometre radius. This ensured that regional and community information remained relevant but individual respondents could not be identified. After the randomisation of the location points the information for each respondent was entered in an excel table along with the rest of the network information. This information formed the database that was used in the GIS ArcMap program to create the maps, layer and compare data, and analyse the network properties.

## 4.8 Study Limitations

In addition to the limitations and points of consideration already discussed in this chapter the following points should be noted.

### *4.8.1 Capturing People, Social Networks and Communities in Space and Time*

Without longitudinal data the complex and dynamic history of a respondent, a personal network or a community cannot be fully represented. Relationships with other people change continuously: people die, 'fall out' with each other, change jobs, move away and so forth while new people join groups, move in next door and so on. This study is in fact just a 'snapshot' picture of respondents' personal social networks, with little opportunity for incorporating the temporal nature of how this network has, and will continue, to develop and change. Some temporal information has been collected about residential moves, previous employment, length of time living alone, place of birth and age. However, there was no information collected on short-term and long-term relationships within social networks that may have added value to the temporal aspects of social network analysis. In hindsight, this would have been valuable information to collect.

### *4.8.2 Social Networks with Indefinite Boundaries and Complex Structures*

As suggested in Chapter Two Australia is increasingly a mobile society, where people are less likely to spend their entire lives living and connecting with people in one location (Castells, 1996; Bauman, 2003; Delanty, 2003). This has meant that social networks are more likely to extend beyond the boundaries of home locations, potentially, becoming global social networks (Crow, 2004). Exploring social networks, as opposed to community-

based networks, requires acknowledging and incorporating indefinite boundaries, 'fluid' less-defined relationships and a variety of ways of maintaining connection with network members. This requires a much deeper and more complex analysis than simply connecting an ego and network actor as two nodes with a line or edge. 'Researchers have to find out precisely what passes along these lines before pronouncements about the nature of the network can be made' (Crow, 2004, p.10). Every effort has been made with this study to incorporate the complexities of distance, relationships, reciprocity and modes of connection but the fact remains that at some point in the analysis these details are categorised and averaged to become quantitative data. The use of qualitative observations and quotes from respondents helps to acknowledge these complexities to some degree.

#### ***4.8.3 The 'Shades of Grey' in Social Networks***

Respondents were asked to nominate network connections based on the people, activities and groups that were important to them at this time in their life. These were then categorised as network roles: family, friends, neighbours, service providers, groups and activities. As data collection commenced it soon became apparent that these categories were by no means clear and mutually exclusive. Regular examples of children and grandchildren who provided informal services, neighbours who were family members, best friends who were neighbours, service providers who were friends or neighbours regularly occurred. In addition, the two nominated categories of groups and activities were not always easily defined. These 'shades of grey' were overcome by asking the respondent themselves to nominate which category they would like a person to be included in with a note in the margin indicating the other relationship.

A pattern of self-nomination of groups and activities became clearer after the first thirty or so interviews were completed. Most groups were defined as those gatherings of people where a formal meeting process was conducted, where the group had office bearers and a certain defined structure. Activities were generally defined as groups or gatherings where membership and attendance was less formalised. Once this pattern of self-categorisation was established the same categories were used consistently so that Church, for example, did not become a group for some personal networks and an activity for others.

#### ***4.8.4 The Social Network as a Complete List***

People are fallible, expecting them to recall a perfect list of their social network contacts at a particular time and day is not reasonable. Most people, if asked to perform the same

activity a day or two later or a month later, would probably remember additional people, and forget others. Additionally they may record the frequency, reciprocity and mode of contact very differently at different times. For example: a distant cousin may have visited recently that would not have been included on a list at another time, or a daughter who lives in another state may have just visited for a week or two, changing the respondent's perception of usual frequency and mode of contact. The social network data collected here can only be considered indicators of typical patterns of personal network connections – not as definitive examples.

#### ***4.8.5 The Network List as an Indicator of 'Rank' or Importance***

Respondents were encouraged to start their lists anywhere they liked. The interviewer took great care to describe examples of network connections they might like to consider in varying order so as not to bias the ordering of the list in any way. For example: at some interviews it would be suggested that they might like to consider 'friends, neighbours, family etc' for their list and at other times the suggestion would be to consider 'groups, activities, family members, friends etc' and so on. Most respondents chose to begin with family members, in particular children. Children who lived geographically closer were more frequently mentioned first.

No assumptions have been made about the importance of the network nominations based on their order in the list. Pahl (2005) suggests that most people mention family first as this conforms with social norms, rather than as a significant indicator of strength of relationship or importance. It was also noted that respondents often found it easier to begin the listing process by breaking the process down into smaller categories; for example they would list all their children first, then move on to neighbours or groups or friends and so on. The 'tail end' of the network list was often less organised with 'forgotten' sisters and cousins, distant friends and additional activities mixed up together as life stories were developed and discussed. This process highlighted the need to consider carefully the value of examining the order of the social network lists. In hindsight, additional time could have been taken at the end of the listing process to ask participants to rank the people on the list by importance as has been done in other studies, or perhaps nominate the three key important people on their lists (Pahl and Spencer, 2004).

#### ***4.8.6 Defining Community Boundaries***

Census data is usually defined by administrative boundaries, often coinciding with local government boundaries, rather than utilising more localised meaningful social boundaries (Hugo and Smailes, 2003; Smailes, 2006; Hugo, 2007b). This study utilised Census boundaries, SLAs in particular, to define the sample population areas and to compare survey data with Census data for these regions. Data was used at SLA level because of the limitations of data at more localised levels such as the Census Collection Districts (CDs) in rural areas. A CD generally covers the area a single Census collector could reasonably cover, usually about 220 households, with numbers often much smaller for rural and remote regions (Hugo, 2007b). Therefore in rural regions such as this study, much of the CD data is problematic for analysis due to the variations in population densities. Yet, much of the data at the SLA level, the next level of aggregated Census data, may not reflect meaningful local communities and regions for respondent data, because they are arbitrary constructs (Fischer, 2001). This is known as the modifiable unit area problem (MAUP).

People do not live out their lives defined by administrative boundaries (Hirshorn and Stewart, 2003; Smailes, 2006). Services are usually accessed from a wide variety of places. In rural areas particular services (such as medical specialists) may be accessed from urban and regional locations on a regular basis. Additionally people do not necessarily socialise within these boundaries. Therefore this study needs to look at the sample population and the region in general at dual levels of analysis – as personal communities without defined boundaries and as administratively bound demographic and political regions.

#### ***4.8.7 Ecological Fallacy***

It is important to note that while point data (spatial data related to individual respondents) can be aggregated up to areal data defined by the CDs and SLAs the opposite is not possible. Information obtained from Census data does not necessarily hold true for the individual (Hirshorn and Stewart, 2003; Freedman, 2004). ‘Using area-based data to draw inferences about underlying individual-level processes and relationships poses considerable risks’ (Fischer, 2001, p.14754).

#### ***4.8.8 Generalisability of Data***

This study is not considered to be generalisable to the wider population. It relies on a non-random sample population of a particular cohort from a particular region of a particular state in Australia and therefore is really only a representation of itself. It is not indicative of

social network patterns for all South Australians, all older people or all rural dwelling people but rather presents an opportunity to explore the process of spatialising social network patterns of older people in order to discuss the importance of space, place and time on the social lives of older, rural dwelling people in South Australia. It is hoped that the process used could be extended into studies of other groups – urban dwelling older people, other rural dwelling cohorts and other population groups in order to further the theoretical directions used in this study.

#### **4.9 Conclusion**

Consideration in the design of the survey instrument and the approaches to data collection, appropriate to older people, has been given in this study. Further ethical implications of collecting and utilising geo-coded social network data in specific, reasonably sparsely populated, rural regions were considered and dealt with sensitively and appropriately. While there are limitations to the study design, many of these are the result of the paucity of resources (human, financial and temporal) available in carrying out a PhD.

The spatial-boundedness of personal networks is an important factor contributing to the health and wellbeing of the individual as well as the strength and character of communities and neighbourhoods. Understanding the socio-temporal qualities and spatial structures of personal networks requires integrating multiple methods of data collection and analysis to present a holistic understanding of ageing, connectedness and rural living.

Three clear themes have emerged that connect this study to Lawton's theoretical directions of environment and ageing and the ensuing SPOT framework developed more recently by Wahl and Lang (Lawton, 1980, 1998; Wahl and Lang, 2004; Wahl *et al.*, 2004). These three themes: people, place and time will be addressed in following chapters.

## CHAPTER 5: AN OVERVIEW OF SOCIAL NETWORKS

### 5.1 Introduction

Social networks are the connections and linkages people have to other people; to family members, friends, work colleagues, service providers, people they meet in their neighbourhood, in groups and as a part of regular activities (Antonucci, 2001; Pahl and Spencer, 2003; Phillipson *et al.*, 2004; Fiori *et al.*, 2007). As time passes and individuals grow older their social networks change and adapt (Antonucci *et al.*, 2004; Peace *et al.*, 2006; Wenger and Keating, 2008). Partners and friends grow older too, there are births, marriages, deaths, people move house, new services are introduced, interests and activities change, neighbours come and go, and the places these interactions occur in also change. Understanding how older people feel connected to their social networks and local communities requires understanding not only their social networks but also their life course history, the places they live and interact in and the spatial aspects of their network connections.

Examining the social networks of older people in rural environments provides insight into the social structures and supports needed in these places. Exploring the social network properties of rural older people also provides some insight into the impact of the changing nature of Australian rural communities for those who continue to live there. This Chapter provides a description of the properties of participant social networks. Section 5.2 looks at elements such as network size while Section 5.3 examines the different categories of social network ties. These network properties are then utilised as variables in Chapters Six and Seven.

### 5.2 Social Network Characteristics

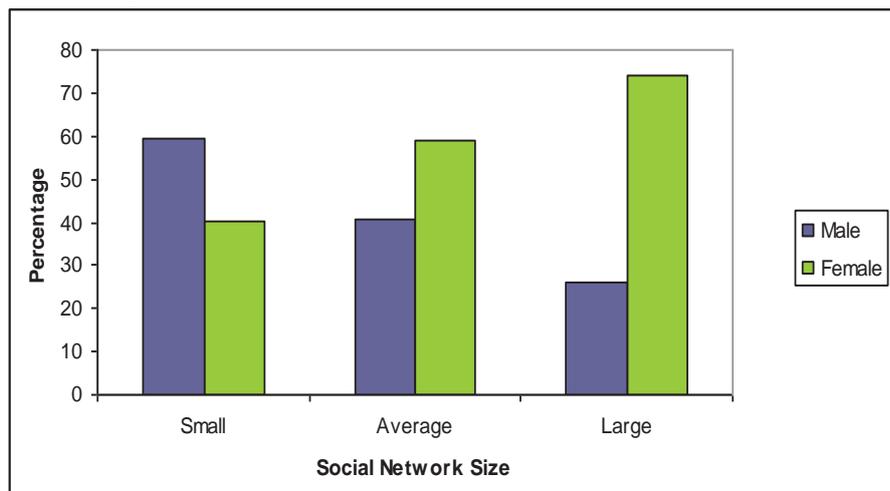
Participants were asked to nominate the people, groups and activities that were important to them at this time in their life. They were encouraged to begin their lists anywhere they liked and through a process of informal discussion and general prompts, time was taken to ensure that a comprehensive picture of their networks was recorded. This utilised an approach to ego-centric social networks using 'intimate ties' (important people in your life at this time), rather than nominating everyone the individual knows (Phillipson *et al.*, 2004). Another approach utilising 'relationships and roles' is also incorporated into this process, whereby nominated network ties are prescribed by formal categories (Phillipson *et al.*,

2004). Participants were asked to provide information on the role each person played in their network; the frequency of contact, the mode of contact, the level of reciprocity and importantly for this study, the location of each network tie.

### ***5.2.1 Size of Participant Networks***

Social network size varied greatly, the smallest being four nominated network ties and the largest 43 network ties, with a mean of 14.3 network ties. The median social network size was 13, with the 25th percentile being nine and the 75th percentile being 19. Even after removing the high outliers (three networks contained more than 40 ties, the rest were 32 ties or less) the median remained at 13. This is comparable with other social network studies with older people. Knipscheer, de Jong Gierveld, van Tilburg and Dykstra (1995) found in their Dutch study of the social networks of over 4,000 older people that the average number of network ties was 13.4, with children being nominated most frequently and familial ties making up over half (59 percent) of all network ties. Pahl and Spencer's (2004) study in the United Kingdom with 62 older people showed personal communities ranging from just five nominated ties to 41 nominated ties and Antonucci et al (2004) found that on average less than ten close relationships were nominated in social networks, and most of these were family members.

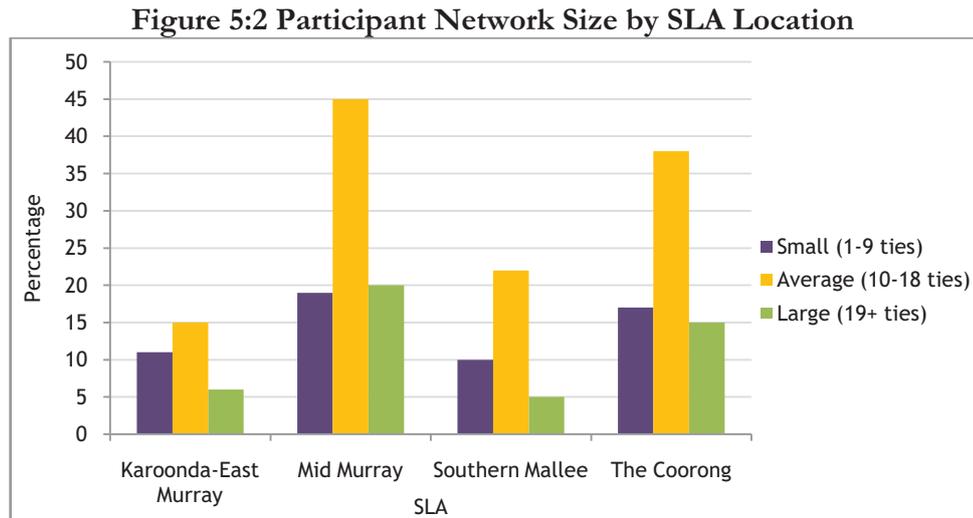
Utilising the 25<sup>th</sup> percentile of nine network ties as an indicator of a small social network ( $\leq 9$ ), and the 75<sup>th</sup> percentile of 19 as an indicator of a large network ( $\geq 19$ ), with networks that fall between these two figures representing average networks (10–18 ties), some relationships between participant demographic variables and network size can be observed. Most obviously network size varies by gender, with females representing the majority of larger networks, as shown in Figure 5:1. Males ( $n=95$ ) recorded a median of 11 network ties and females ( $n=128$ ) a median of 14 network ties. This is congruent with findings in other research that suggests that generally women tend to have more extensive networks than men, with men more reliant on support from their spouses and less from other network ties (Field and Minkler, 1988; Antonucci, 1994; Stein and Hunt, 2002). As an indicator of the gendered influence on spousal relationships in this study 66.3 percent of male participants were married compared to 52.3 percent of females, and 42.9 percent of women were widowed compared to only 21.1 percent of men.

**Figure 5:1 Social Network Size by Participant Gender**

\* Males, n = 95 and Females, n = 128

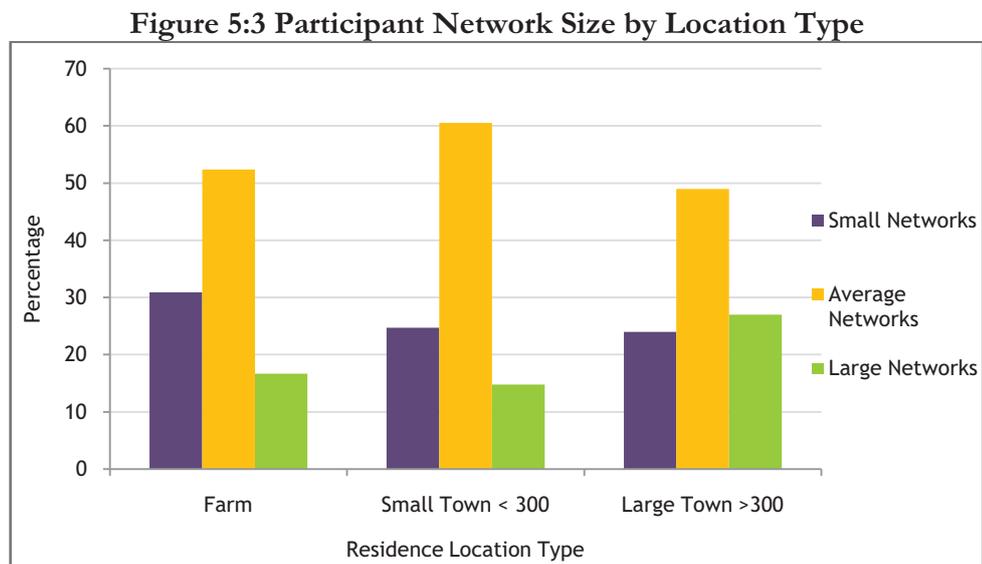
Females had a slightly higher median in the categories of family (6.5 ties compared to 5.6 ties for males) but no real differences in the number of children network ties. Females also had slightly higher medians for groups (0.9 compared to 0.7) and service providers (1.2 compared to 0.96) but only slight differences for neighbours and activities. Female participants were more likely to nominate friends in their networks compared to males, with females having a median of 2.95 friends in their networks compared to 1.95 for males. Friendship properties are discussed more fully later in this chapter.

Social network size, in particular small and large social networks, also varied according to location within the study area by SLA. Figure 5:2 shows that the proportions of small and large networks are approximately even for the Mid-Murray and The Coorong SLAs while the Southern Mallee and Karoonda-East Murray SLAs show greater numbers of small networks compared to large networks. This may be the result of two differing factors: both the Karoonda-East Murray and Southern Mallee SLAs have lower population densities, fewer townships and therefore potentially 'smaller pools' of potential social network ties (McPherson *et al.*, 2001). Secondly, both the Karoonda-East Murray and Southern Mallee SLAs had greater proportions of participants with a longer length of residence, which also shows some association with smaller social networks (see further discussion on length of residence in Chapter Seven).



Small Networks n = 57, Average Networks n = 120, Large Networks n = 46

Other key participant variables, such as settlement type (farm, small town or large town), living status (alone, with a partner or with family), general physical health (SF36 general health score) and self-rated health (SF36-Q1) all show some association with network size, as seen in Figure 5:3, 5.4 and 5.5.

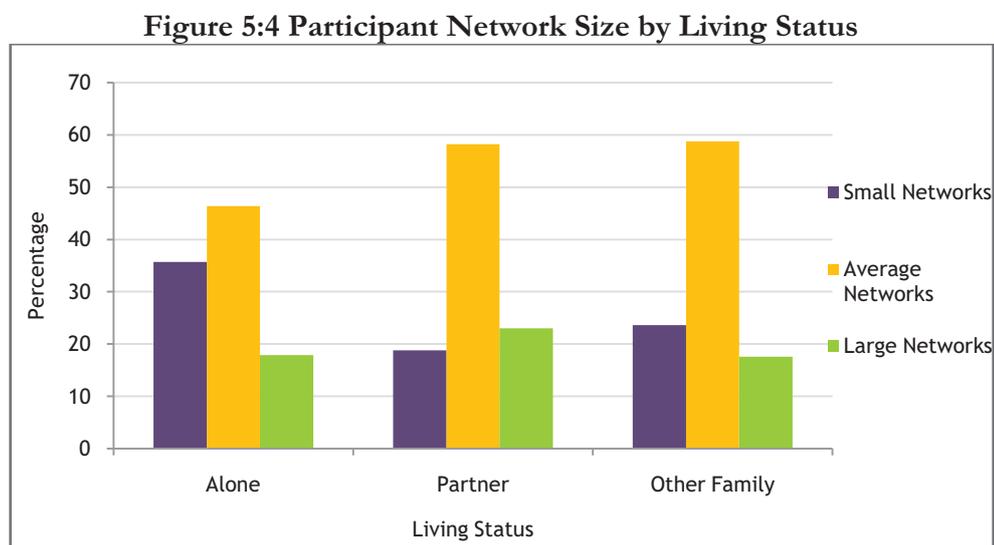


Small Networks n = 57, Average Networks n = 120, Large Networks n = 46

Figure 5:3 shows that of the 42 participants living on farms 31 percent had small social networks compared to just over 20 percent of those living in small or large towns. Large social networks were more evident for participants living in large towns compared to those in small towns and living on farms. No other studies could be found to compare these results. While the differences for this variable alone do not equate with a significance

difference in social network size, with most networks regardless of location being of an average size, this must be taken into consideration along with other variables, such as living alone and poor health.

Figure 5:4 highlights the greater likelihood of having a small social network for those participants who lived alone, compared to those living with others (either a partner or other family members). This is supported by the findings from the large, seminal Dutch study (NESTOR-LSN) on the living arrangements and social networks of over 4,000 older people (Knipscheer *et al.*, 1995). This study found that on average, respondents living with a partner had the largest networks while those that were living in residential care settings had the smallest networks.



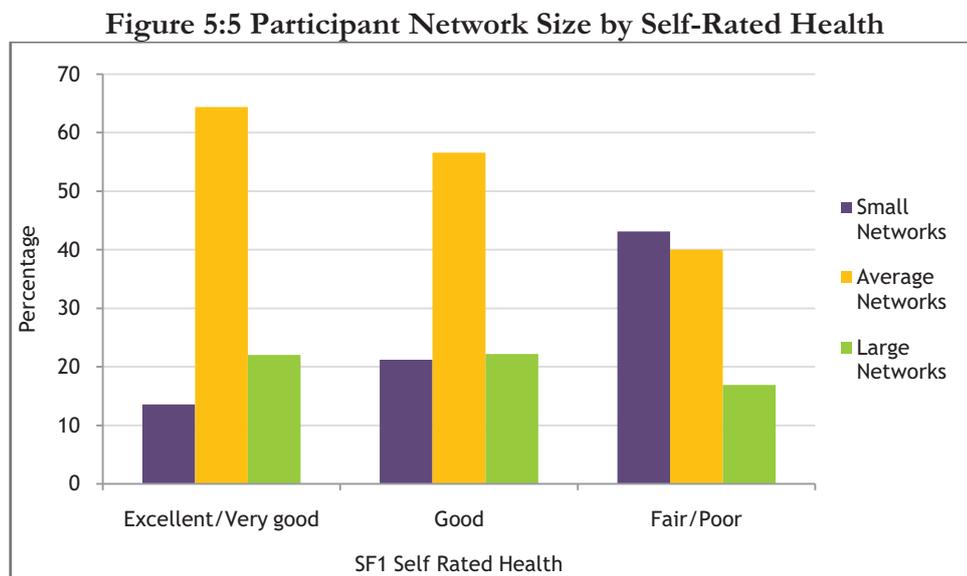
Small Networks n = 57, Average Networks n = 120, and Large Networks n = 46

This is an important point when considering that lone person households are increasing in the older population. The proportion of South Australians aged 65 years and over living alone at the time of the 2006 census was 31 percent, compared to 28 percent in 1996 (Hugo *et al.*, 2009).

Health and wellbeing have been linked to social networks. Central to this theory is the idea that ‘the structural arrangement of social institutions shapes the resources available to the individual and hence that person’s behavioral and emotional responses’ (Berkman *et al.*, 2000, p.845). Research indicating the positive relationship between health and social networks is quite robust (Cohen and Syme, 1985; Rogers, 1996; Cattell, 2004). Studies have consistently showed that a lack of social ties, such as close friends, relatives, marital status

and affiliation with social and voluntary organisations will predict mortality (Cohen and Syme, 1985; Cohen, 1988; House *et al.*, 1988). ‘Public health experts posit that the association between social networks and health is now as strong as the epidemiological evidence linking smoking and health’ (Lubben and Girona, 2004 p.21).

It is impossible within this study to be definitive about causal links between the size of social networks and health. There are several reasons for this: the study sample is small and purposive with limited health data collected; this was not the main focus of data collection and therefore extensive lifecourse health data was not collected. In addition, the study is not longitudinal and therefore cannot assume any causal link between changes in health issues and changes in social network size. However, there is an obvious association between health and social network size as can be seen from Figure 5:5 and Table 5:1.



Small Networks n = 57, Average Networks n = 120, and Large Networks n = 46

Self-reported health assessed by a simple single-item measure has been shown to be a robust predictor of health and well-being (Avery *et al.*, 2006; ABS, 2007c; Mavaddat *et al.*, 2010). The SF1, the first question in the Short Form 36 (SF-36) (Ware, 2002), was used as a measure of subjective health in this study. There is evidence in Australia that as people age the levels of people rating their health as ‘fair’ or ‘poor’ increase (Avery *et al.*, 2006; ABS, 2007c). Community participation (in the form of voluntary work and involvement in sporting and recreational groups) is also positively associated with self-reported ‘very good’ and ‘excellent’ health (ABS, 2007c). Smaller social networks were more strongly associated

with fair or poor self-rated health and both good and very good/excellent self-rated health and average or large networks.

The SF36 Health Score contains thirty-six questions about various health attributes. The questions can be examined separately or combined to produce an eight scale profile of health (physical functioning, role-physical, pain, general health, vitality, social functioning, role-emotional and mental health). These can then be used independently or combined to produce two summary measures: Physical Health Summary Score and a Mental Health Summary Score. A combination of these two scores gives a general health score, with a higher score representing better self-rated health. Utilising the medians for participants' general health score as well as the two summary scores there was a clear relationship between health and social network size, as shown in Table 5:1.

**Table 5:1 Participant Network Size by Median SF36 Health Scores**

	SF36 General Health Score	SF36 Summary Physical Health Score	SF36 Summary Mental Health Score
Small Networks (n = 57)	53.9	56.4	70.2
Average Networks (n = 120)	65.8	70.5	80.0
Large Networks (n = 42)	66.2	75.6	83.9

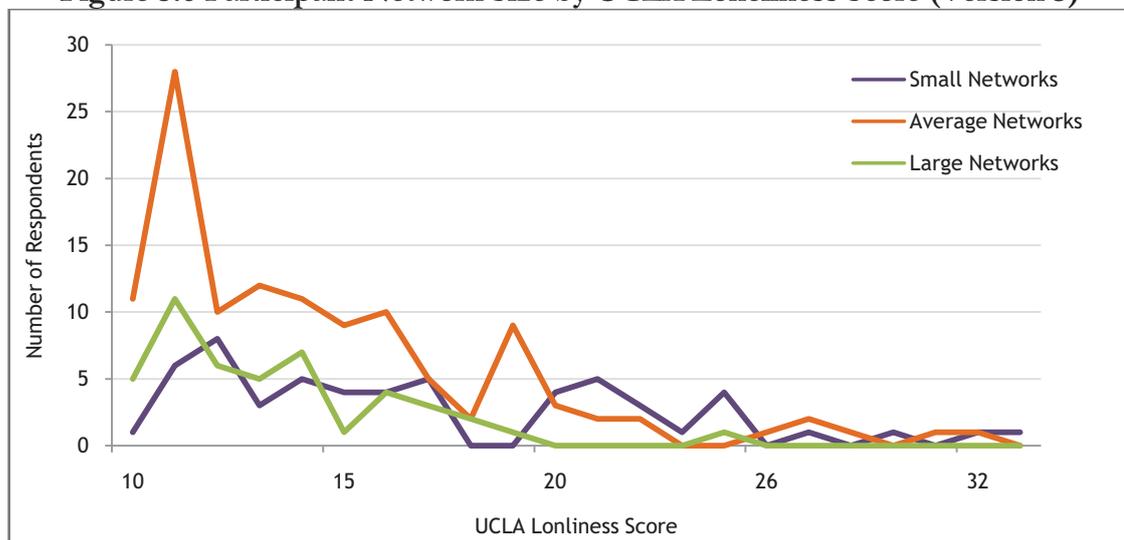
The UCLA Loneliness Scale was also incorporated into the survey. Overall respondents scored well on the UCLA Loneliness Scale with a median score of 14 and a 75<sup>th</sup> percentile of 17, out of a possible score from 10 to 40 (with a high score indicating increased feelings of loneliness). Compared to Russell's (1996, p.26) validation and reliability assessment of the Version 3 UCLA Loneliness Scale, where older adults had a median score of 31.5, participants in this study appear to have a very low average. As the survey was conducted face-to-face this result should be considered as perhaps reflecting a 'public account' of respondent's level of loneliness; that is, the version that they think the interviewer wishes to hear or the socially acceptable description of their feelings (Victor *et al.*, 2000).

As discussed in Chapter Two there are clear differences between social isolation and loneliness and the number of ties within a social network may not directly reflect feelings of loneliness (Townsend, 1973; Victor *et al.*, 2000; Andrews *et al.*, 2003; Victor *et al.*, 2005; Franklin and Tanter, 2008). While loneliness, living alone and social isolation are all inter-related concepts there are no causal links suggested in this study. Other studies have

suggested that it is the quality of social connections that matter more so than the quantity and that satisfaction with social relationships is a better predictor of perceptions of loneliness, not the number of social network ties (De Jong Gierveld, 1987; Pinquart and Sorensen, 2001).

As Figure 5:6 shows, however, study participants with high loneliness scores were more likely to have a small social network, particularly after a loneliness score of 20, with only one respondent with a large social network recording a loneliness score of more than 19. Supporting the idea that the quality of social networks ties matters more than the quantity; small social networks were not limited to participants with high loneliness scores but instead occurred at all levels of the UCLA Loneliness Scale. This suggests that while small social networks may not be indicative of someone who is lonely a large social network is perhaps indicative of someone who is not likely to be lonely. What this study was not able to elaborate on are those participants who had always had a small social network throughout their lifetime and those who have more recently had reductions in their social networks (through poor health, widowhood, residential movement and so on) and compare their perceptions of loneliness. This would be an opportunity for further research into loneliness and the role social networks can play in perceptions of loneliness.

**Figure 5:6 Participant Network Size by UCLA Loneliness Score (Version 3)**



As can be seen from this discussion on overall social network size different variables such as living alone, location, self-rated health and self-rated loneliness do appear to have some correlation with network size – although no causal relationships can be established. For many of these variables the differences appear slight, but what needs to be considered in

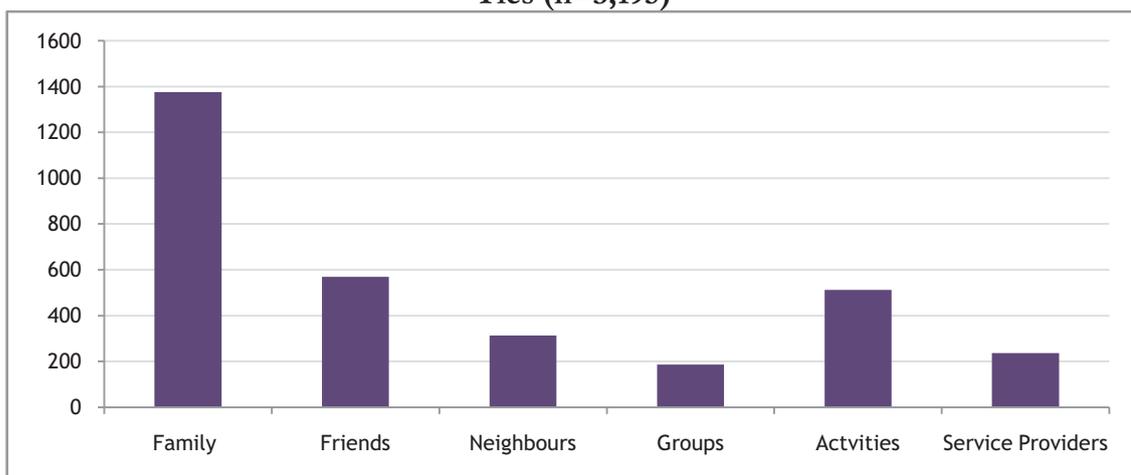
more depth is the impact a *combination* of these variables may have on social network size, and therefore by implication, availability of informal support.

### 5.3 Social Networks by Category of Network Ties

Overall the 223 participants nominated a total of 3,195 network ties, in six different categories. Categorising social network ties was not a simple task for two main reasons. Firstly, not every network tie had a single role. For example: some neighbours were also considered close friends, for others a family member also provided a lot of informal services, or a service provider was seen as a friend. It was left up to the respondent to decide which category network ties should fall into. Secondly, the distinction between formal groups and activities proved difficult. After the first series of interviews were carried out a clear pattern of categorisation began to emerge for groups and activities, as described in Chapter Four. All other similarly nominated ties were grouped the same to ensure consistency. Generally groups were viewed as network ties that involved a formal structure, such as association membership, monthly meeting dates and office bearers, while activities had less formal structures and attendance patterns.

Figure 5:7 shows that family comprised the largest percentage of social network ties at 43.1 percent; friends represented 17.8 percent of social networks, neighbours 9.8 percent, groups 5.9 percent, activities 16 percent and service providers 7.6 percent.

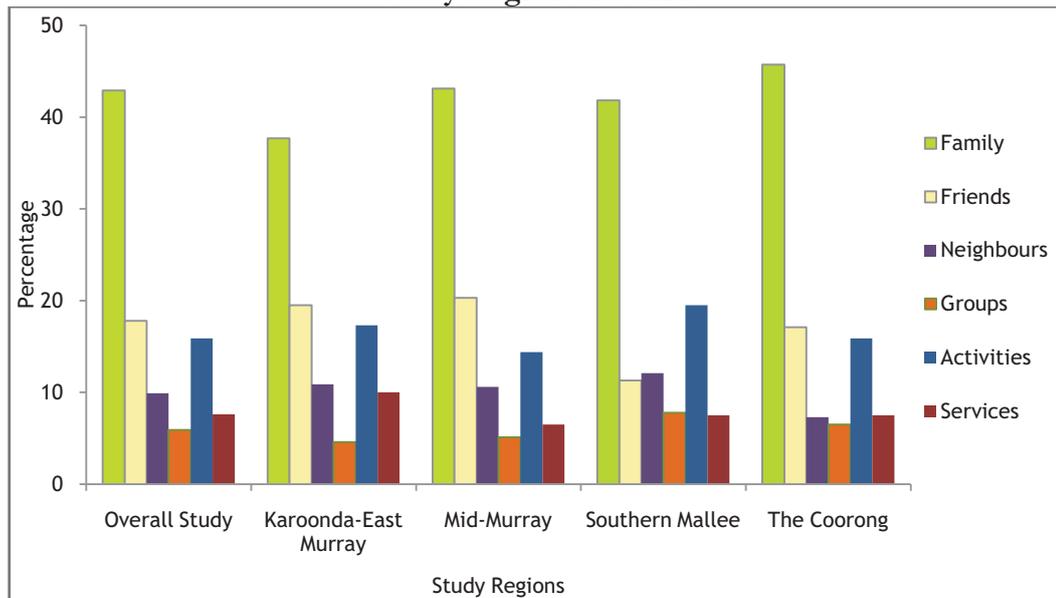
**Figure 5:7 Categorised Network Ties as a Percentage of all Nominated Network Ties (n=3,195)**



The large Dutch NESTOR-LSN study found that family (excluding partners) represented 59.4 percent of all network ties for the 4,059 older people in the study, with children being nominated most frequently (van Tilburg, 1995). This study also reported that the most

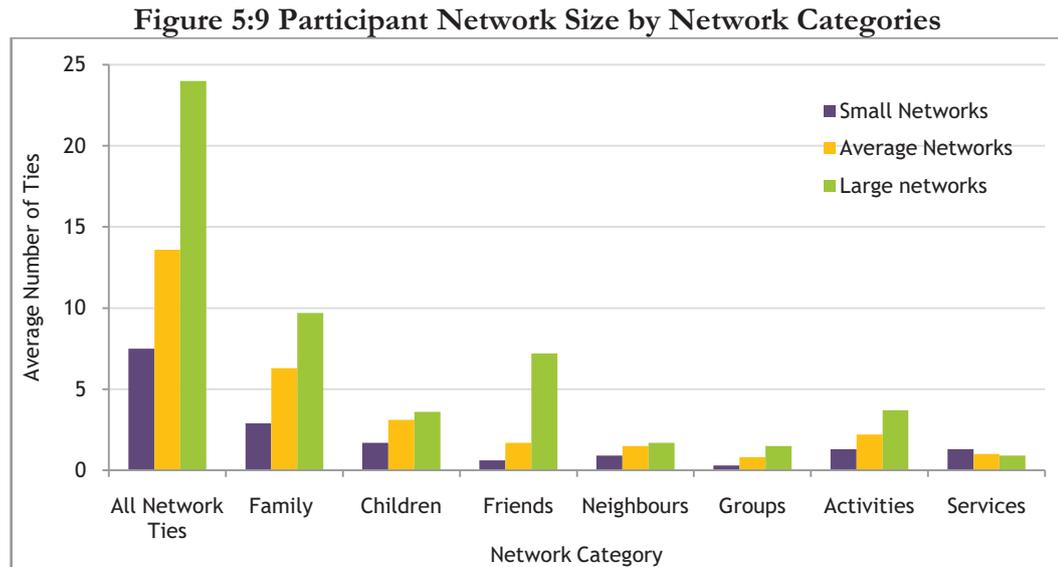
commonly nominated non-kin ties were neighbours, followed by friends and then fellow members of organisations and groups (Knipscheer *et al.*, 1995). A similar pattern of distribution by network tie categories was found in this study and was consistent across all four SLAs in the study area, as shown in Figure 5:8. Although of note is the lower proportion of friends nominated by Southern Mallee participants.

**Figure 5:8 Categorical Network Ties as a Percentage of Network Ties by Overall Study Region and SLA**



Small social networks were smaller across all categories, with the exception of services, where small social networks had the largest proportion of nominated service provider ties, as shown in Figure 5:9. The biggest difference in a network category can be seen in nominated 'friend' ties where the difference in proportion between small and large networks was greatest; indicating that participants with large networks were much more likely to nominate a friend than participants with small or average networks.

Also of interest is that larger networks not only had larger numbers of nominated family ties overall but also reported larger numbers of children ties. This is explained by the high proportion of participants with small social networks nominating no children ties (21.1 percent) compared to 4.2 percent and 8.7 percent of participants with average and large networks respectively.



Small n = 57, Average n = 120, and Large n = 46

### 5.3.1 Family Network Ties

Previous studies have shown familial ties to be an important component in social networks, particularly for informal support (Knipscheer *et al.*, 1995; Wenger, 1997; Antonucci, 2001; Phillipson *et al.*, 2001; Antonucci *et al.*, 2004; Wenger and Keating, 2008). In the South Australian ‘State of Ageing’ report (Hugo *et al.*, 2009, p.60) 80 percent of older people stated that support in a time of crisis came from family, while friends and neighbours were only nominated by about half this proportion. Participants in this study usually nominated family members first; particularly their children, regardless of location or frequency of contact.

For some participants proximal children were nominated first, for others children were nominated in birth order. Three participants nominated having a parent in their social network (all mothers), and another 5 nominated having an aunt. The majority of other nominated kinship ties were siblings, relations through marriage and adult grandchildren.

Each nominated tie represented either an individual or a family unit that lived together, thus a daughter, son-in-law and grandchildren living as a family unit represented one network tie denoted by the person the participant had the most contact with. Variations to this occurred when adult grandchildren had regular contact with a participant independently, for example a grandson who worked on the farm or came to care for the garden regularly or a grandchild no longer living with parents that maintained telephone or

email contact. In these cases a separate network tie was created. Most participants talked about maintaining contact with one person in a household and families visiting as a group.

*“I usually just talk to my daughter and she tells me the rest of the family’s news”* (M033, female aged 70 years)

*“The grandkids come with my son and his wife sometimes, but now that they are older we don’t see them as much as we used to, we just hear what they are up to.”* (M006, female aged 76 years)

The median number of nominated familial network ties was five. No-one nominated *only* familial network ties but 67 participants (30.5 percent of the study population) nominated a large number of familial network ties, represented by being greater than or equal to the 75<sup>th</sup> percentile of 8 kinship ties. For 26.8 percent of participants who nominated a large number of family network ties family represented 80 percent or more of all nominated social network ties. In fact, for 71.6 percent of participants with a high number of familial network ties family comprised 50 percent or more of their total social networks compared to family representing 25.4 percent of total social network ties for the remaining participant group. This suggests that the greater the number of familial ties the less need (or perhaps less time) for other social network ties. In addition to this, only 11.9 percent of those participants with large numbers of familial ties had no localised family ties compared to 24.7 percent of participants overall. It is impossible to know if perhaps more familial ties were nominated *because* they were proximal ties or if these participants would have nominated just as many familial ties regardless of their location. Proximal and distant ties will be discussed further in Chapter Six.

Two participants did not nominate any family members at all in their social networks and a further 11 participants nominated just one family member. Of these 13 participants six did not have any children, seven lived alone and nine had small networks. Only two of these 13 participants nominated a proximal familial network tie and only one a proximal child tie. This would suggest that this was a subset of participants vulnerable to a lack of informal support. Overall, 21 participants (9.4 percent) did not nominate any children in their social network lists. This included those who never had children, those with no living children and those who chose not to include estranged children on their lists. Of this group with no nominated children network ties 57 percent had small networks, compared to 25.6 percent of the overall study population with small social networks.

In terms of policy and service delivery it is this group of older people who are more vulnerable to a lack of informal support systems in later life. As family structures change, with lower birth rates, higher divorce rates and more dispersed family ties the likelihood of people living alone with a lack of informal family support in old age is set to increase. This will require a different approach to fostering and supporting ageing-in-place.

A second subset of participants will be examined here briefly in terms of family network ties. Eight of the 223 participants in this study identified themselves as Aboriginal. For the most part the data pertaining to this small subset have been incorporated into the study as a whole as it impossible to draw any conclusions about this group from such low participation numbers. However it is important to acknowledge that in terms of social networks, particularly family ties, this group showed some variations from the main study population. The eight Aboriginal participants all had average to large social networks; the smallest was 12 and the largest 22 network ties. On average these networks consisted of 74.8 percent of nominated family ties, with the remaining ties being activities and services. Most of the participants were involved in local Ngarrindjeri community activities, in particular the Elders meetings and barbeques, but it was family that was considered the most important part of any social network. Almost all participants nominated core family members but then explained that there were many others that they could nominate if they wanted to. As one participant put it:

*“They’re the main ones, the main family, but I have hundreds of other cousins I could talk about, and we see each other all the time...if they’re coming down here we catch up or if I am going to Adelaide...we see each other all the time, we stay in each other’s houses and we see each other at funerals and things like that, all the time” (C017, male aged 74 years)*

Half of the participants in this group were living with extended family members (children and grandchildren) and two participants were the main carers for some of their grandchildren. But in contrast to this, three of the Aboriginal participants were living alone, but talked of family living nearby.

### **5.3.2 Friend Network Ties**

Friends were the second largest category of nominated network ties, representing 17.8 percent of all nominated ties. General associations, such as the people participants ‘said hello to in the street’ or knew casually through groups and activities were not nominated individually as friends. Some participants did, however, nominate people they knew

through groups and activities but who were also considered close friends. For example, a participant who plays bowls on a regular basis may have nominated their bowls partner as a friend but not all the people they see regularly at the bowls club as friends.

This point needs clarifying because generally the number of nominated friendship ties did not reflect the number of people a participant associated with socially outside their family. Many participants commented on the number of people they knew in the town, or that they would stop and chat to in the street, or see at the pub or bowls club but that were not listed separately as friends.

*“Well you run into just about everybody at the post office in the morning, and you stop and say hello and have a chat, but I wouldn’t list them all as friends. Mind you if you didn’t turn up for a few days they would be asking after you to make sure you were all right.”* (M016, male aged 77 years living in a small town)

It can therefore be suggested that nominated friendship ties are not a good measure of social capital. However, other social community connections that occur regularly on an informal basis indicate that social capital for this particular group of the population is strong in these rural communities.

While 88 participants (39.5 percent) did not nominate any localised friend ties, 164 people (73.5 percent) did not nominate any dispersed friend ties. Interestingly, 79 participants (35 percent) did not include any friends in their social network lists. Despite female participants generally having larger social networks than male participants there was very little difference in the proportions with no nominated friend ties by gender, with 35.8 percent of male participants and 35.2 of female participants nominating no friend network ties. However gender did appear to be a factor at the other end of the spectrum with nearly twice as many females (40.6 percent) nominating 3 or more friends than males (24.2 percent).

The overall size of social networks appears to be a factor related to the number of nominated friend ties. As shown in Figure 5:9 participants with large social networks were more likely to nominate friend network ties. Only 10.9 percent of this group did not nominate any friend network ties compared to 61.4 percent of those participants with small social networks. Additionally location appears to influence the nomination of friend network ties, with 52.4 percent of farm dwellers not nominating any friend ties compared to 32.1 and 31 percent respectively for participants in small towns and large towns,

emphasizing the fact that friends are more likely to be formed from more frequent, localised contact with others.

### ***5.3.3 Neighbour Network Ties***

Most participants (78 percent) nominated at least one neighbour in their social network. As expected, neighbours were consistently considered to be people that lived within close proximity. This is comparable to the findings of Phillipson *et al* (1999) where respondents could all nominate a neighbour and considered neighbours as people that lived in close proximity, definitely no further away than their own street.

Phillipson *et al* (1999) suggested that most respondents recalled high levels of contact with neighbours; but found that levels of intimacy and reciprocity with neighbours were slightly lower (measured by asking how many neighbours had come into the respondent's home). Most participants in this study spoke of knowing who the neighbours are, and having an understanding that neighbours 'looked out for each other'.

*"You know they're always there...you know if you needed to call on them they'd help out but it's not like we're in each other's pockets all day long."* (C025, male aged 76 years, living in a large town)

Of the 22 percent who did not nominate a neighbour many spoke of knowing who their neighbours were. For some living in holiday shack communities neighbours were infrequent residents on weekends and school holiday periods and therefore not someone they were close to.

*"See those next door, they really only come up here in the school holidays, they are a lovely family, always say hello and offer to do things for you but of course you hardly ever see them...and the other side well they're here nearly every weekend but they keep to themselves pretty much."* (M060, male 94 years, living in a small community on the river)

Others had younger neighbours who were new residents and/or who worked during the day and although they often knew who they were by name, did not feel particularly close to them. Some considered a neighbour a good friend, someone they looked forward to having contact with every day; this was often the case for people who lived alone.

*"Well I just love living here, Glad next door...we are the closest friends, we get together every afternoon for a chat and a cup of coffee. I'd be lost without my neighbours."* (M057, female aged 79 living in a group of retirement units)

Location appears to correlate with the likelihood of nominating a neighbour, with 36 percent of farm dwelling respondents not nominating any neighbours, compared to 12 percent of participants living in a small town and 24 percent in large towns.

#### ***5.3.4 Activity Network Ties***

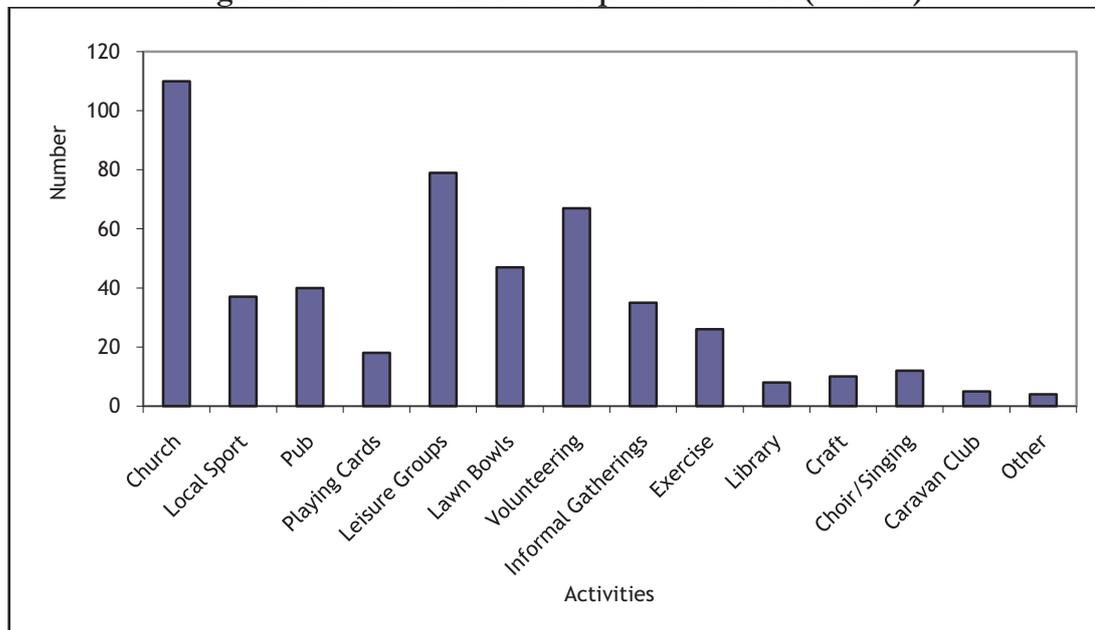
Activities were the third most common nominated network tie, with almost three times as many activity network ties (512) being nominated than group network ties (187). Participants most commonly nominated between one and four activities, with 14.3 percent of participants not nominating any activities (20 percent of all males and 10.2 percent of females). Activities varied from more formalised group based activities such as Church and socialisation groups specifically for older people through to informal community and family gatherings such as a regular ‘birthday group’ that meet for lunch once a month or a ‘cousin’s day’ twice a year, see Figure 5:10 for the full classification of activities.

Almost half of all participants nominated Church as a regular activity – for most participants this was weekly or fortnightly and for all participants it was an activity carried out in their local community, or alternating between their local town and the next. Many lamented the loss of local Church services, with some Churches being closed down and others having only monthly or fortnightly services. Some, however, had found this to be an opportunity to become even more involved in their local Church by becoming lay preachers for interim services or volunteering in a pastoral role to support a more regionalised Church minister or pastor. For example, one female participant in Karoonda would attend her own weekly Church service but would also play the organ for another Church on a fortnightly basis because this congregation had no-one to play anymore.

Although churches and church services close for a variety of reasons declining attendance is usually the driver (Clark, 2010). Clark (2010) states that in the 1950s 44 percent of Australians attended church on a regular basis but by the 1980s this had fallen to 24 percent, where it has remained steady ever since, although much of this attendance is now at ‘New Age’ and Pentecostal churches. By the 1990s only nine percent of church goers were under the age of 30 and more than 40 percent of Anglican and Uniting Church members were aged over 60 years. In small rural towns Clark (2010) attributes the loss of churches and church services to declining populations and improved transport services to larger towns. The church has often played a pivotal part in rural community life for many older people; it is often the site of weddings, baptisms and funerals as well as community

events that are associated with a sense of belonging. Closure of these institutions in small rural communities often means ‘both sociological dislocation and the breaking of the nexus between place identification and spiritual experience’ (Clark, 2010).

**Figure 5:10 Nominated Participant Activities (n = 512)**



Senior leisure groups or ‘day care’ programs were the second most commonly nominated activity. Across this region 13 day activity programs were offered<sup>16</sup>, often co-located with hospital facilities and run as part of the Home and Community Care (HACC) state funded programs. For many this was a regular activity because transport to and from the group was provided, making access easier. Most groups were held weekly, some fortnightly or monthly. This was seen as an opportunity to ‘catch up’ with other community members on a regular basis. Many of these groups have localised memberships of over 30 older people and some participants attend more than one group in their area.

<sup>16</sup> These programs are offered at: Mannum, Karoonda, Lameroo, Pinnaroo, Tailem Bend, Peake/Jabuk and Meningie through the SA Country Health hospitals, and at Morgan through the Mid-Murray Council. An 8<sup>th</sup> program is offered at Mt Pleasant hospital just outside the Mid-Murray council region which offers a program, including transport, once a week to residents living in the central region of the Mid-Murray council district. One not-for-profit group offers similar socialisation programs in Mypolonga, Tailem Bend, Mannum and Palmer. All are HACC state funded programs.

Going to the pub occasionally was considered by many as an opportunity to socialise informally with other community members. For one participant going to the pub meant he felt a part of a community social setting even if he didn't speak to anybody while he was there.

*I like going to the pub a couple of times a week. Often I just sit there and listen to all the chatter going on around me and it feels like you are part of a crowd, even though you might not say a word.* (C002, male aged 72 years, living alone)

Volunteering was another important activity for many participants. In 2006, South Australian retired men and women provided an average of 5.9 hours and 3.5 hours of volunteer work per week respectively (Hugo *et al.*, 2009). Volunteer rates were found to be greater in regional and rural South Australia than they were in Adelaide across all age groups (Hugo *et al.*, 2009). Volunteering roles for participants in this study included helping in the local Opportunity Shop (often attached to a Church), delivering Meals on Wheels, helping at a local sporting club or school or regular visiting to a local hospital or nursing home. One participant, aged 92 years, was still making and delivering homemade biscuits to "the old people" in the local nursing home on a weekly basis where she would stay and have morning tea. For this participant this was a way of still contributing something to her local community, but an opportunity for a social visit at the same time. In much the same way, this same participant would 'do the flowers' for the bowling club tables every week. Although she no longer was able to play bowls she remained connected to her local club through this volunteering role.

### ***5.3.5 Groups as Network Ties***

Formal group network ties represented the smallest proportion of all social network ties (5.9 percent), with 187 nominated group ties. In fact, over half (51.1 percent) of participants did not nominate any formal groups in their social networks and only 14 participants (6.3 percent) nominated more than two group network ties. Groups most commonly nominated included Probus, Lions, the Returned Service League (RSL), Legacy, Senior Citizens, the Country Women's Association, Church Guilds, the Women's Agricultural Bureau and Red Cross.

For many participants group memberships were a part of their past social networks, and while they were no longer a member of a group they spoke of groups they had been involved with in the past as still being an important part of their identity (although these

were not included as current social network ties). For some, the lack of current group membership was because of increasing poor health and/or frailty. For others it was because of the closure of groups in their community.

Participants commented on the demise of groups in their areas, particularly Senior Citizens and Country Women's Association groups due to lack of membership and more often, a lack of people willing to be office bearers to keep groups operating. Others spoke about no longer wanting to take on the responsibility of running community groups such as these, or the burden of continuous meetings and fund raising activities as they grew older, without the support of younger members.

*"Well, I feel I have done my time on committees and working for the community, I'm in my 80's now and there comes a time when you just have to give it up."* (K003, female 82 years)

*"The young ones are all working or too busy you see, so they aren't joining. So it's just us old chooks, and there's only six of us. I don't know what will happen when we go? I guess the group will just close down."* (C003, female 83 years)

*"You know, it's the same ones on each committee, we run the Guild, the Red Cross, the CWA... some days we just stay and have one meeting straight after another – we just switch hats so to speak! That's what it's like in these small towns."* (M026, female aged 70 years)

Foskey (1998) found that as rural family resources decreased so did voluntary community resources with competing, multiple demands on active community members to maintain community organisations, networks and activities. Foskey (1998) points out that many older community members feel burdened with both the number and complexity of voluntary community responsibilities that they have maintained for years. While many participants in this study lamented the loss of community groups there was also a sense of ongoing responsibility and commitment to under-resourced, dwindling community groups. This effect was more common in smaller towns across the study region.

A very different impact was described in one of the larger, growing 'tree change' communities on the River Murray where the number of volunteers for Meals on Wheels exceeded the number of clients of the service. This meant that a volunteer's 'turn' on the roster was infrequent and some people felt their volunteer services were being underutilised. A second participant in this large town described how recent very poor

health had forced him to retire from two community groups he had been a member of for several years, but he felt that his inability to attend had not been missed because of the growing, changing membership of the groups in this town:

*“Well I have been a member of the historical society and the Probus here since I retired here 8 years ago but I can’t go anymore, I don’t go to anything anymore, since I got really sick. Not that anyone seems to have noticed! It’s only a couple of the old regular members who stay in touch the rest probably don’t even know who I am, there is that many new ones joining.”*

(M032, Male)

### **5.3.6 Service Providers as Network Ties**

Service providers were not nominated very often, even when the interviewer was aware, through general observation, that provision of services was a part of the participant’s home life or when recruitment had been made through a service provider. One hundred participants (44.8 percent) did not nominate any services in their social networks, and a further 57 (25.6 percent) nominated only one service in their networks. Phillipson *et al* (2001, p 262) found formal service provision and community support maintains a ‘low profile’ in the lives of older people, with some older people being determined to maintain autonomy and independence.

The participants in this study were not asked specifically about aged care and community care services that they used. Those participants nominating just one or two services tended to view services and service providers more broadly as general community services. Service providers who were included in social network lists included doctors, gardeners, local shop keepers (who were often also the local postal officer), and the local publican.

Aged care specific services that were nominated included in-home carers, out-reach (home) nurses, the Red Cross ‘Tele-cross’ caller<sup>17</sup>, Meals on Wheels volunteers and transport providers. A small number of participants considered service providers to be very important social connections, describing a very close relationship with regular service providers.

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<sup>17</sup> The Red Cross in South Australia provides a volunteer service where older, isolated people are called every morning for a short chat. Some participants felt this was a valuable connection to other people and spoke fondly of the friend who called every morning; other participants were in fact Telecross volunteers themselves, calling other older people.

*“Then there’s ‘Margie’; she’s my carer and she comes every day to shower me and set the house right for the day. She even takes me to the hairdressers and takes me shopping....she’s like a daughter to me, she’s like family.”* (S036, female aged 87 living alone).

Just 32 participants (14.3 percent) nominated three or more services. All of these participants included at least one provider of age specific services, 75 percent of them included at least two. Of this sub-group of 32 participants 65.6 percent were aged over 80 years of age, 50 percent had no localised children network ties and a further 37.5 percent had only one localised children network tie, 50 percent lived alone and just under 60 percent were no longer driving. This suggests that the greater the isolation and age the more likely it is that age specific services play a more important role in ageing-in-place.

#### **5.4 Conclusion**

This chapter has explored social network properties, providing some insight into the social connections and support networks of older people in rural environments. One important network property is size of social networks. Network size provides an understanding of the connection participants have to others, and acts as an indicator of potential instrumental and emotional support (van Tilburg, 1995). In this study network size differs by many variables including self-reported health, living alone or with others, and location. While many singular factors appear to have a relationship with social network size it is the cumulative effect of a combination of these factors (such as being male with poor health and living alone in a small town) that may have the biggest impact on social networks and potential social support. It is the combination of such network facets that Wenger *et al* (1997; 2002; 2008) used to define the support network typologies described in Appendix Three.

It is clear that family remain an integral part of the social networks of older people (Litwak and Longino Jnr, 1987; Wenger and Tucker, 2002). Almost half (43.1 percent) of all nominated network ties in this study are family ties. Litwak and Longino (1987) suggest that if instrumental support is not based on remuneration there has to be a ‘long history or future potential of exchange between the older person and the helper to build norms of duty or love, or both, necessary to motivate helpers’ (Litwak and Longino, 1987 p.268). Friends tend to be the same age as the older person and therefore are less capable of carrying out a caring role, neighbours may be younger and fitter but are less likely to have developed a long-term relationship with the older person to build expectations of regular

care and assistance; whereas children have both the sense of history and the bonds of duty and love that are necessary for taking on this commitment.

The importance of family (and their location) for this role is strengthened in this study when considering that 57 percent of participants with no nominated children network ties has small social networks. Wenger's evolution of social networks suggests that this group is most likely to require formal support services as they grow older (Wenger and Keating, 2008). Also of particular interest are the subset of participants who nominated no family members or only one family member in their social networks and what this implies for their ability to access informal support when required and how this impacts on their decisions about ageing in-place.

However, within this study families are by no means the only aspect of social networks. Friends and activities combined also represent over one third of all network connections. Surprisingly, service provision only plays a small part in the make-up of nominated network ties, although it plays a greater role for those participants with small social networks. What must be remembered about the social network categories described in this chapter is that this does not capture informal community interactions (at the post office, at the local shops, in the street) with other community members that make-up the everyday lives of rural dwelling older people. These localised, informal encounters are impossible to measure and quantify in quite the same way and yet participants consistently described these interactions as being a part of their community life, their connections to others.

These informal localised interactions not only provide a sense of connection and place for the older person but in addition these connections strengthen the bridging social capital of the rural communities they live in. Social capital is not developed from individuals acting on their own; 'measures of social capital are largely measures of linkage, of networks' (Johnson *et al.*, 2003). While elements of social networks, such as family, may be seen as what Putnam described as bonding social capital, other elements of social connectivity such as activities, groups, volunteering and the informal interactions in the community that are also described by participants can be seen as evidence of bridging social capital (Putman, 2000; Putnam and Feldstein, 2003). Together they create a sense of active citizenship and a strong community life (Onyx and Leonard, 2000).

Informal, localised interactions within the community, in combination with the social network ties described in this chapter, not only provide a sense of community but also work together to create a sense of identity and place attachment for the older person (Peace *et al.*, 2005, 2006). Social networks portray a great deal of information about who people are, their sense of place and their life experiences. When asked to discuss the people and activities that were important to them at this time in their lives participants in this study also described past activities and associations, the people and places they had known before and memories associated with those people and places. In addition to providing a sense of identity and history, a discussion of social connections provides context for a sense of place. This sense of place attachment is part of an individual's social identity portrayed through their social activities and relationships (Fried, 2000; Wiles, 2005a; Peace *et al.*, 2006).

As suggested in Chapter Two, identity is built on the convergence of social relationships, physical places and time; with individuals strengthening their sense of place attachment and identity through regular activity, social experiences and memories (Fried, 2000; Cresswell, 2004; Wahl and Lang, 2004; Smailes, 2006). This supports Massey's (1997) conceptualisation of place as an open, dynamic system of connecting social relationships. This chapter has highlighted the typical composition of social networks for older people in rural areas to form an understanding of place attachment and ageing-in-place in rural environments. Of interest is not only who is in the social networks of older people but also where those network ties are located. Distance and location play important roles in maintaining contact with social network ties and this will be explored further in Chapter Six.

# CHAPTER 6: SPATIAL PROPERTIES OF NETWORK TIES

## 6.1 Introduction

Ageing-in-place means not only ageing at home but also ageing within the local community; staying connected to social ties, and both formal and informal support networks (Wenger, 1997; Wiles, 2005b; AIHW, 2007b). While presence of a social network does not guarantee availability of informal support for older people ageing-in-place, elements of social networks, such as location and frequency of contact, are indicative of availability of informal support (Wenger and Keating, 2008). The neighbourhood environment and proximal social connections can be very important for older people, as they spend more time living and interacting within their local community (Wahl *et al.*, 2004; Peace *et al.*, 2006). Physical distance combined with reduced mobility often means that both the local community setting and the proximity of social network connections are even more pertinent for older people in small rural communities.

In order to understand social networks in rural settings it is necessary to consider the social and the spatial together. It is the combination of the two that create a unique rural ageing-in-place experience. As Massey (1984) suggests, it is the spatial form of social processes and social relationships that matters, and for older people in rural regions this creates unique patterns of localised and dispersed social network ties. The spatial elements of social networks represent the unique 'life spaces' of participants in this study in a particular time and place, as represented in Schnell and Yoav's (2001) model described in Section 2.2.

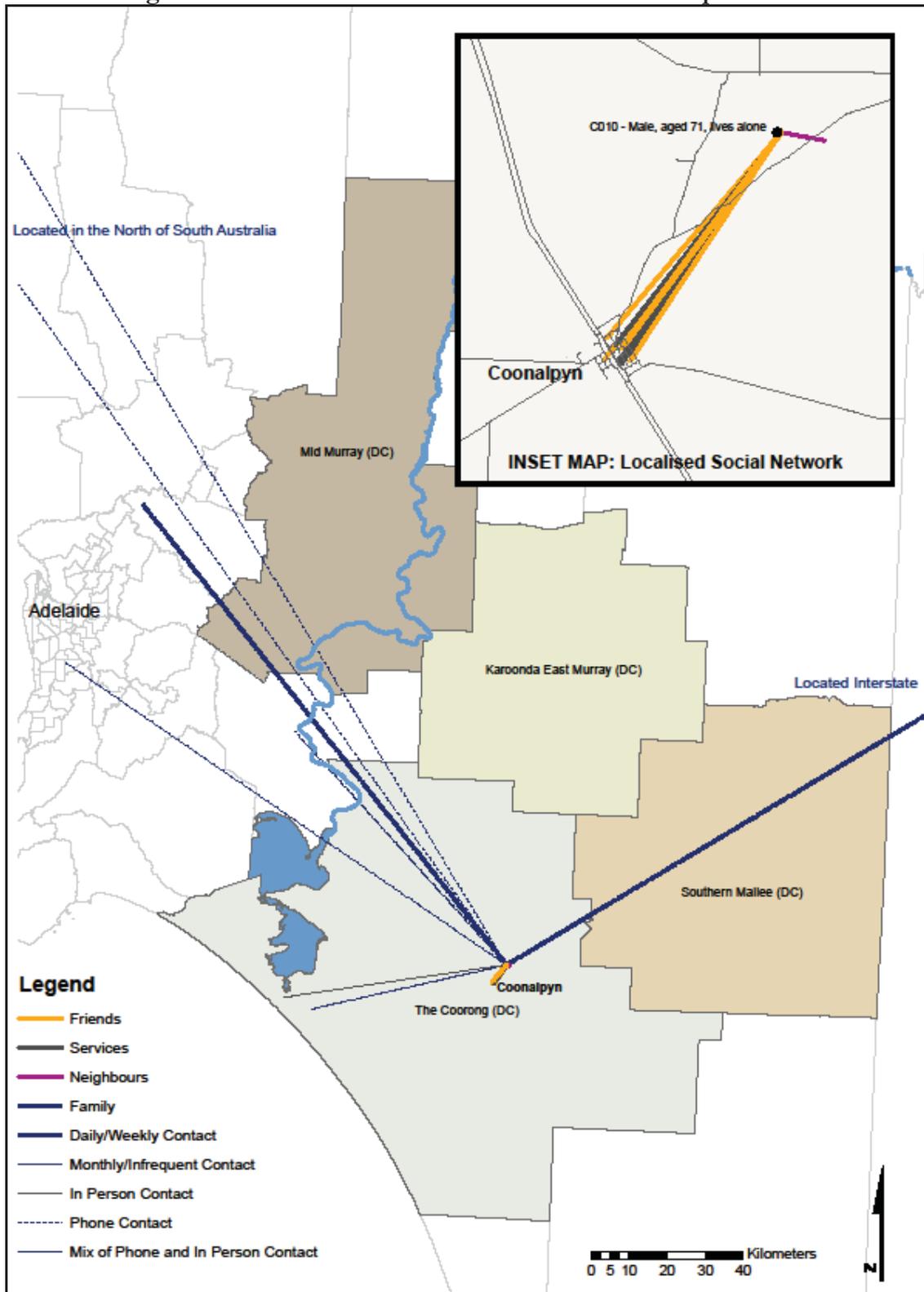
Social networks are based on personal location, the location of important others, the exogenous influences and circumstances of these connections, and internal resources that define the person and their relationships such as health, resilience and personality (Bidart, 2005; Peace *et al.*, 2006; Wenger and Keating, 2008). Where these network ties are located plays an important role in the type of instrumental support (both realised and potential) that is available to assist with ageing-in-place (Wenger and Keating, 2008). With this in mind, this chapter examines the nature and significance of the spatial elements of social ties, looking at both proximal and distant ties for participants.

## 6.2 Proximal and Distant Ties

Most people have a combination of proximal and dispersed social connections. This mix of localised and non-localised ties is particularly pertinent for people residing in rural localities where the distances associated with dispersed ties can be more pronounced (Smailes, 2006 172). Proximal and distant network ties are represented here as a geodesic measurement of distance between the participant and each of their network ties. This measure of distance is achieved by geocoding both the participant and their nominated network ties as described in Chapter Four. Social network maps are developed using these geodesic measurements of distances and can be used to represent different participant variables. For example, the map in Figure 6:1 depicts the social network or life spaces of 'Frank', a 71 year old male.

Frank has lived alone since he was widowed eight years ago. For the past three years he has been acting as caretaker of a farm where, in exchange for accommodation, he 'keeps an eye on' the farm. He self assessed his health as 'poor' on the SF1, has emphysema, diabetes and other ongoing health issues. Frank has lived in the area for five years; before his caretaking role on the farm he was renting a cottage on another nearby farm. Frank is undecided about staying in the region and says his future residential movements will be determined by the owner of the property, he will stay as long as he has free accommodation. Frank nominated 18 ties in his social network, eight of them family (three of those children), six friends, one a neighbour, and three service providers (none of these aged specific services). Frank did not nominate any groups or activities in his network. Nine of his network ties are dispersed (all eight family ties and one friend), the other nine are proximal. As can be seen from Figure 6:1, all of Frank's kinship ties (the blue lines) are dispersed across South Australia and interstate, with most contact being by telephone (indicated by the dotted lines). Frank's only frequent contact (considered daily or weekly and represented by the thicker lines) is face-to-face (represented by the solid lines) with service providers and friends in the local town, Coonalpyn, located about five kilometres away.

Figure 6:1 The Geo-Coded Social Network of Participant C010

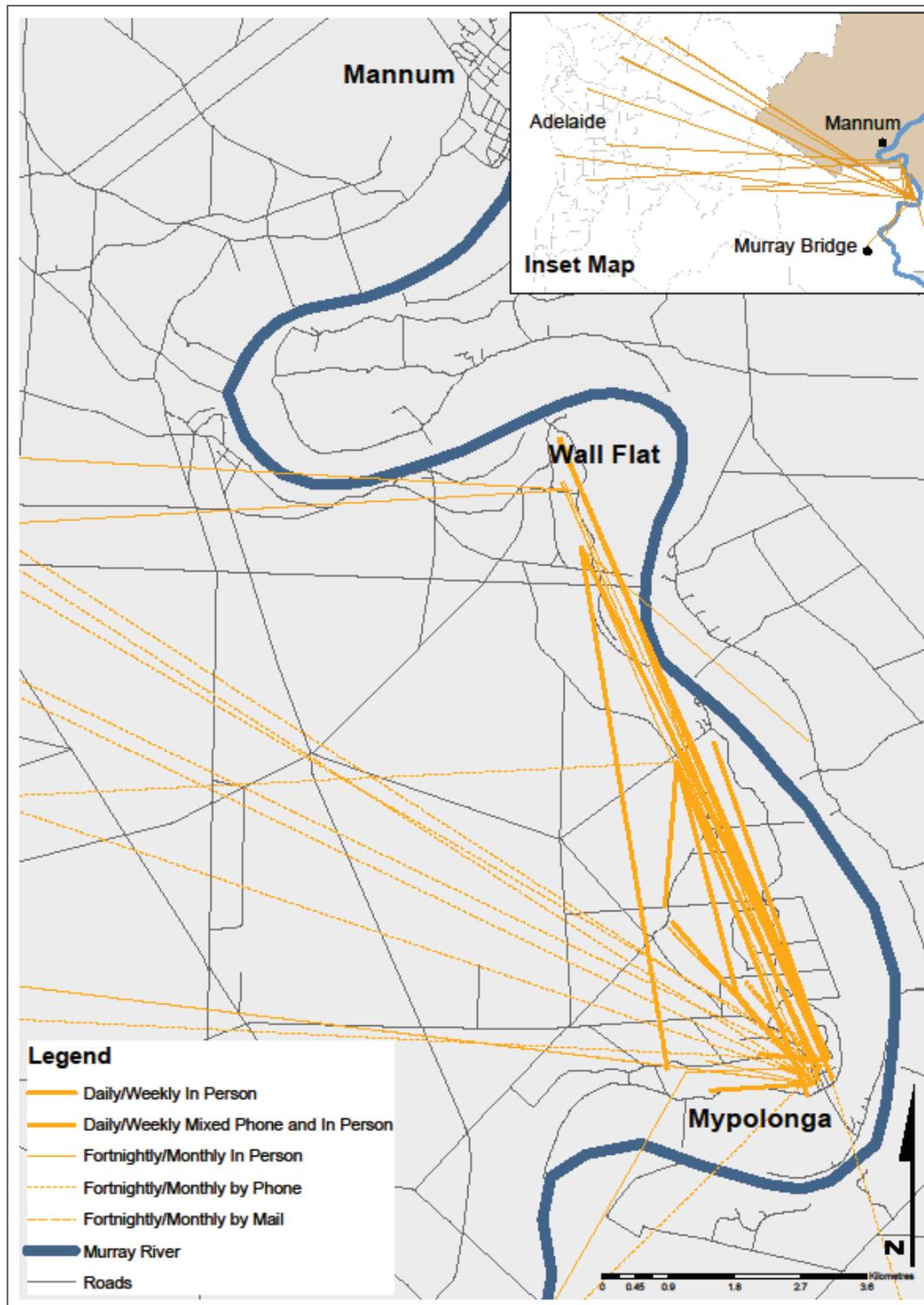


Spatial representations can also be made of separate network properties, such as the example in Figure 6:2 that shows the location of friend ties for all respondents living in the small co-located settlements of Mypolonga and Wall Flat. These two small settlements represent an area of intensive fruit block and dairy farming along the Murray River between the regional city of Murray Bridge to the south and the rural town of Mannum to the north. Wall Flat is in essence a conglomeration of farms and a few houses with no facilities other than a local hall. Mypolonga is the location of two local stores, a post office, several small agricultural businesses, and a primary school. Several local sporting teams and community groups utilise the local hall and football club, where a very active monthly HACC socialisation program is run for older people living in the area. The two settlements have a shared identity in many ways through sporting teams, fruit block and dairy industries. For example, many of the women interviewed from both towns talked fondly of having worked together in the past in the fruit packing sheds and had maintained these friendships.

Figure 6:2 highlights the close interactions of participants living within these two settlements. While the inset map shows that some friend network ties are maintained outside of the region (mainly in Adelaide) most interaction with friends occurs at the local level. In fact, all frequent interactions (represented by the thicker lines) and almost all face-to-face and 'mixed mode' (a mix of phone and face-to-face) interactions occur at the local level. It would be expected that interactions with proximal ties are more likely to be face-to-face and distant friendship ties were more likely to be by phone but interestingly this network map shows that frequency of contact was also influenced by distance, with all distant friendship ties being fortnightly or monthly contact, regardless of mode.

Also of note in Figure 6:2 is the influence of physical geography. There was only one recorded friendship tie across the river (unlike Murray Bridge and Mannum this area does not have a ferry service or bridge across the river). There were also limited friendship ties to the nearest larger towns, with only two friendship ties recorded in Murray Bridge and none in Mannum, both towns are approximately 15 kilometres away.

Figure 6:2 Friend Ties for Respondents Living in Mypolonga



Spatial properties can also be mapped for a particular group of respondents, or comparisons can be made between groups of respondents such as in Figure 6:3 which highlights the non-localised ties of short term residence participants (represented by the blue lines) and long term and life time participants (represented by the orange lines) in the

town of Mannum. Length of residence refers to the number of years the participant has spent living in the local community. Four categories are used for length of residence: short term (15 years or less), mid-term (16 to 40 years), long-term (41 to 65 years) and life time (66 years or more). For a more detailed exploration of these terms and length of residence as an influence on social networks refer to Chapter Seven.

**Figure 6:3 Comparison of Distant Ties for Short-Term Residents and Long Term or Life Time Participants in Mannum, Mid-Murray SLA**

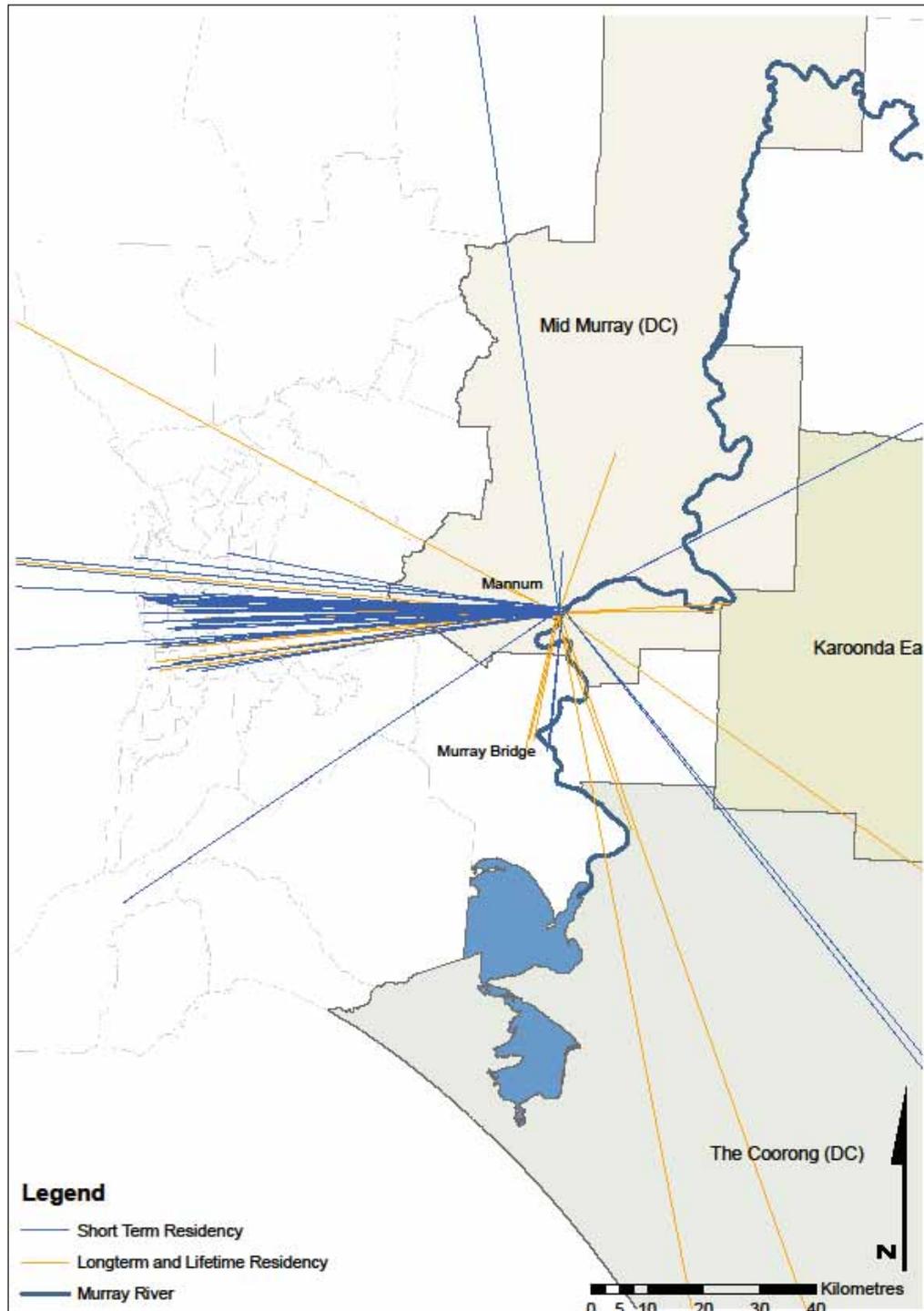


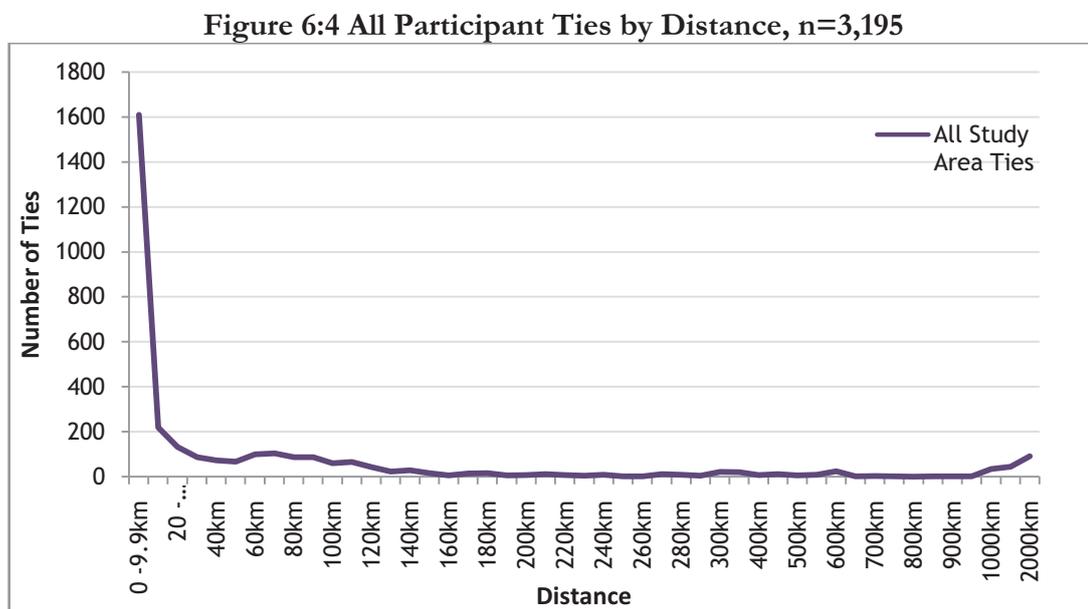
Figure 6:3 highlights the larger number of distant ties for short-term residence participants in the township of Mannum compared to long term and life-time participants. In fact the short-term residence participants ( $n = 6$ ) have a total of 62 non-localised network ties compared to the long term and life time residence participants ( $n = 7$ ) who have a total of 28 distant ties. What Figure 6:3 also highlights is the tendency for those distant network ties to be located in Adelaide, particularly for participants with short term local residence. While the long term and life time residents have some distant ties in Adelaide and other regions they also have ties to Murray Bridge and other centres located with-in the region.

All three of these examples highlight the complexity of proximal and distant social network ties. Each example shows a combination of proximal (localised) network ties and distant ties highlighting that social networks are neither completely place-based localised community networks nor are they only 'communities of interest', made up of distant ties. Instead, social networks represent a mix of the two.

This study affirms that a sense of connection for many people has the duality of localised connections but also maintaining other network ties over distance. For many participants a sense of the local is developed through daily activities and proximal network connections such as neighbours and friends. This is combined with a sense of place attachment developed from memories and history through long-term residence. Added to this, for most participants in this study, there was a sense of connection to a social network that extends beyond the spatial boundaries of local community or neighbourhood. For the majority of people living in these rural communities distant social ties included family and (some) friends who have moved away, or live in other places. For some participants distant network ties also included specialist services located in urban and regional centres, affiliations to national or state groups and/or people and activities associated with previous places of residence. Understanding proximal and distant ties within social networks provides some understanding of the nature and role of place-based community and dispersed 'communities of interest'.

Obviously proximal ties are considered to be localised, and several options were considered to determine how this could be measured, including consideration of SLA boundaries, travel time by car or a measure in kilometres. As SLA boundaries can be considered an artificial boundary and not necessarily a representation of local community (Smailes, 2006) this form of defining proximal ties was discounted. Travel time was discounted as being

too subjective; half an hour's drive for an older person who has a licence may seem a small distance compared to someone who no longer drives and has no access to suitable form of public transport. Instead, each network tie was examined as a measure of distance in kilometres from the participant. By utilising the geocoded points for each network tie in relation to the location of the participant a straight line measure of distance was obtained for every social network tie. It is acknowledged that this, in effect, is a measure of distance for network ties that may not represent the true travel distance (by road) between network ties. In fact, in most cases it is a slight under-estimation of the actual travel distance by road for reaching network ties, however it is easier to compute this distance using the ARCGIS program and it provides a good approximation of distances between ties. Figure 6:4 highlights all participant ties by distance for the study population.



However a simple measure of distance for all network ties does not take into account differences associated with the location of the participant or the type of network tie. Table 6:1 shows the distribution of network ties by distance for categories of network ties, including family, friends, services, groups and activities. Neighbours have been omitted from this table as nominated neighbour ties are proximal in nature, with 100 percent of neighbour ties in this study located less than 10 kilometres from the network ego.

Table 6:1 shows that all network tie categories had large proportions of localised ties, with family the only network category that did not have a majority of proximal ties. Although 44.6 percent of nominated family ties are located within less than 10 kilometres of the network ego the remaining 55.4 percent of family ties are dispersed across large distances. Activity, group and service network ties are all clearly proximal in nature, with over 70 percent of each category located less than 10 kilometres from the network ego and over 90 percent of each located less than 50 kilometres away. While the network category of friends had a slightly lower proportion of localised ties than the other non-family categories the majority of nominated ties were still located less than 10 kilometres away and over 72 percent were located within less than 50 kilometres.

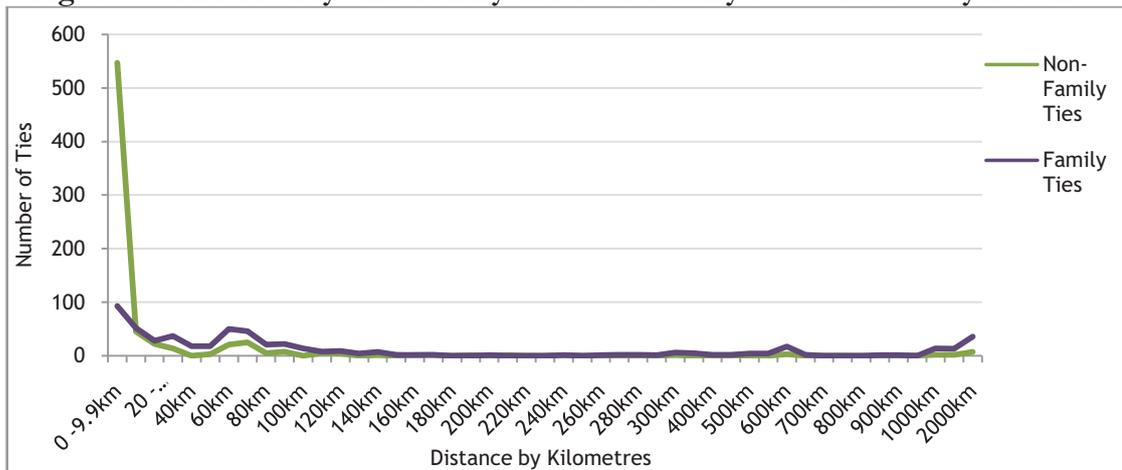
**Table 6:1 Percentage of Nominated Network Ties by Category and Distance**

Distance in Kilometres	Family	Activities	Friends	Services	Groups
0 - 9.9	44.6	71.5	58.2	70.9	72.8
10 - 19.9	7.6	8.7	5.7	12.2	9.1
20 - 29.9	4.5	2.3	4.3	8.4	4.8
30 - 39.9	5.1	11.5	2.6	2.5	1.1
40 - 49.9	2.1	0.4	1.9	1.8	2.2
50 - 59.9	1.9	0.4	1.4	1.8	0.5
60 - 69.9	3.3	0.5	3.3	0.8	1.1
70 - 79.9	3.6	1.6	4.1	0	2.1
80 - 89.9	3.1	0.4	1.9	0.4	2.1
90 - 99.9	3.1	0.5	3.9	0.8	1.1
100 - 149.9	7.5	1.7	6.7	0.4	1.5
150 - 199.9	1.9	0	0.9	0	0.5
200 +	11.7	0.5	5.1	0	1.1

As a result of this trend the examination of proximal and distant ties in the remainder of this chapter will explore family and non-family ties as two separate categories, with non-family ties including friends, neighbours, groups, activities and services.

Figure 6:5 compares family and non-family ties for the Mid Murray SLA. The clear majority of non-family network ties were located within ten kilometres of the participant and family ties were dispersed more broadly across distance. While proximal family ties are evident for each SLA there are clearly less defined patterns of family ties. By contrast, there are only small proportions of non-family ties after the initial ten kilometre measure. This represents a typical pattern found in all the study SLAs. The figures for the remaining three SLAs can be found in Appendix Sixteen.

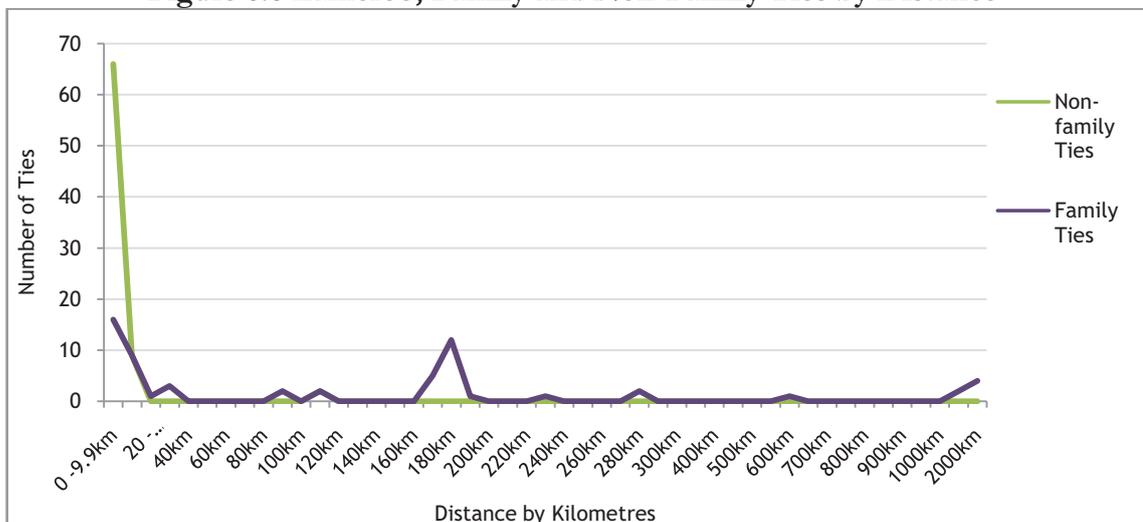
**Figure 6:5 Mid Murray SLA Family and Non-Family Network Ties by Distance**



Family Ties n=574, Non-Family Ties n=721

This pattern of network ties is replicated when the comparisons of family and non-family ties are made at the town level as seen in Figure 6:6, which shows network ties for participants living in the town of Lameroo in the Southern Mallee SLA. Again, the pattern of network ties remained similar for all main towns in the study region.

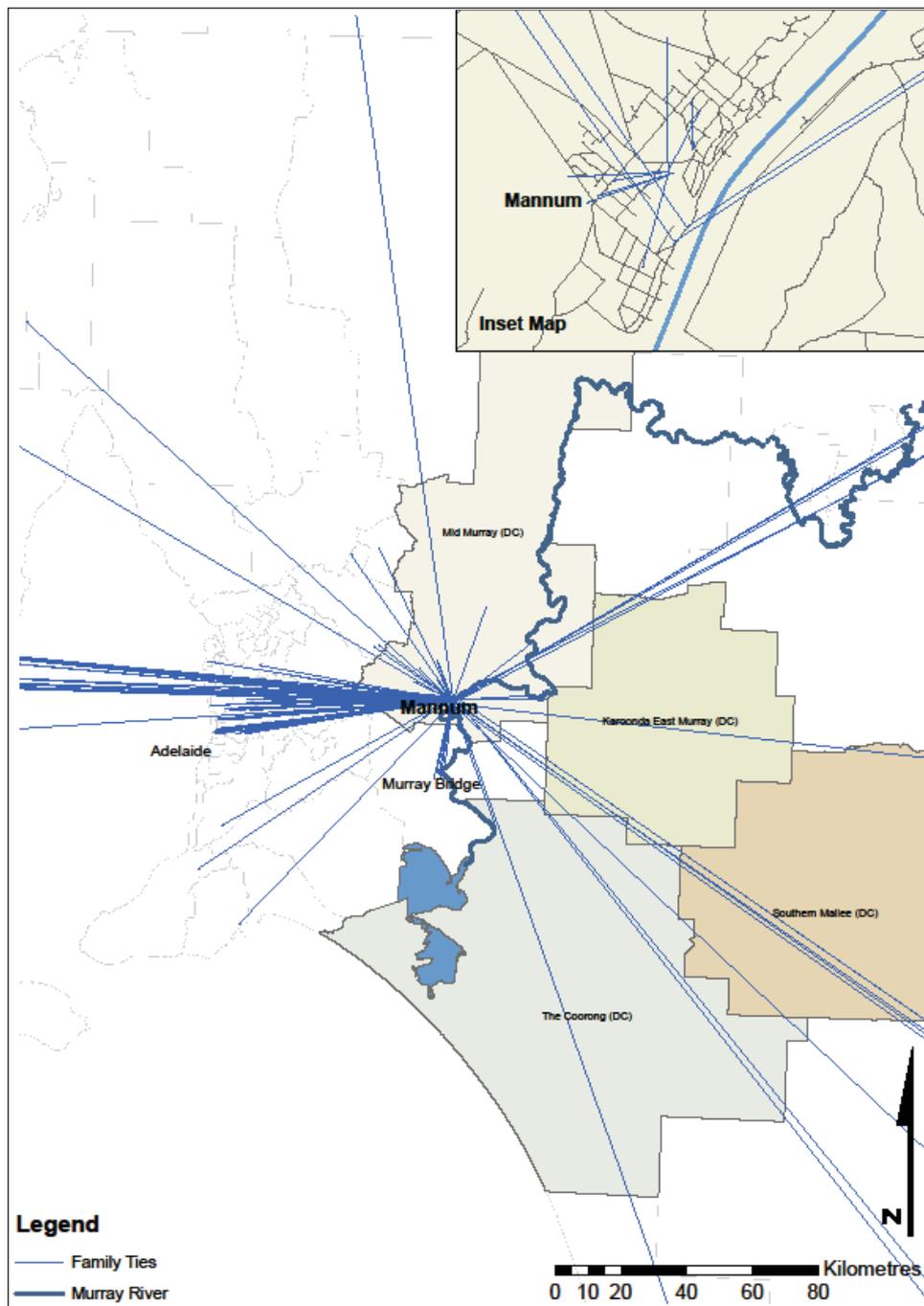
**Figure 6:6 Lameroo, Family and Non-Family Ties by Distance**



Family Ties n=61, Non-Family Ties n=77

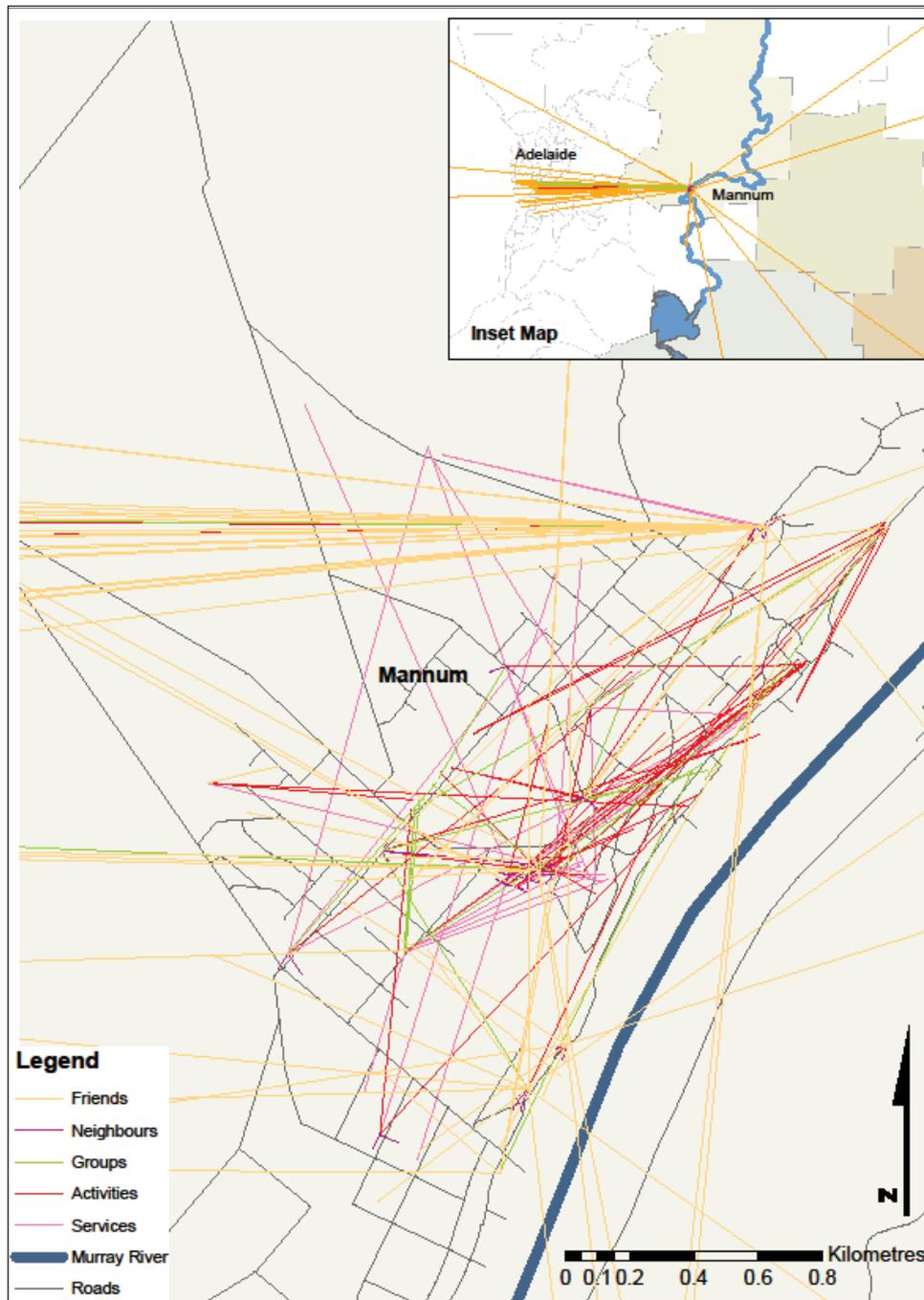
If these patterns are examined using a map the contrast between the location of non-family and family ties is obvious. Figure 6:7 shows the location of all family ties for the participants living in Mannum. The inset map shows only the localised family ties (all family ties less than 10 kilometres). Clearly there are very few localised family ties for this group of participants, with the majority of ties being located in Adelaide. The lines that extend beyond the map's boundary indicate nominated family ties that are interstate and overseas.

**Figure 6:7 Family Ties for Mannum Participants, Mid-Murray SLA**



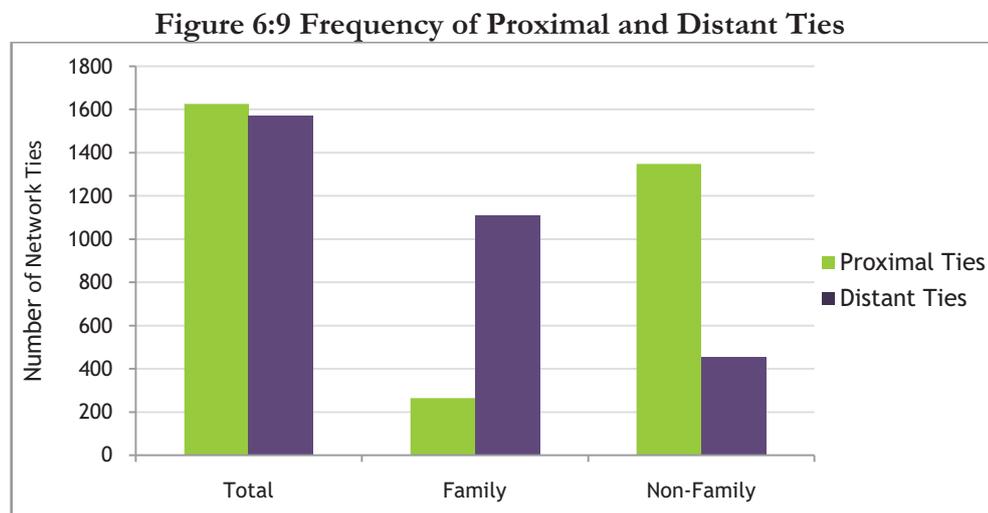
The distribution of family ties for the Mannum participants can then be compared to the distribution of non-family ties, as shown in Figure 6:8. The inset map in Figure 6:8 highlights the localised nature of most non-family ties. In this particular example a larger than average number of friend network ties are non-localised, highlighting the town's proximity to Adelaide and the shorter length of residence for many participants in Mannum, many of whom have maintained ties to previous places of residence. However, apart from the non-localised friend ties, the majority of other non-family ties are located within the town boundary.

**Figure 6:8 Non-Family Ties for Mannum Participants, Mid-Murray SLA**



As a result of this examination of network ties by distance proximal ties have been considered to be any network tie 10 kilometres or less from the network ego, while distant ties are considered to be any tie greater than 10 kilometres from the network ego. While this seems to be a very small distance it, in effect, follows the settlement patterns of small rural towns where the township boundaries are compact, with most of the housing, community buildings and services located within a small physical area, and large distances between towns.

As can be seen in Figure 6:9 while the overall number of proximal and dispersed ties are relatively even there is a great disparity between the types of ties that are proximal and those that are dispersed.



Both proximal and dispersed ties will be examined a little more closely by different participant and network attributes in the following sections of this chapter.

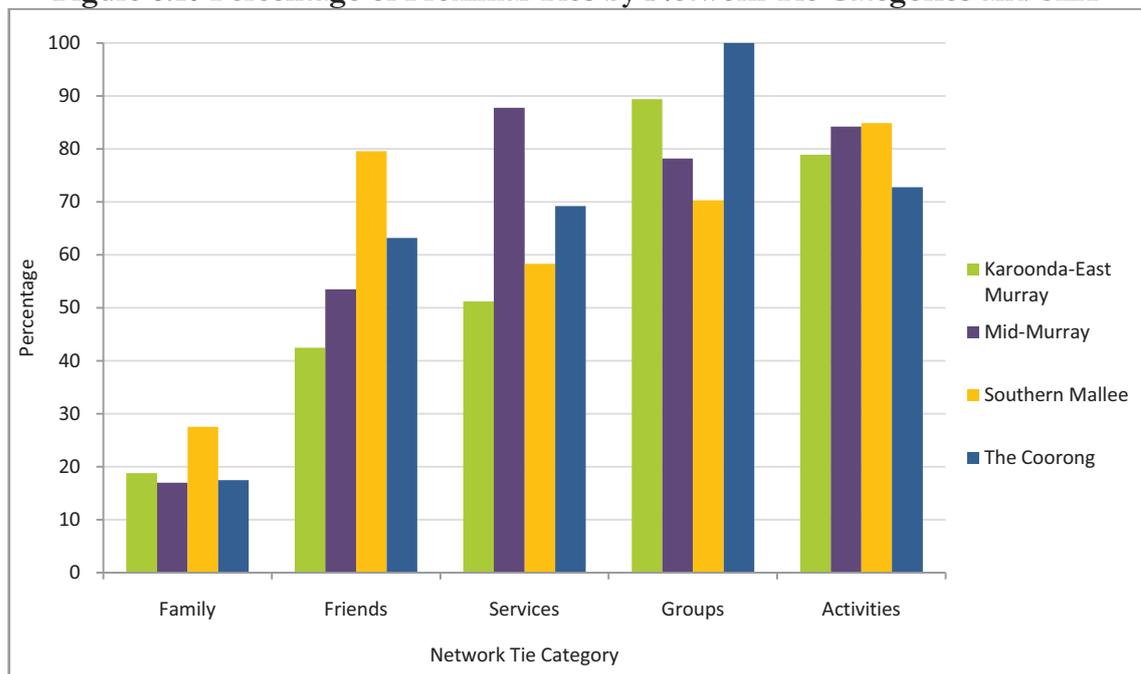
### 6.3 The Properties of Proximal Ties

Section 6.2 has shown that for this particular group of rural dwelling older people most proximal ties are spatially bounded within a small area of less than 10 kilometres, congruent with rural settlement patterns for the area. What is interesting is that this pattern of localised ties appears to remain relatively constant regardless of where participants were located within the study region and despite access to transport and technology which, it could be argued, make such localism less prevalent or relevant to the rural living experience. The previous section has also shown that some ties, such as activities, groups, services and friends were more likely to be proximal than others. Section 6.3 will explore

the nature of these localised ties in more detail by different participant variables and prevalence of mode of contact and frequency of contact for proximal ties.

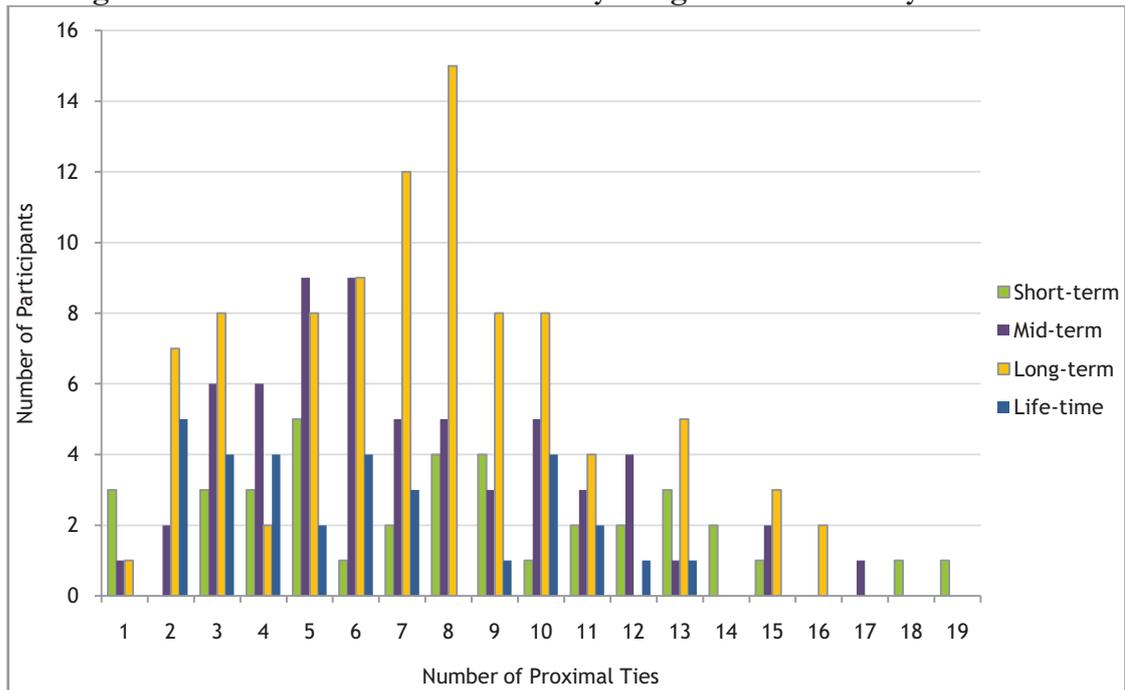
While the overall trend was for less nominated proximal family members and higher proportions of nominated proximal groups and activities there was some variation by region, as shown in Figure 6:10. Of note are the participants in the Southern Mallee SLA, who were more likely to nominate proximal family and friends than other regions. This area is also the most remote of the four SLAs in the study region, and while it did not have the highest number of farm dwelling participants, the majority of participants in this SLA (59.5 percent) mentioned some association with family involved in farming in the region. In addition, the Southern Mallee SLA had the highest proportion of long term and life time residents (73 percent) compared to the other SLAs. Karoonda-East Murray was second highest with a proportion of 59.4 percent of long term and life time participants. Both of these factors, an association with the land through family farming and longer length of residence, appear to influence the likelihood of having more localised family and friends.

**Figure 6:10 Percentage of Proximal Ties by Network Tie Categories and SLA**



Length of residence in the community appears to have very little influence over the overall number of nominated proximal ties, as shown in Figure 6:11, where all participants, regardless of length of residence, appear to range from low numbers of proximal network ties through to high numbers.

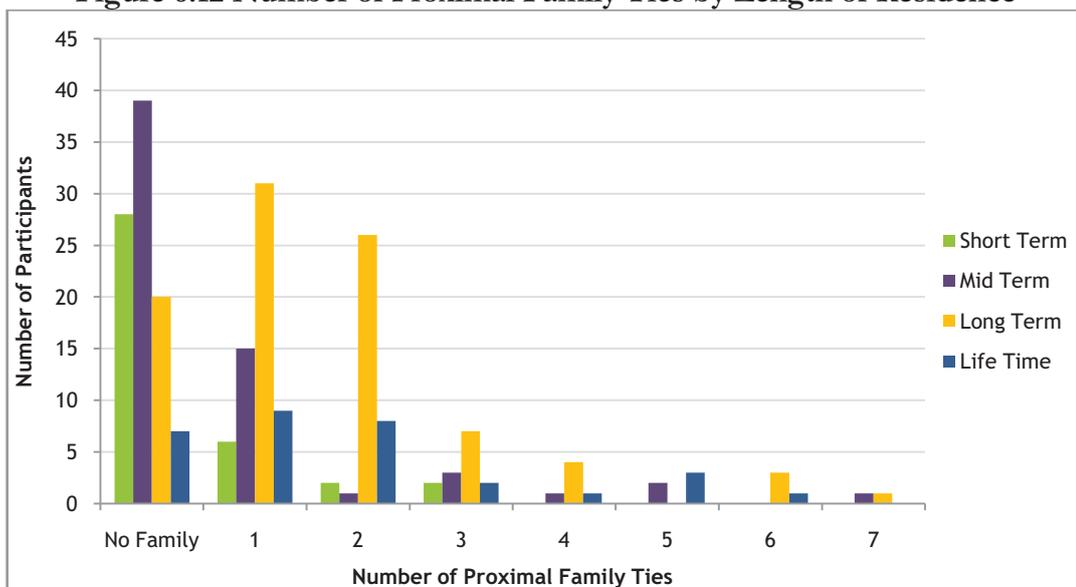
**Figure 6:11 Number of Proximal Ties by Length of Community Residence**



Short Term n=38, Mid Term n=62, Long Term n=92, Life Time n=31

Length of residence is more strongly associated with the number of proximal family ties, as shown in Figure 6:12. While the majority of participants, regardless of length of residence, had few (if any) proximal family ties it was more likely that participants of short term and mid term lengths of local residence nominated no localised family ties.

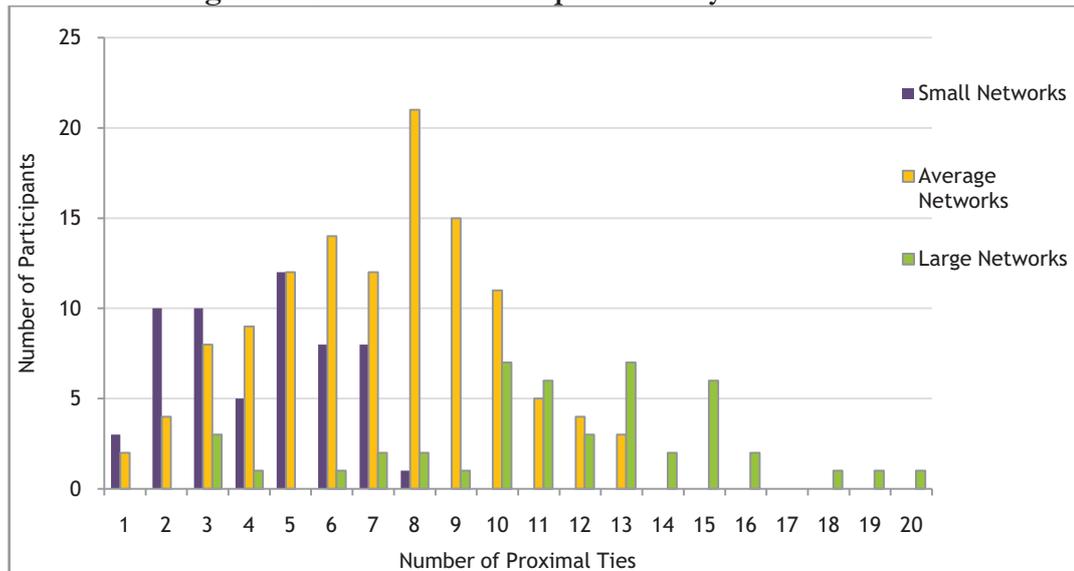
**Figure 6:12 Number of Proximal Family Ties by Length of Residence**



Short Term n=38, Mid Term n=62, Long Term n=92, Life Time n=31

A longer length of residence may be associated with a greater likelihood of nominating proximal family ties but it was also associated with smaller overall network size. Participants with long term and life time residence made up 64.9 percent of all small social networks in this study. Not surprisingly participants with small social networks were more likely to nominate smaller numbers of proximal ties and those with large social networks were more likely to nominate larger numbers of proximal ties, as seen in Figure 6:13.

**Figure 6:13 Proximal Participant Ties by Network Size**



Small Networks n = 57, Average Networks n = 120, and Large Networks n = 46

By looking more closely at the distribution of proximal ties by family and non-family categories for these three network types it can be seen that there are some differences. Table 6:2 compares the proportion of participants in each network size category who nominated no proximal family ties and one proximal family tie. Participants with small networks were most likely to nominate only one or no proximal family members. In fact over 82 percent of this group have little or no family living nearby. This compares to 64.2 percent of participants with average networks and 67.4 percent of participants with large networks.

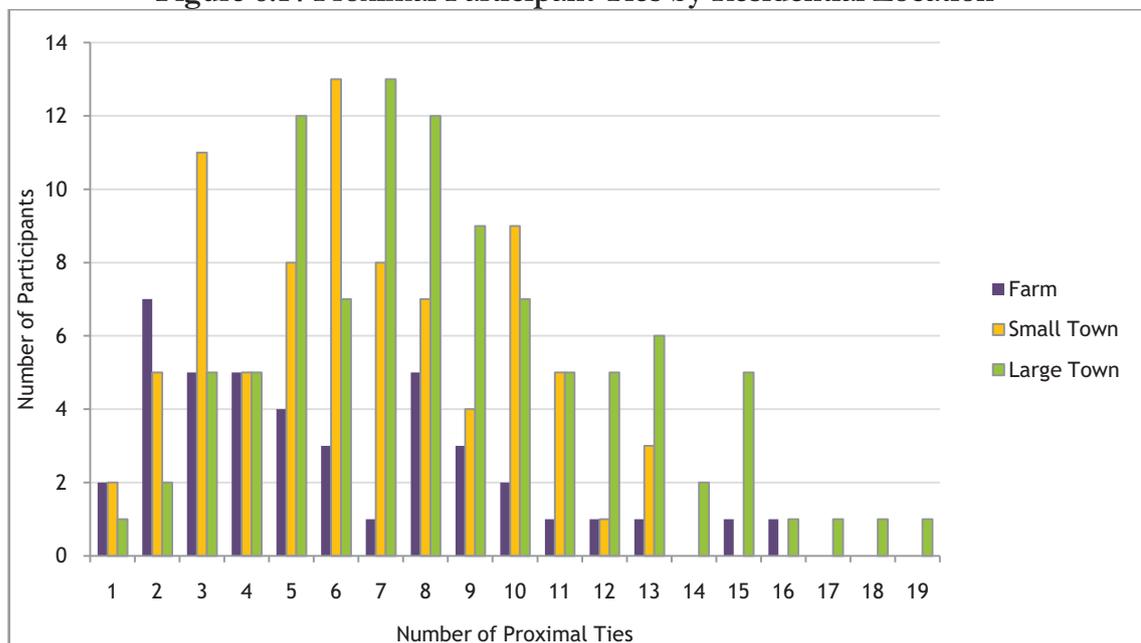
**Table 6:2 Participant Network Size by Percentage of Proximal Family Ties**

Network Size	No Proximal Family Ties	One Proximal Family Tie
Small Networks (n=57)	50.9	31.6
Average Networks (n=120)	37.5	26.7
Large Networks (n=46)	43.5	23.9

Also of note is the high percentage of participants with large social networks who nominated having no proximal family members, highlighting that all social networks, regardless of size, had a high likelihood of having no proximal family members. A large overall network size does not necessarily mean that an older rural person has informal support systems, such as family members, close by to draw upon.

Participants who lived on farms were more likely to nominate small numbers of proximal ties, as shown in Figure 6:14. This is partly attributable to farm dwellers being slightly more likely to report having small social networks overall; 30.9 percent compared to 24.7 percent of small town dwellers and 24 percent of large town residents. Of course, the probability of participants on farms having nominated network ties living less than 10 kilometres away is lower. They are more physically isolated from proximal network ties and therefore have either a smaller pool of people to form a proximal social network or have social networks that cover wider areas. Figure 6:14 shows that participants in larger towns were more likely to nominate a larger number of proximal ties, supporting the ‘smaller pool’ theory (McPherson *et al.*, 2001).

**Figure 6:14 Proximal Participant Ties by Residential Location**



\* Small Towns, population < 300 people and Large Towns > 300 people  
Farms n=42, Small Towns n=81, Large Towns n=100

An examination of self-reported health (SF1), UCLA loneliness scores and living alone or with others revealed no differences in the distribution of proximal tie numbers, despite showing some association with overall network size (see Chapter Five).

### 6.3.1 Proximal Family Ties

Proximal ties also need to be considered more closely by the category of network tie. While nominated family ties are the least likely to be proximal, research has shown they represent an important component of social and support networks, particularly children ties as children are the most common source of informal support for older people (Wenger and Tucker, 2002; Pahl and Spencer, 2004; Wenger and Keating, 2008). Of the 1,626 nominated proximal ties 266 (16.3 percent) were family ties. Nominated children ties represented the majority of these family ties, 204 (12.7 percent) of all proximal ties were children.

Table 6:3 shows the number of proximal family ties for each SLA, and also what proportion of overall family ties they represent. The higher proportion of localised family ties for the Southern Mallee SLA is apparent, however when comparing proximal children ties to proximal family ties the Southern Mallee has the lowest proportion. This suggests that the presence of family connections through farming and longer lengths of residence for participants (as has been described for the Southern Mallee SLA) does not necessarily mean higher proportions of children living in the area. Overall, children network ties represented high proportions of nominated proximal family ties for all areas. Thus, despite family ties representing the smallest proportion of proximal network ties, they are representative of supportive close family ties such as children.

**Table 6:3 Proximal Family Ties as a Proportion of Overall Family Ties by SLA**

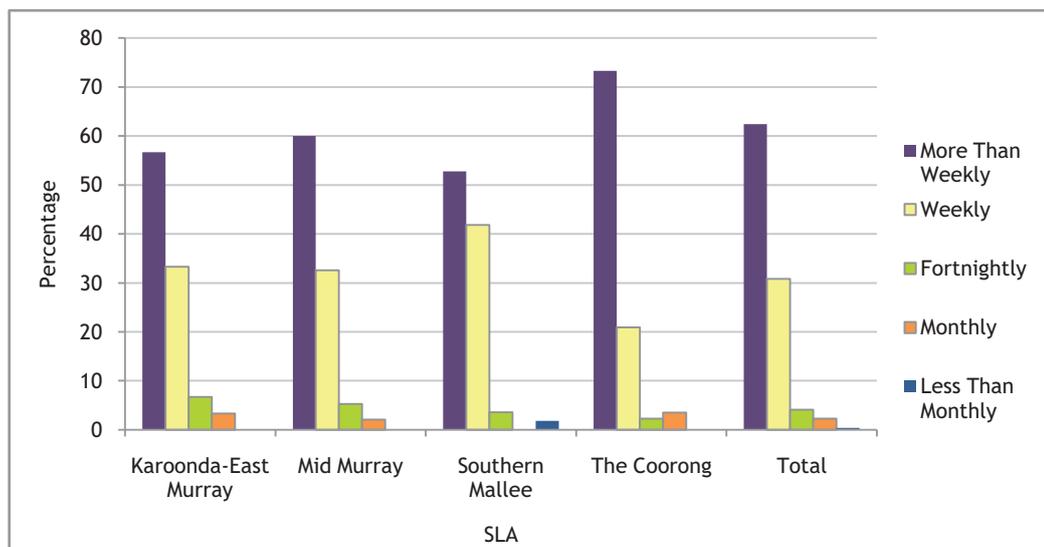
	Number of Overall Family Ties	Number of Proximal Family Ties	Proximal Family Ties as a % of the Total	Proximal Children Ties as a % of Proximal Family Ties
<b>Karoonda-East Murray</b>	155	29	18.8%	72.4%
<b>Mid Murray</b>	547	93	17.0%	90.3%
<b>Southern Mallee</b>	199	55	27.5%	61.8%
<b>The Coorong</b>	474	83	17.5%	81.9%

Location is just one aspect of social network interaction. Mode of contact, reciprocity and frequency of contact all add depth to the portrayal of localised network ties. Distance has shown to be a strong indicator of both frequency of contact and face-to-face contact (Frankel and DeWit, 1989; Wellman, 1996; Thomese and van Tilburg, 2000). While Frankel and De Wit (1989) found that proximity influenced frequency of contact with adult children it was not necessarily a predictor of emotional support. However, in terms of

instrumental informal support from family members frequency of contact and levels of face-to-face contact are important indicators of available support (Wenger, 1997; Wenger and Tucker, 2002).

Figure 6:15 shows that the majority of contact with proximal family ties is very frequent, with most occurring more than once a week. In fact, 93.2 percent of contact with proximal family ties occurs weekly or more than weekly.

**Figure 6:15 Frequency of Contact with Proximal Family Ties, n = 266**



In addition, most of this contact, especially frequent contact, occurred either in person or as a mix of in person contact and phone contact ('mixed mode' contact). Table 6:4 shows that contact with proximal family members occurred most commonly in person and more than once a week.

**Table 6:4 Frequency of Proximal Family Ties by Mode of Contact, n= 266**

	In Person	Mixed Mode	Phone
<b>More Than Weekly</b>	104	61	1
<b>Weekly</b>	46	35	1
<b>Fortnightly</b>	8	3	0
<b>Monthly</b>	3	1	2
<b>Less Than Monthly</b>	1	0	0

Participants were also asked to describe the nature of contact with network ties in terms of reciprocity (in other words, is contact most commonly instigated by the network ego or the network tie). Overwhelmingly contact with proximal family ties was seen as a reciprocal

arrangement with interaction occurring both ways. Over 84 percent of all contact with localised family was seen as reciprocal. While this type of contact (frequent, reciprocal and in person) can be seen as a positive sign for available informal support and strong family ties, it must be remembered that the majority of family ties were not proximal and that there remained a sizeable sample of participants who nominated no proximal family ties, or only one proximal family tie, as shown in Table 6:2.

### 6.3.2 Proximal Friend Ties

As discussed in Chapter Five, friends represented the second largest component of participants' social networks at 17.8 percent of all network ties; despite over 35 percent of participants nominating no friends in their networks. The majority of nominated friend ties were localised, however there were variations by SLA in the proportion of localised friendship ties, Table 6:5.

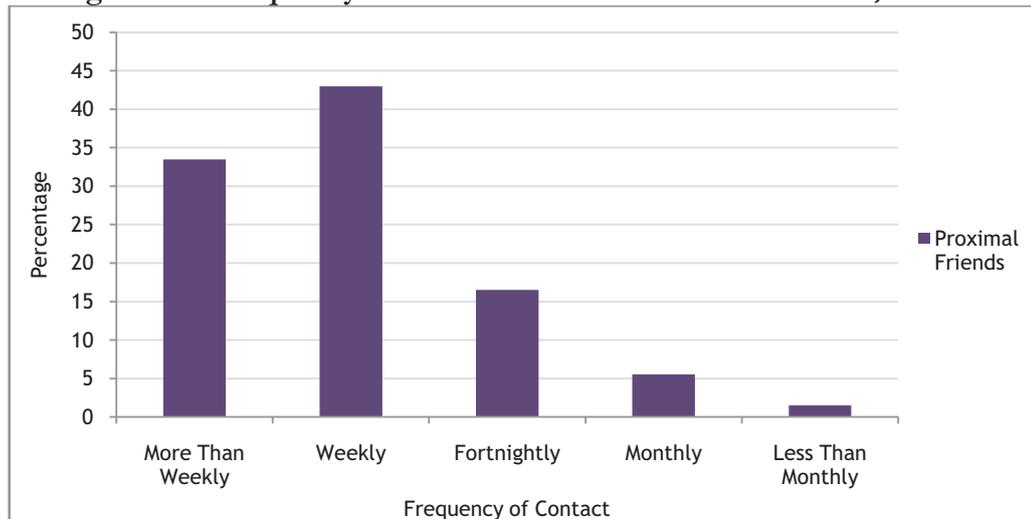
**Table 6:5 Proximal Friend Ties as a Proportion of Overall Friend Ties by SLA**

	All Friend Ties	Proximal Friend Ties	Proximal Friends Ties as a % of all Friend Ties	% of Participants with no Nominated Friend Ties
Karoonda-East Murray	80	34*	42.5	40.6
Mid-Murray	257	138	53.7	25.9
Southern Mallee	54	44	81.5	45.9
The Coorong	177	112	63.3	39.1
<b>Total</b>	<b>568</b>	<b>328</b>	<b>57.7</b>	<b>35.4</b>

\* A further 10% of Karoonda-East Murray Friend Ties were located less than 20km away, associated with friend ties to farms or from farm dwellers.

The Southern Mallee appeared to have a greater tendency to have localised friendship ties (as was the case with family ties), with over 80 percent of friendship ties being localised. The Southern Mallee also recorded the highest percentage of participants nominating no friendship ties, again highlighting that the more rural/remote nature of the SLA has an impact on the numbers, types and location of social network ties.

Figure 6:16 shows that contact with proximal friends was also very frequent, with 76.5 percent of nominated contact being weekly or more. Again most of this contact occurred either in person (51.5 percent) or as a mix of in person and phone contact (44.2 percent) indicating a strong sense of connection *for those people who nominated friend ties*.

**Figure 6:16 Frequency of Contact with Proximal Friend Ties, n = 328**

### 6.3.3 Proximal Activity and Group Ties

The majority of activity ties were localised (79.9 percent) and Table 6:6 shows that distribution of proximal activity ties was consistent across all four SLAs. This was a surprising result considering the low numbers of activities available in some small settlements and the anecdotal evidence of closures of groups and community activities, such as church services described in Chapter Five.

**Table 6:6 Proximal Activity Ties as a Proportion of Overall Activity Ties by SLA**

	All Activity Ties	Proximal Activity Ties	Proximal Activity Ties as a % of all Activity Ties
Karoonda-East Murray	71	56	78.9
Mid Murray	182	153	84.1
Southern Mallee	93	79	84.9
The Coorong	166	121	72.9

Overall, only a small number of participants (32), representing 14.3 percent of the total sample, did not nominate any activity ties. Participants with small social networks were most likely to have not nominated activity ties in their social networks, 24.6 percent, compared to 12.5 percent of participants with average networks and 6.5 percent of participants with large social networks. Gender, living alone or with others, driving status, location (farm, small or large town), and health status made very little difference to the proportion of participants not nominating any activities. However, age did impact slightly on the average number of nominated proximal activity ties, as seen in Table 6:7, and was a

significant indicator of the likelihood of nominating dispersed activity ties, as discussed in Section 6.4.

**Table 6:7 Proximal Activity Ties by Participant Age**

Age	Number of Participants	Number of Nominated Proximal Activity Ties	Average Number of Nominated Ties per Participant	Number of Participants Nominating No Activity Ties	% of Participants Not Nominating Activity Ties
70-74yrs	59	123	2.1	11	18.6
75 -79 yrs	81	152	1.9	9	11.1
80-84 yrs	48	80	1.7	7	14.6
85 - 89 yrs	17	38	2.2	2	11.8
90 - 94 yrs	13	17	1.3	1	7.7
95+ yrs	5	5	1	2	40

Naturally all activities were carried out in person, and they usually involved the person going out into the community. Very few nominated localised activities involved ‘at home’ hobbies or past-times. Most of the activities that were detailed in social network lists involved interacting with groups of others, such as at Church as part of special interest activities such as bowls, playing cards or social activity programs, and as informal activities such as going to the pub or following local sporting events.

While the frequency of activities was slightly lower on average compared to contact with both friends and family; the majority of nominated activities still occurred weekly or more (60.9 percent), as shown in Table 6:8.

**Table 6:8 Frequencies of Proximal Activity Ties, n = 512**

Frequency	Percent
More Than Weekly	9.8
Weekly	51.1
Fortnightly	13.7
Monthly	21.3
Less Than Monthly	4.2

This pattern of interaction and frequency of activity indicates reasonably high levels of interaction with others within the local community for most participants in the study.

Nominated group activity ties followed a very similar pattern for each SLA, with most groups being either localised (within 10 kilometres of the participant) or regional (located within 50 kilometres of the participant), as seen in Table 6:9. The exception is the larger

number of state or national groups nominated by The Coorong SLA participants. This is not attributable to any particular individuals but most of the nominated groups in this category were located in Adelaide and for half of them the main mode of contact was by mail or email.

**Table 6:9 Distribution of Nominated Group Ties by Distance**

	Localised Groups	Regional Groups	State or National Groups
<b>Karoonda-East Murray</b>	18	1	0
<b>Mid Murray</b>	50	12	2
<b>Southern Mallee</b>	32	3	2
<b>The Coorong</b>	43	10	14

All localised group activity interactions were in person, with no weekly group activities being nominated. Over 85 percent of all group activity occurred monthly or less, with the remainder being fortnightly. This is reflective of the nature of formal group activities in general; many groups operate on a schedule of monthly meetings. Most groups that people did attend were national organisations such as Probus, CWA or Senior Citizens, but were viewed as being a part of something local, a community based group. This is particularly the case for groups that were involved in raising money or offering other forms of support to local communities, such as Red Cross, CWA or Lions Clubs. Most participants discussed their group memberships and activities in terms of ‘doing something for the local community’ and did not indicate that they were interested, or involved in, membership at a regional or state level.

#### ***6.3.4 Proximal Service Ties***

Nominated service ties represented an interesting mix of localised and regional interaction. Only nine services were nominated to a centre or capital city outside of the region; all accessed infrequently. Examples of such network ties included services for ex-servicemen or specific health specialists. All other service use was considered to be localised for this discussion. It was anticipated at the outset of the study that access and interaction with service network ties would be the most likely to be spatially dispersed in nature because of the regionalisation and centralisation of service delivery in rural areas in recent decades. While service access at a regional level was noted, there was obviously limited interaction with services at a state level. Table 6:10 shows that each SLA showed a similar pattern of a majority of localised services, supplemented with other services located in a nearby town.

The Southern Mallee and Karoonda-East Murray SLA participants had the highest levels of service use in other towns. These two SLAs also had key towns with smaller populations, suggesting a greater need to travel to access necessary services. However travel to services was still limited to mainly nearby towns.

**Table 6:10 Distribution of Nominated Service Ties by Distance**

	Localised Services (Within 10 kilometres)	Regional Services (Located 10 to 30 kilometres away)	Total Number of Nominated Services
<b>Karoonda-East Murray</b>	21	15	41
<b>Mid Murray</b>	72	9	81
<b>Southern Mallee</b>	21	13	36
<b>The Coorong</b>	59	17	78

All interaction with services was in person and most occurred on a frequent basis, either weekly or more frequently. Participants in The Coorong SLA recorded the most frequent interaction with services, with 74.6 percent of nominated service ties occurring weekly or more often, compared to Mid Murray participants with 72.8 percent and Southern Mallee and Karoonda-East Murray participants with 61.9 percent and 58.3 percent respectively. While this suggests high levels of service use it must be remembered that most nominated services were not community aged care specific services but instead included services such as shops and the post office. This is supported by examining the direction of interaction with services. The Southern Mallee participants recorded the highest level of nominated services coming into the home, 40.2 percent, compared to 35.8 percent of Mid Murray participants and 22 percent for both the Karoonda-East Murray and The Coorong participants. Nominated services coming into the home included things such as: community care providers, domiciliary care providers, gardeners, meals on wheels and home maintenance people.

### ***6.3.5 Summary of Proximal Ties***

The concept of a localised community or neighbourhood appears to be very much evident in the social networks of these older rural South Australians, with the majority of nominated community ties (apart from family members) being located within close proximity of the network ego. This suggests that the concept of ‘community’ for this group is town based, with interactions following settlement patterns closely. Services, groups and activities in particular are accessed most often at the town level. Added to this, interaction

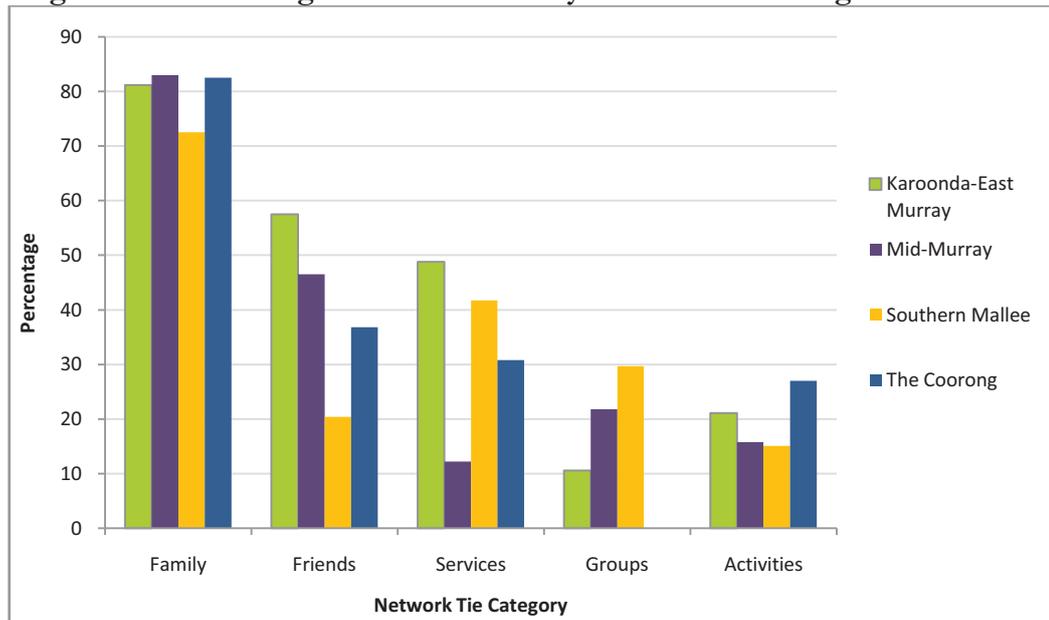
levels, measured through frequency of contact, mode of contact and reciprocity are high; with most interactions occurring in person and weekly or more often. This suggests that for this particular cohort of the Australian rural population the local town is still an important site for the location of activities and services. As such, further regionalisation of services and goods, or the closure of local groups and activities would impact greatly on their sense of wellbeing and daily life.

While family and friends are less likely to be as localised it is important to note that contact with localised family and friends is high, suggesting that for those older people who have localised family and friends, informal support is more likely to be available when needed. However this does raise questions about participants who did not nominate any localised family members, and in particular for those who did not nominate any family or friends at all in their social networks.

#### **6.4 The Properties of Distant Ties**

As described in Section 6.2, distant ties were considered to be any social network ties nominated more than ten kilometres from the network ego. The following examination of distant ties gives some consideration to regionalised ties (such as with the discussion on the category of service ties in Section 6.3.4) as well as ties located at greater distances.

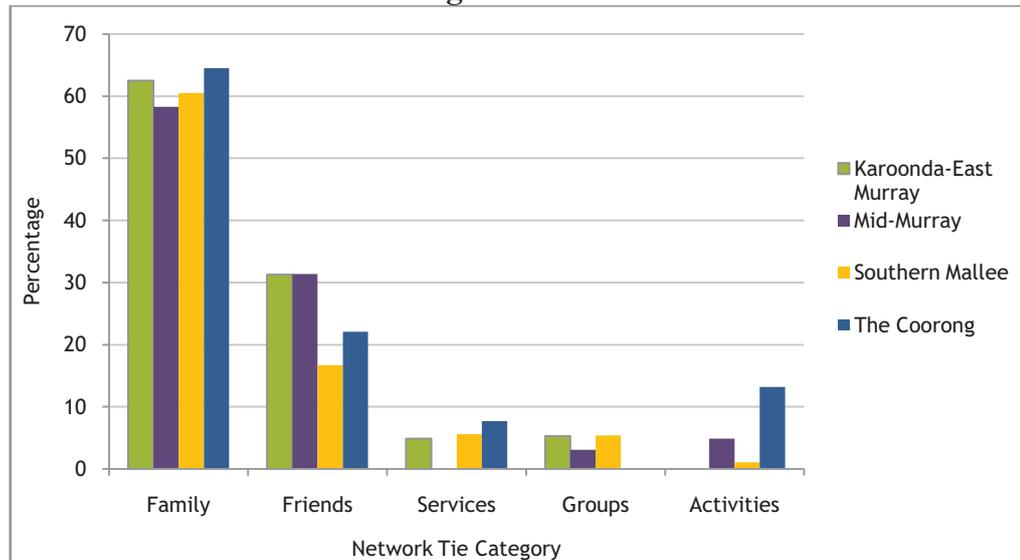
Figure 6:17 shows the proportion of distant network ties by the different social network categories for each SLA in the study region. Note that the more remote Southern Mallee SLA had fewer distant family and friend ties. It is unclear if this was because they had fewer distant family and friend ties to nominate or if it was because greater distances mean contact with distant family and friends was infrequent and/or less meaningful and therefore not included on social network lists. However, for all SLAs in the study the majority of nominated family ties were distant ties, with friends and services also having high proportions of distant ties.

**Figure 6:17 Percentage of Distant Ties by Network Tie Categories and SLA**

As the discussion of services in Section 6.3 showed, some distant ties were in fact still located within the region. This can be demonstrated for all network tie categories by examining the proportions of distant ties by the same categories and regions, but using 50 kilometres as the marker for a distant tie. For most of the towns in this study this then encompasses ties located in the next town and for many (but certainly not all) access to the regional centre of Murray Bridge as nominated regional ties.

Figure 6:18 shows that family ties and, to a lesser extent, friend ties still showed large proportions of ties beyond this 50 kilometre distance marker. More than 50 percent of family ties in particular were still distant ties. However the proportions of the other network categories reduced dramatically. In fact, participants in the Karoonda-East Murray SLA nominated no activity ties over the 50 kilometre distance, participants in The Coorong SLA nominated no group ties over 50 kilometres and Mid Murray participants nominated no services after the same distance. This highlights that while the immediate local area played an important role in providing a sense of community and interaction with others, as seen in Section 6.3 on proximal ties, the regional area surrounding the local community also played a role in providing access to services, groups and activities.

**Figure 6:18 Percentage of Distant Ties (at 50 Kilometres or more) by Network Categories and SLA**



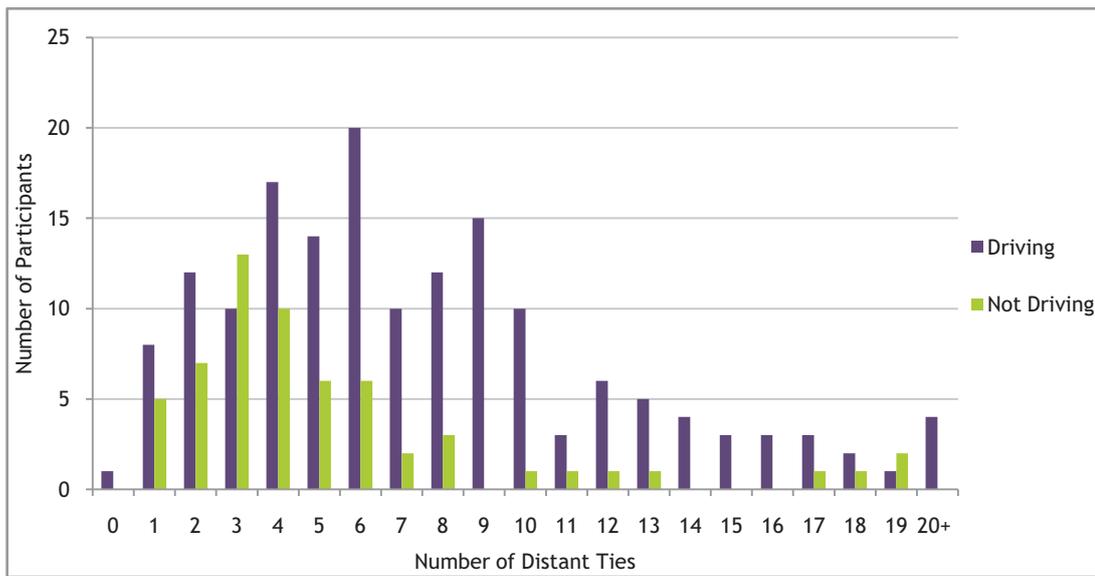
Some participant characteristics were found to influence the number of distant social network ties. As shown in Table 6:11 age appears to influence the number of nominated distant ties particularly compared to the number of proximal ties by age, where there was little evidence of change. This suggests that as age increases social networks tend to become not only smaller in overall size but also more localised, supporting other research that suggests neighbourhoods and local community are more important as people age (Le Mesurier, 2004; Keating, 2008).

**Table 6:11 Participant Age by Average Number of Proximal and Distant Ties**

	70-74 yrs	75-79yrs	80-84yrs	85-89yrs	90-94yrs	95+yrs
<b>Average Number of Proximal Ties</b>	7.3	7.3	7.6	6.1	7.3	6.8
<b>Average Number of Distant Ties</b>	8.6	7.6	5.6	4.6	5.3	3.4

This reduction in distant ties as people age may be related to decreased mobility, such as the cessation of driving. The ability to cover large distances easily appears to influence the number of distant ties in social networks in this study. Figure 6:19 indicates that overall drivers were more likely to nominate greater numbers of distant network ties. The drivers in this study nominated an average of 7.7 distant ties compared to an average of 5.3 distant ties for non-drivers.

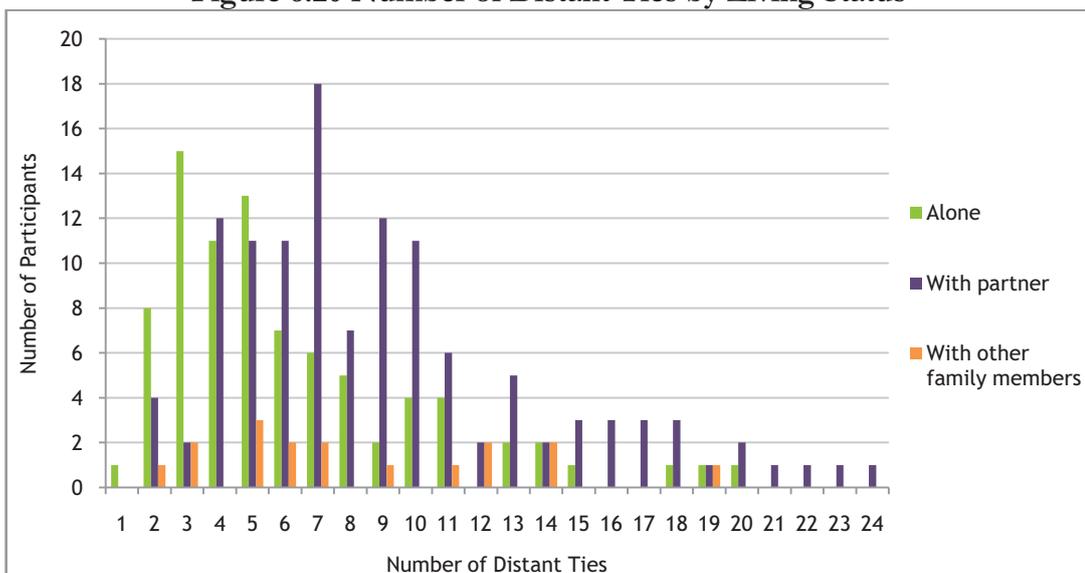
**Figure 6:19 Number of Network Ties for Drivers and Non-Drivers**



Drivers n= 163, Non Drivers n = 60

Whether participants were living alone or with someone else also appears to have influenced the number of distant ties they were likely to nominate. Participants who were living alone nominated an average of 5.2 distant ties, compared to those living with a partner nominating with an average of 8.3 distant ties. While the number of participants living with other family members was low (n = 16) they had an average of 7.7 nominated distant ties. Participants who were living alone were also more likely to have smaller networks overall, Figure 5:4.

**Figure 6:20 Number of Distant Ties by Living Status**



Living Alone n=84, Living with a Partner n = 122, Living with other family members n=16

It must be taken into account that these three attributes: age, living status and still driving; are all inter-related, the younger you are the more likely you are to still be married and still driving. It is perhaps the combination of the three elements that add to the likelihood of greater numbers of distant social network ties. The relationship between driving and age for participants in this study is discussed in Chapter Seven.

Length of residence appears to also influence the number of dispersed ties in participants' social networks. Participants who had lived in the local community for 15 years or less nominated an average of 8.2 distant ties, slightly more than participants who had lived in the community for 15 to 40 years who had an average of 8 distant ties each. This compares to long term residents (41 to 65 years in the local community) and life time participants (65 years or more in the local community) who had an average of 6 and 6.6 distant network ties respectively.

#### ***6.4.1 Distant Family Ties***

Family ties were the most commonly nominated network tie overall, and the most likely to be distant. Table 6:12 highlights the large percentage of nominated distant ties that are family ties. This suggests that because family are such an important part of social networks, particularly for older people, they will be nominated as part of social networks regardless of location.

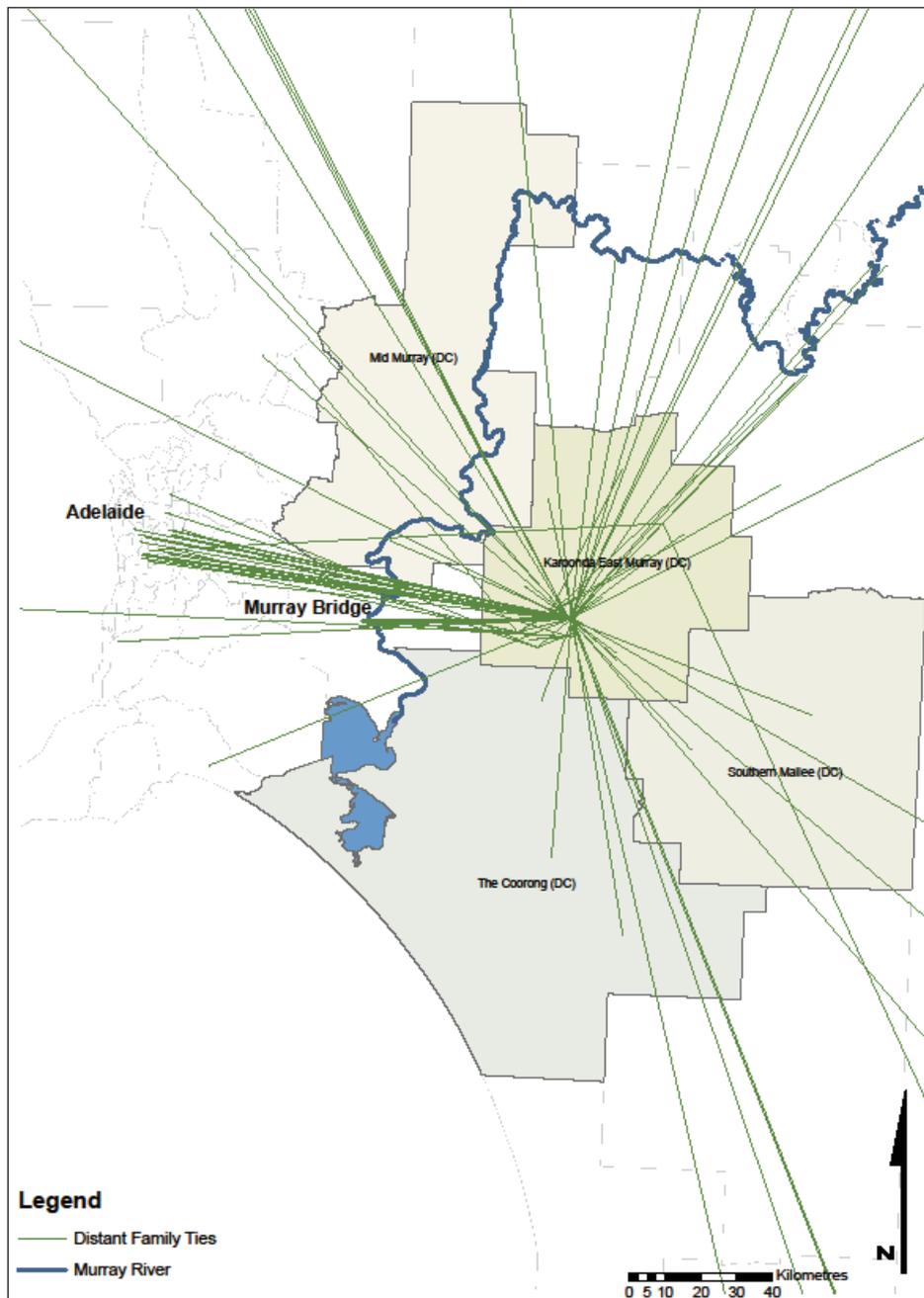
**Table 6:12 Distant Family Ties as a Proportion of Overall Family Ties by SLA**

	Number of Overall Family Ties	Number of Distant Family Ties	Distant Family Ties as a % of the Total	Distant Children Ties as a % of Distant Family Ties
<b>Karoonda-East Murray</b>	155	126	81.2	49.2
<b>Mid Murray</b>	547	454	83.0	37.0
<b>Southern Mallee</b>	199	145	72.5	37.2
<b>The Coorong</b>	474	391	82.5	37.8

In terms of actual numbers, more dispersed children ties were nominated than proximal children ties; with almost twice as many children being nominated at a distance in each area. Participants in the Karoonda-East Murray SLA nominated 21 proximal children ties and 62 distant children ties, Mid Murray SLA participants nominated 84 proximal and 168 distant children ties, the Southern Mallee participants nominated 34 proximal and 54 distant children ties and The Coorong participants had 68 proximal and 150 distant children ties.

By utilising the geo-coded information about distant family ties it is possible to see where the majority of distant family ties are located. Figure 6:21 shows the location of all distant family ties for the Karoonda-East Murray SLA.

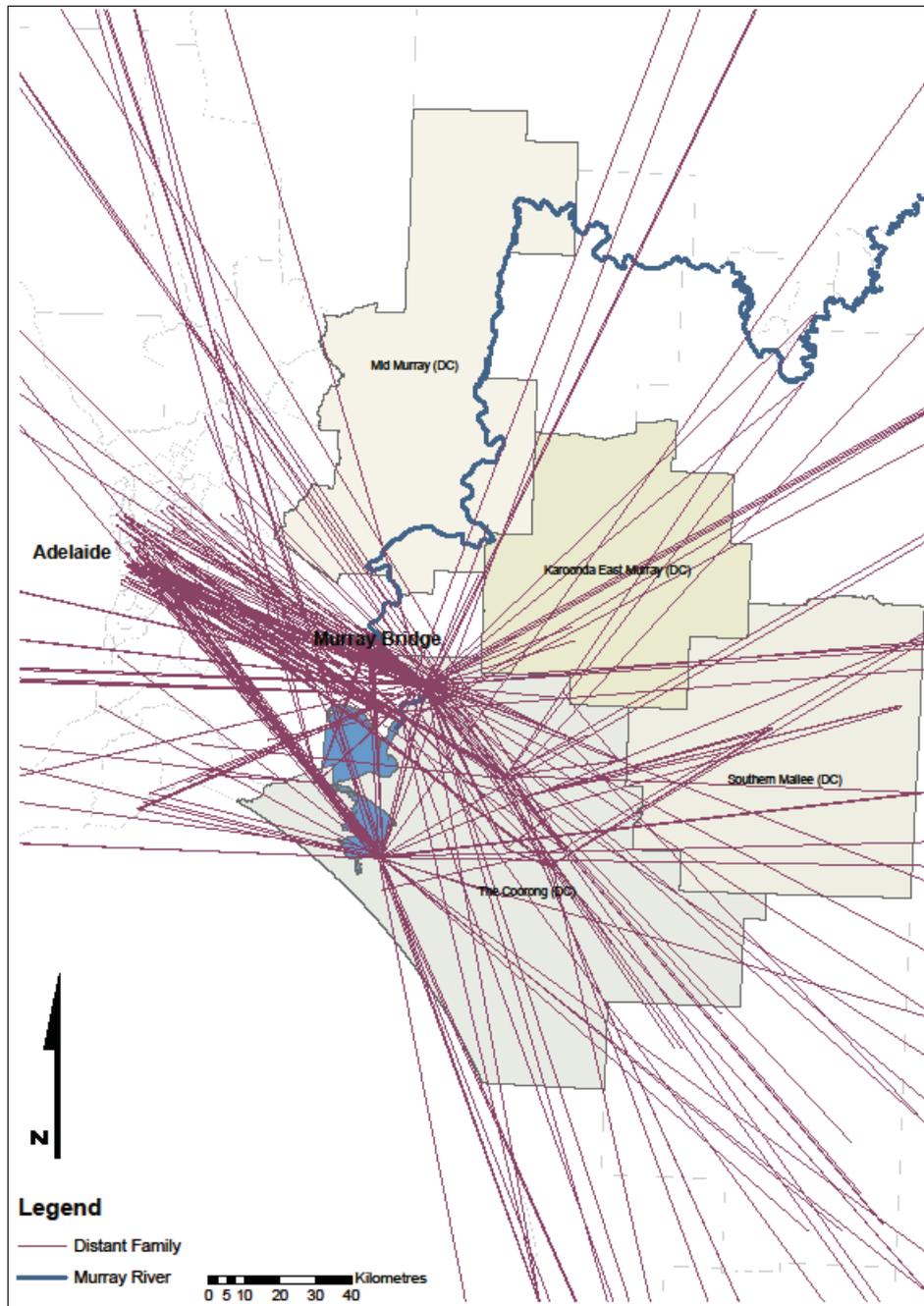
**Figure 6:21 Distant Family Ties for Karoonda-East Murray SLA**



Of note are the high proportions of nominated family members located in the Adelaide region, and also the number of family members concentrated in the regional centre of Murray Bridge. Lines that end at the borders of the map indicate family members who live interstate or overseas. Also note the number of family ties that lie within the Murray Lands SD, indicating family members still located in rural areas.

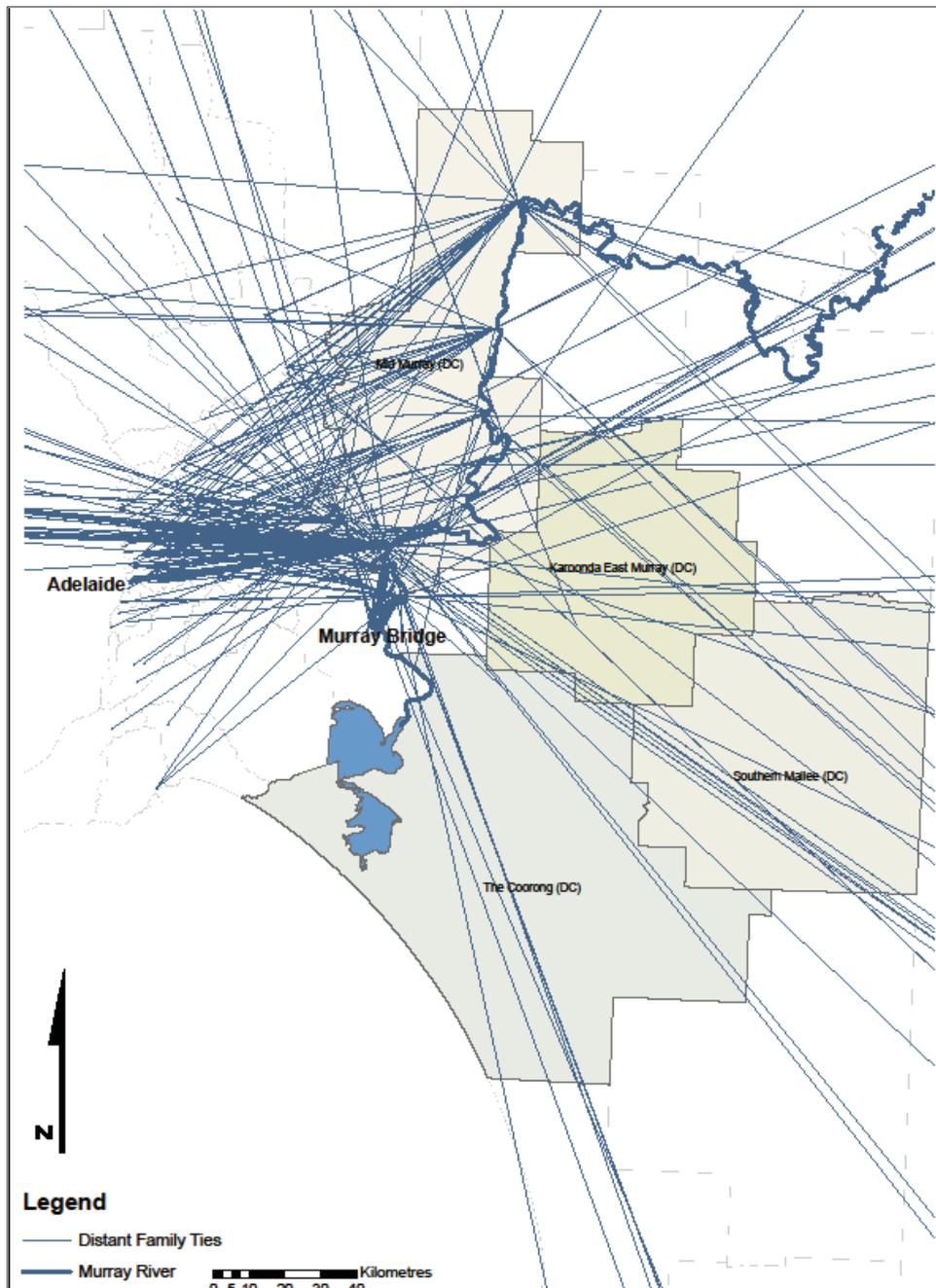
This pattern of family ties located in Adelaide and Murray Bridge is even more obvious for participants in The Coorong SLA and the Mid Murray SLA, as shown by the density of lines in this region in Figure 6:22 and Figure 6:23.

**Figure 6:22 Distant Family Ties for The Coorong SLA**



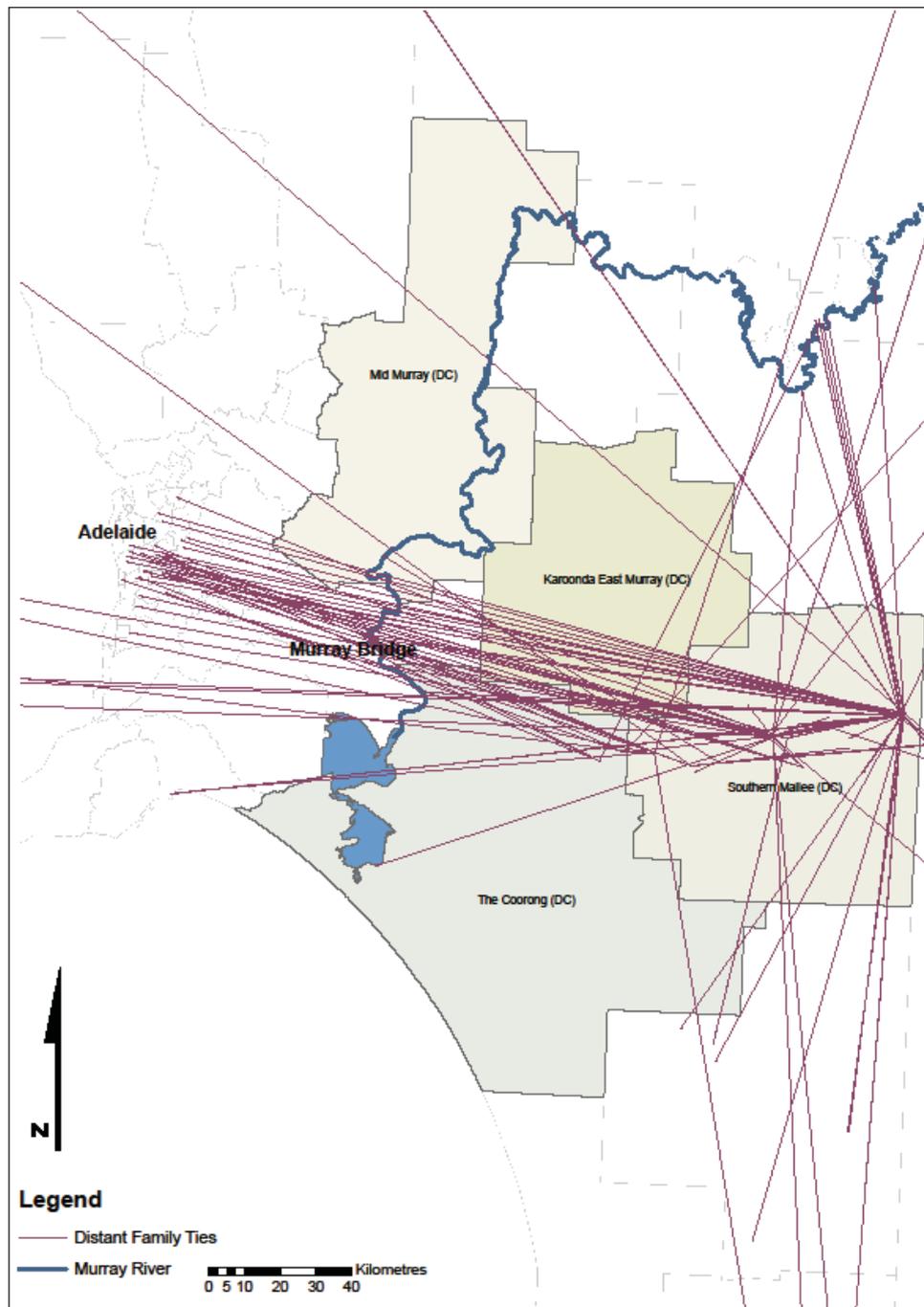
Mid Murray Participants also had a strong association with the Barossa region to the north of Adelaide, but surprisingly little familial association with the Riverland region, Figure 6:23.

Figure 6:23 Distant Family Ties for Mid Murray SLA



While Southern Mallee SLA participants showed a tendency to nominate family members in both Adelaide and Murray Bridge there was also some association with the Riverland region to the north of the SLA and with the Upper South East farming region to the south of the SLA as shown in Figure 6:24. The Southern Mallee map shows a smaller proportion of nominated family ties outside of the state compared to the other SLAs.

Figure 6:24 Distant Family Ties for Southern Mallee SLA



These maps show that while some family ties are located in the nearest regional centre, Murray Bridge, and in other rural areas within the region the majority of nominated family ties are located in the South Australian capital city of Adelaide. This emphasises the impact of distance for older people in rural areas, particularly for maintenance of relationships with family members and the availability of informal support as they age.

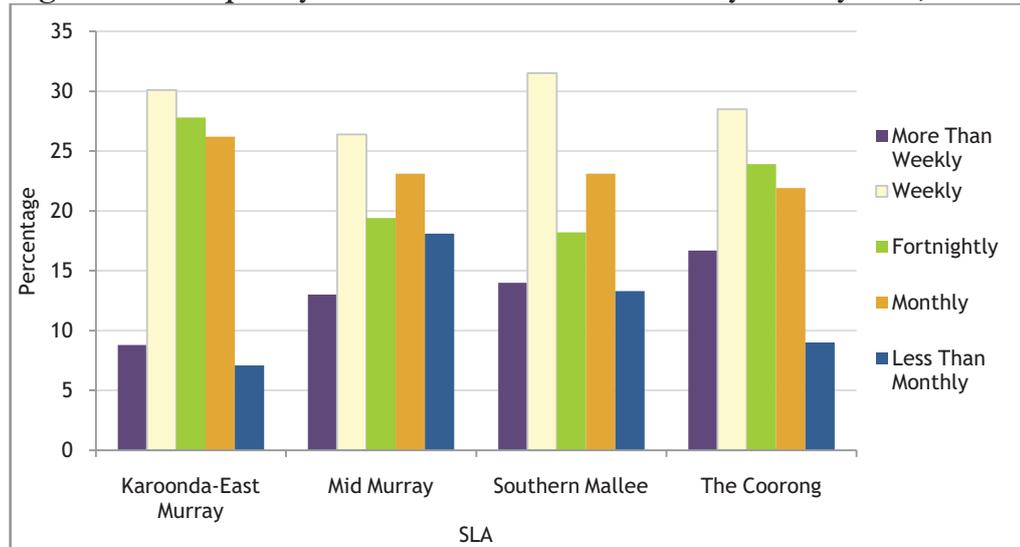
As already stated, children tend to be the main providers of informal support to older people (Wenger and Tucker, 2002; Phillips, 2007). When comparing the proportion of both dispersed and proximal children ties as a proportion of overall family ties it can be seen in Table 6:13 that children made up almost half of all nominated family ties and were more likely to be living away from their ageing parents. Presumably this group of children are less able to offer most forms of informal, physical support. This may, of course, have had no impact on availability of emotional support or frequency of contact by telephone and did not mean that children living away from older parents offered no informal support. However it may impact on the need for formal services to assist with daily living as people grow older and remain living in these rural areas.

**Table 6:13 Proximal and Distant Children Network Ties by SLA**

	Karoonda-East Murray	Mid Murray	Southern Mallee	The Coorong
<b>Number of Overall Family Ties</b>	155	547	200	474
<b>Proximal Children Ties as a % of All Family Ties</b>	13.5	14.6	17.0	15.2
<b>Dispersed Children Ties as a % of All Family Ties</b>	40.0	30.5	27.0	31.9

It is not only distance or location of family that impacts on the availability of informal support; it is also the frequency of contact with those family members. In addition, whether that contact is in person or not impacts greatly on the availability of informal support from family members, particularly children (Wenger, 1997; Wenger and Tucker, 2002).

Figure 6:25 shows frequency of contact with distant family ties by SLA, this can be compared to Figure 6:15 which showed the frequency of contact with proximal family ties. Compared to proximal family ties, where over 93 percent of all contact occurred weekly or more, only 42.1 percent of all contact with distant family ties occurred this frequently. Over 50 percent of all distant family ties where 'more than weekly' contact was maintained were located less than 50 kilometres from the participant compared to less than 10 percent of those distant ties for whom monthly or more contact was made.

**Figure 6:25 Frequency of Contact with Distant Family Ties by SLA, n=1112**

Frequency of contact with distant ties does not necessarily relate to face-to-face contact. Table 6:14 shows that most contact with distant family ties was by phone; most often weekly, fortnightly or monthly. A mix of both phone and in person contact (mixed mode contact) was the second most likely form of staying in touch with distant family.

**Table 6:14 Frequency of Contact with Distant Family Ties by Mode of Contact, n=1112**

	In Person	Mixed Mode	Phone	Other (mail and email)
<b>More Than Weekly</b>	20	78	55	2
<b>Weekly</b>	39	101	<b>154</b>	20
<b>Fortnightly</b>	19	82	<b>127</b>	14
<b>Monthly</b>	31	45	<b>158</b>	22
<b>Less Than Monthly</b>	10	39	77	19

Most contact with distant family showed high levels of reciprocity, with 82.6 percent of nominated contact with distant family ties considered reciprocal contact. Only 9.6 percent of contact was described as others usually contacting the participant and 7.7 percent of contact was described as the participant usually initiating the contact.

This examination of distant family ties shows that most family ties, including children ties, are located outside the participant's local community, with the majority living in the capital city of Adelaide or the regional centre of Murray Bridge. Levels of contact and reciprocity with family members is high but is less frequent than contact with proximal family

members and (as expected) is more likely to be by telephone. Mail and email contact play a less important role in maintaining contact with distant family members.

#### **6.4.2 Distant Friend Ties**

Friends were the second largest component of nominated social network ties and they also represented the second largest component of distant network ties. Over 42 percent of all nominated friend network ties were distant ties. The Southern Mallee SLA had the lowest proportion of nominated distant friend ties, congruent with the lower proportion of nominated distant family ties, as shown in Table 6:15.

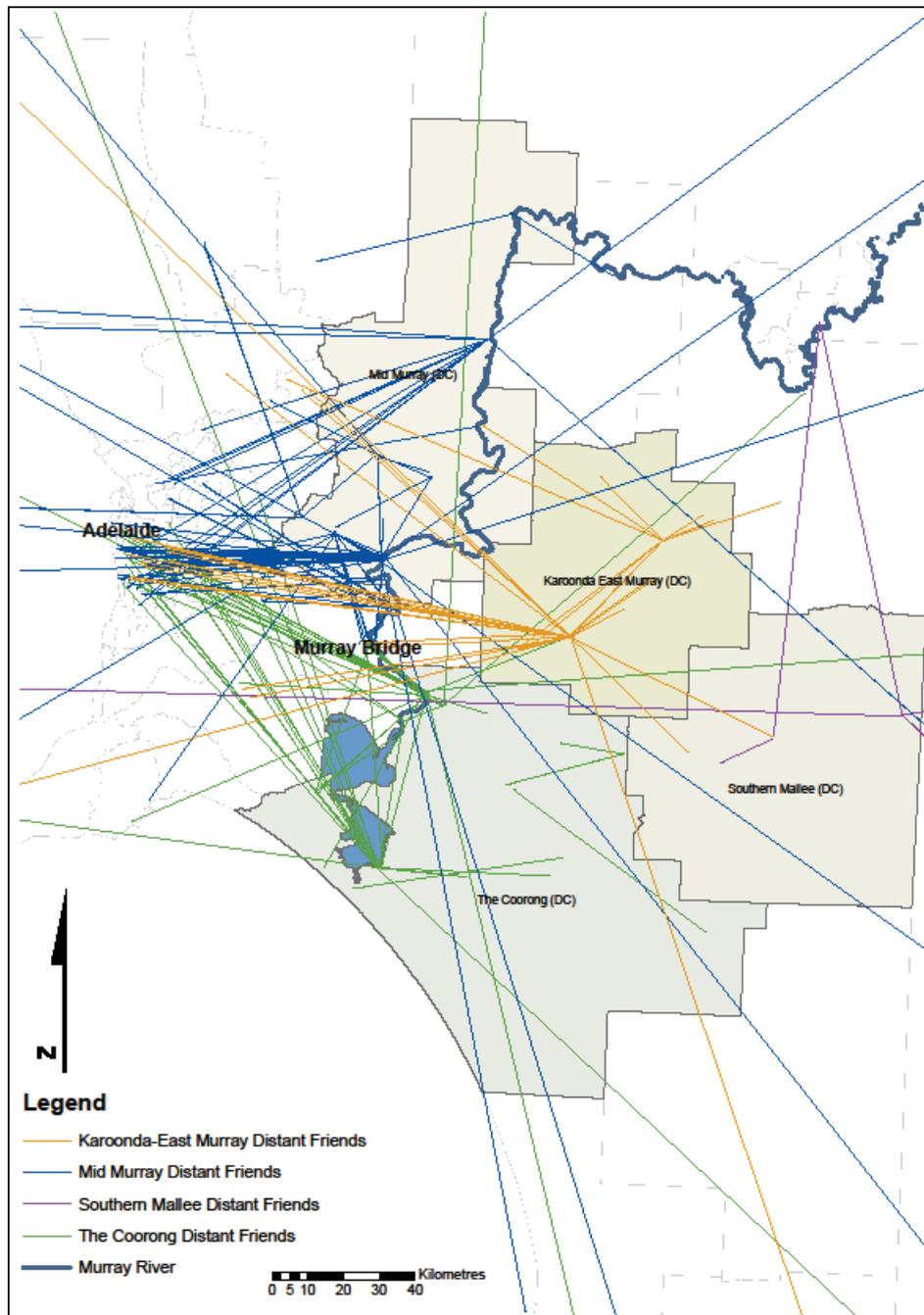
**Table 6:15 Distant Friend Ties as a Proportion of All Friend Ties by SLA**

	All Friend Ties	Distant Friend Ties	Distant Friends Ties as a % of all Friend Ties	% of Participants with no Nominated Friend Ties
<b>Karoonda-East Murray</b>	80	45	56.3	40.6
<b>Mid-Murray</b>	257	119	46.3	25.9
<b>Southern Mallee</b>	54	10	18.5	45.9
<b>The Coorong</b>	177	65	36.7	39.1
<b>Total</b>	568	239	42.1	35.4

Figure 6:26 shows that there is a similar pattern of location of nominated friend ties as there was for nominated distant family ties, with the majority being located in Adelaide, particularly for participants in the Mid Murray.

Distant friend ties were most likely to be nominated by participants with shorter lengths of residence. Over half (55.3 percent) of all short term residence participants nominated distant ties in their social networks, comparable to the 53.2 percent of participants with mid-term length of residence who nominated distant friend ties. In contrast, only 16.3 percent of participants with long term length of residence and 6.5 percent of participants with life time length of residence nominated distant friend ties in their networks. This shows evidence of people moving into the study area but maintaining ties with others from their previous place of residence. Evidence of this association does not exist for distant groups and activities however, these appear more to be related to special interests such as caravan clubs, military associations, special hobbies, and political affiliations rather than ties to a previous place of living.

Figure 6:26 Location of Distant Friend Ties by SLA



Eighteen percent of contact with nominated distant friends was in person but less than 20 percent of this group were located more than 50 kilometres away from the participant strengthening the evidence that distance still matters for face-to-face contact. Nominated mixed mode contact (a mix of phone and in person contact) represented 40.2 percent of all contact with distant friends and phone contact represented 33.9 percent of contact with this group. Again, mail and email contact represented a small portion of contact modes at 11.7 percent.

### 6.4.3 Other Distant Ties

Groups, activities and services represented only a small proportion of all distant ties, particularly those located more than 50 kilometres away from the participant. This emphasises the localised nature of most community activities. As stated in 6.3 most services nominated as distant ties were associated with specialist medical services and returned servicemen associations and all were accessed less than monthly. Age appeared to have the most influence on nominated distant activity ties as shown in Table 6:16.

**Table 6:16 Distant Activity Ties by Age Cohort**

70-74 yrs	75-79yrs	80-84yrs	85-89yrs	90-94yrs	95+yrs
44	38	14	2	3	1

As suggested in Section 6.4.2 nominated distant groups and activities were also usually associated with special interests, and again were more likely to be engaged in monthly or less than monthly.

### 6.4.4 Summary of Distant Ties

Nominated distant ties represent almost half of all social networks ties for participants in this study. They also represent the majority of family ties, including children; with groups, activities and services amounting to only a small proportion of all distant ties. Contact with distant family ties was less frequent and less likely to be in person than it was with proximal family members. However family remained the most important part of most participants' social networks, they were most likely to be nominated first and represented the greatest proportion of social networks, regardless of distance.

## 6.5 Conclusion

Social networks represent combinations of friends, family, groups, activities, neighbours and services. They also represent a mix of localised and distant network ties. However, if proximal and distant ties are considered as two separate networks it is possible to see some major differences in the composition of those two networks.

By introducing an environmental, spatial analysis of social networks it is easier to understand the context of daily life for older people in rural areas and how distance and location impacts on the nature of social networks. Groups, activities, neighbours and services represent a very localised sense of community or neighbourhood that for this group of participants reflects an active and interactive community life. The majority of

social network ties were located within 10 kilometres of the network ego and the localised ties were more frequent and more likely to be in person. Sense of place identity develops from not only the physical characteristics of the places people live and the memories and histories associated with those places, but also from the interactions with the people and activities *within* those places as Rowles (2003) and Wahl and Lang (Wahl and Lang, 2004; Wahl *et al.*, 2004) suggest. This examination of the social networks of participants supports their theory that place, particularly localised community, still plays a very important role in personal identity and a sense of well-being. This also supports Argent's (2008) observations that, despite improved transportation, advances in communication technologies and a rise in interest in spatially dispersed communities of interest, routine daily life for this older cohort of the rural population still contains a social richness and evidence of social capital.

While distance, or space, still matters for a sense of community and belonging this examination of space and social networks has also highlighted that family form an important component of social networks *regardless of distance*. This may have an impact on the availability of informal physical support as rural people age-in-place but it appears that contact with distant family members remains important to the older rural person suggesting that emotional support from family members is still strong. While distance has shown to impact on the social networks of rural older people, another influencing factor is place and a sense of place identity. This will explore further in Chapter Seven.

# CHAPTER 7: SOCIAL NETWORKS AND ASPECTS OF THE LIFE COURSE

## 7.1 Introduction

Understanding the complexities of ageing involves considering it as part of the life course continuum; ageing as both a lived past and an anticipated future, shaped by life course events (Settersen, 2003). The life course is influenced by personal experiences, genetics, relationships with other people, the places people live, and also by time. Considering the contexts of place attachment and social networks in the lives of older people requires conceptualising both the contemporaneous and cumulative effects of place and space (Robert, 2002).

Chapter Five explored the construct of social networks for participants and Chapter Six explored location and distance in relation to those social networks. It is important to understand not only the various components of social networks and how geographical place influences social spaces and social networks, but also to contextualise that process by understanding and placing it within a temporal construct.

Most research studies do not have the luxury of time to collect longitudinal data to examine changes in social phenomenon. Without longitudinal data the complex and dynamic life course of a respondent, the evolution and change in personal networks, and the social, structural and demographic changes in communities cannot be fully represented. This study provides a 'snapshot' of respondents' social networks, with limited opportunity for incorporating the temporal nature of how these networks have developed and changed, nor how the places they are located in have changed. Within this 'snapshot' participants were able to reconstruct their past lives and were given opportunities to consider their future behaviour. This chapter explores three key temporal aspects of ageing-in-place in rural environments: age as a construct of time, length of residence as a temporal concept that impacts on place attachment and social networks, and future intentions for ageing-in-place.

## 7.2 Age as a Temporal Influence on Social Networks

Participants in this study varied in age from 70 to 102 years of age, with five Aboriginal respondents being aged between 65 and 70 years<sup>18</sup>. The median age of participants was 78 (mean 78.6). Age is an important variable that impacts on many aspects of an individual's life. The likelihood of no longer driving, living alone, increasing poor health, the loss of friends and family members, ceasing volunteering and other community activities, and moving into supported housing all increase with age (Cruikshank, 2003; Rozanova *et al.*, 2008; Hugo *et al.*, 2009). It is these life course events which create environmental and personal stressors that impact on decisions around ageing-in-place and accessing formal and informal resources (Lawton, 1983; Litwak and Longino Jnr, 1987; Lawton, 1998; Wahl and Lang, 2004; Wahl *et al.*, 2004).

### 7.2.1 Age, Health and Well-being

One commonly used method of measuring the general health of any population is the use of self-rated health indicators such as the SF1 in the SF-36 Health Score used in this study (Avery *et al.*, 2006; Luszcz *et al.*, 2006; AIHW, 2007b; ABS, 2007c)<sup>19</sup>. Self-reported health is seen as an indicator of general health and well-being and has been shown to be a good predictor of mortality (ABS, 2004a; Avery *et al.*, 2006).

Table 7:1 shows the levels of self-reported health for older South Australians by 5 year age groups. There is a clear decline in the levels of health reported as 'excellent/very good' and an increase in self-reported 'fair/poor' health as people age.

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<sup>18</sup> Indigenous community members were eligible to participate in the study from 50 years and over in line with HACC and CACP eligibility. These five participants have been included in the general statistics as part of the 70 to 74 years age groups throughout this study, unless otherwise specified.

<sup>19</sup> This study has utilised all SF36 health scores and summary scores as within study comparisons, no comparisons have been made with other studies. Therefore results reflect differences within the study population only.

**Table 7:1 Self-Assessed Health Status in 5 Year Age Groups, South Australia 65+ Years 2006**

NOTE:  
This table is included on page 183 of the print copy of the thesis held in the University of Adelaide Library.

Source: (Hugo *et al.*, 2009)

This general trend of increased self-reported poor health as age increases is also evident for participants in this study, as can be seen in Table 7:2. The 70 to 74 years group had over 40 percent of respondents rating their health as ‘excellent/very good’ compared to only 20 percent of those 85 years and over. However, there were lower proportions of older people in each of the 75 to 79 years, 80 to 84 years, and 85 years and over cohorts rating their health as ‘excellent/very good’ compared to figures for South Australia.

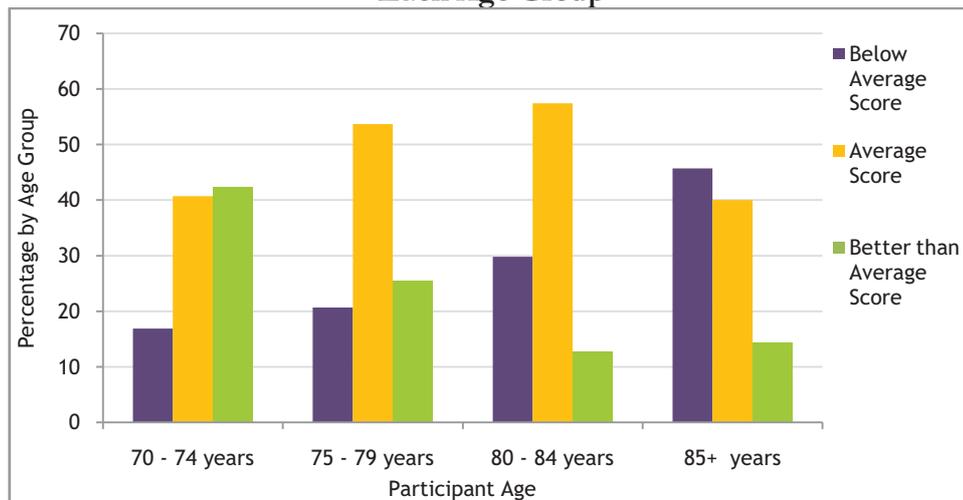
**Table 7:2 Self-Rated Health as a Proportion of Each Age Groups**

Self-Assessed Health	Age Groups			
	70 - 74 %	75 - 79 %	80 - 84 %	85+ %
Excellent/ Very Good	42.4	22.0	19.2	20.1
Good	35.6	54.9	38.3	42.8
Fair/Poor	22.0	23.1	42.5	37.1

Total n=223, 70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

As described in Chapter Five, the SF36 Health Score can be used to create several measures of health, including separate summary scores for physical health and mental health. The overall mean score for participants’ physical health was 67.9 points, with a higher score indicating better self-perceived physical health. The 25<sup>th</sup> percentile score of 56.3 or lower was used to indicate poor physical health and the 75<sup>th</sup> percentile score of 83.8 or higher was used to indicate good physical health (with a score between 56.4 and 83.7 representing average physical health). Figure 7:1 shows the percentage of each age group categorised with below average, average or above average physical health. For participants in this study physical health clearly declines with age as the proportion of participants with below average physical health increases for each age group. The majority of participants in the 85 years and over group rated their physical health as below average.

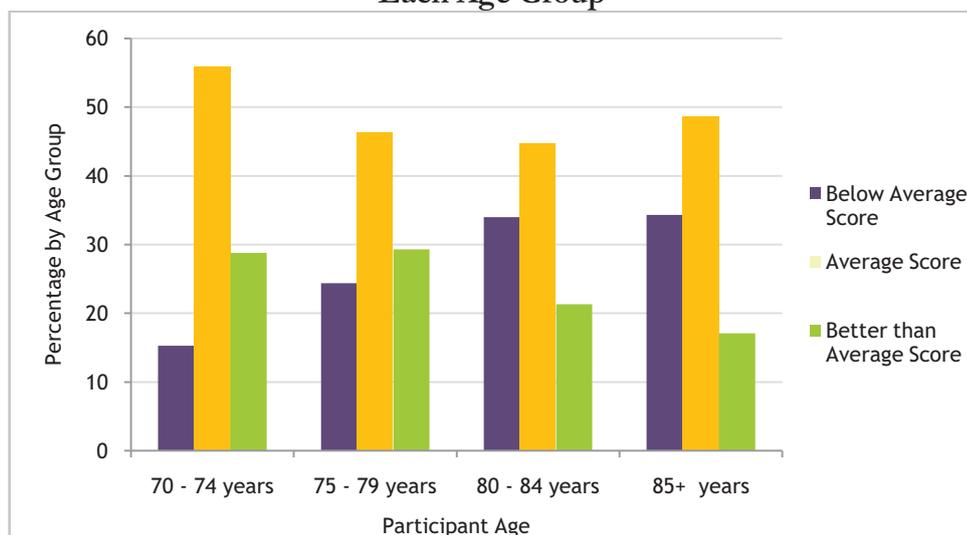
**Figure 7:1 SF36 Physical Health Summary Score Distribution as a Proportion of Each Age Group**



70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

A similar pattern can be seen for the SF36 summary mental health score. The overall mean for the summary mental health score was 78.3, again with a higher score indicating better mental health. Utilising the 25<sup>th</sup> percentile score of 71.6 or lower to indicate poor mental health and the 75<sup>th</sup> percentile score of 89.0 or higher to indicate good mental health (with a score of 71.7 to 88.9 indicating average mental health) Figure 7:2 shows that for participants in this study below average mental health is more common in the older age groups.

**Figure 7:2 SF36 Mental Health Summary Score Distribution as a Proportion of Each Age Group**



70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

Another facet of age as a temporal construct is perception of future health. Question 35 in the SF36 asks 'Do you expect your health to get worse'. Table 7:3 shows that very few

participants saw their future health as unlikely to get worse. The majority of participants aged 85 years and over (65.7 percent) nominated that it is most likely their health will get worse (defined by the responses ‘definitely true’ and ‘somewhat true’) compared to only 17.2 percent who thought it unlikely their health would get worse (defined by the responses ‘definitely false’ and ‘somewhat false’). The 70 to 74 years group were more likely to respond with ‘don’t know’ or ‘somewhat false/definitely false’ than any other participant age group.

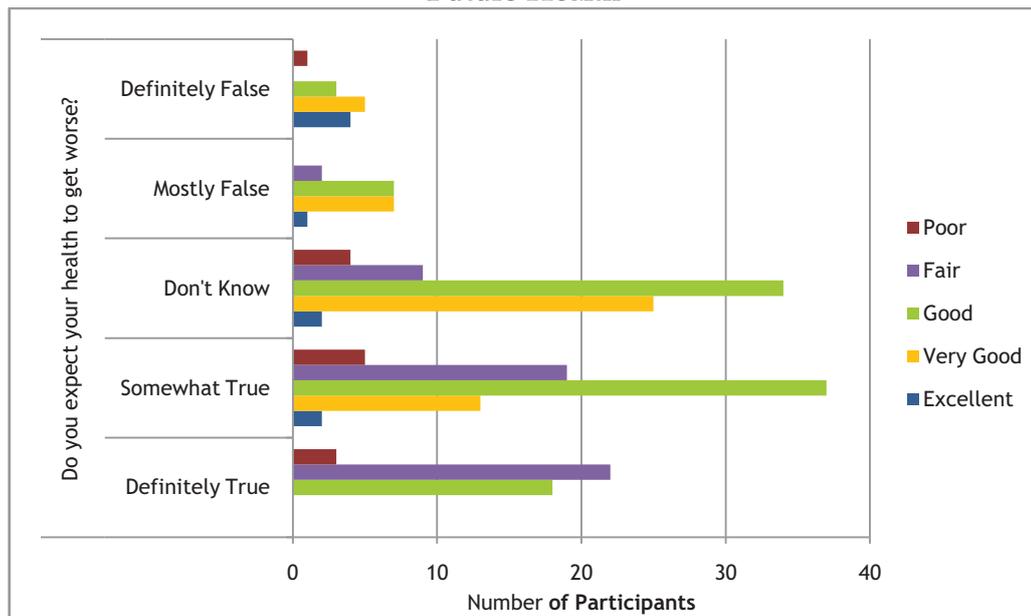
**Table 7:3 Perceptions of Future Health, Question 35 of the SF36 Health Score**

Do You Expect Your Health to Get Worse?	Age Groups			
	70 - 74 (n=59) %	75 - 79 (n=82) %	80 - 84 (n=47) %	85+(n=35) %
Definitely True/ Somewhat True	35.5	53.6	66.0	65.7
Don't Know	44.1	34.2	29.8	17.1
Somewhat False/ Definitely False	20.4	12.2	4.2	17.2

Naturally responses to this question are dependent on current health conditions as well as age; for example a participant with emphysema is more likely to respond to this question as ‘true’ or ‘definitely true’ than someone in good health, regardless of their age. Figure 7:3 compares responses to the SF1 question about current self-rated health to responses to Question 35 in the SF-36 on perceptions of future health. This shows that participants who rated their current health as ‘poor’ or ‘fair’ are less likely to agree that their health will not get worse in the future.

Additionally, no participants who rated their current health as ‘very good’ or ‘excellent’ indicated that it was ‘definitely true’ that their health will get worse in the future. This infers that participants’ perceptions of future health are related to both age and their perceptions of their current health status. Overall, participants were realistic about their future health, and intentions around ageing-in-place appear to have taken into account personal perceptions of future time.

**Figure 7:3 Comparison of Current Self-Perceptions of Health to Self-Perceptions of Future Health**



While there are clear associations between age and health the relationship between health, age and social networks is a complex one. Chapter Five showed that there is a relationship between health and the size of social networks. Smaller social networks have been associated with poorer health in previous studies (Cohen and Syme, 1985; Cohen, 1988; House *et al.*, 1988). Smaller social networks are also associated with increasing age, although it can be argued that this is not always a negative association with people actively reducing their social networks to focus on more meaningful, sustaining relationships as they perceive their future time as more limited (Carstensen, 1995).

### **7.2.2 Age and Mobility**

As people grow older in Australia a reduction in mobility levels is common, with the loss of a driver's licence often presenting a significant life change for older people. Staying connected to the wider community is largely dependent on mobility, and in many Australian rural regions mobility relies on being able to drive (Cruikshank, 2003; Dobbs and Strain, 2008). Being able to drive means not only maintaining autonomy and a level of independence but in rural regions can also be the only form of access to social networks, community activities and essential services, all of which may be located at a distance from the location the older person lives in. Even access to the local post office and shop may be difficult for an older person without use of a car in small rural towns where footpaths may be non-existent, roads unpaved, main roads with heavy vehicle traffic passing through the middle of the town, and localised public transport is unavailable.

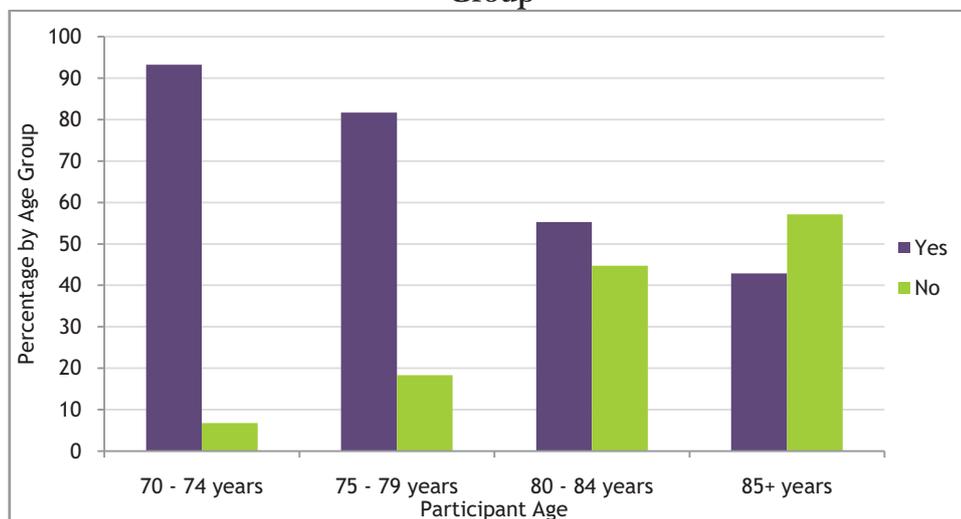
Of the 223 participants in this study 163 (73.1 percent) were still driving. The 60 non-drivers included 15 participants who had never learned to drive, all females, most of them aged over 80 years (Hugo *et al.*, 2009). This is not unusual within this older cohort of women; many older women have never learnt to drive, relying instead on their husbands, friends and family for transport. For those participants who now live alone, or do not have family support nearby, transport in rural areas had become very problematic. Some older drivers discussed the prospect of ‘giving up’ their license or no longer being able to drive.

*“Even though I just drive around the town I don’t know what we are going to do when I can’t drive anymore.”* (K002 female, aged 93)

*“Well there are some things, like the choir, that I would just have to give up if I handed in my licence. Still being able to drive means I am able to keep doing all sorts of things, even with my bad hips.”* (C001 male, aged 86)

Figure 7:4 highlights age as a variable impacting on participant rates of driving. This shows that as age increases the proportion of non-drivers increases. This is consistent with the with the figures for drivers and non-drivers by age for South Australia in the State of Ageing report, where just under 80 percent of people aged 70 to 74 years were still driving compared to less than 40 percent of people aged 85 years and over (Hugo *et al.*, 2009, p.41).

**Figure 7:4 Percentage of Drivers and Non-Drivers as a Proportion of Each Age Group**



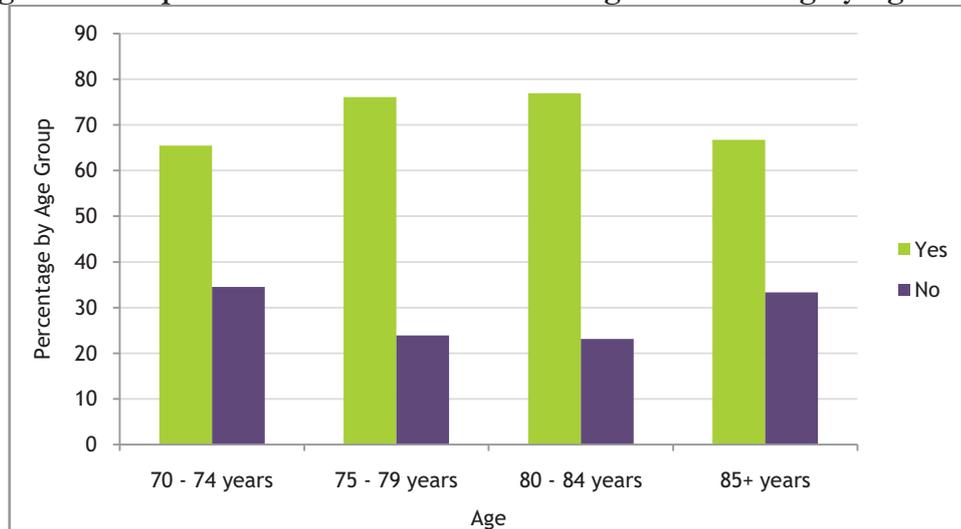
Total n=223, 70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

It cannot be assumed that statistics for licensed drivers reflect the actual number of drivers on the road or that all older drivers are willing or able to drive without restrictions. In South Australia, drivers over the age of 70 are required to provide evidence (a medical

report from a doctor) of their fitness to drive on an annual basis. Older drivers can be placed on restricted licences, limiting the distance they can travel from home and/or night time driving. In rural areas restricted licences can be quite limiting, enabling access to the local town but perhaps not to essential services in other towns. Of the 163 drivers in this study only 20 (12.2 percent) were on restricted licences.

Perhaps more indicative of the limitations to mobility for older drivers in rural areas were the high numbers of drivers in this study who self-restricted their own driving. The majority of drivers in this study, 117 (71.8 percent), self-restricted their own driving. Figure 7:5 shows the high proportions of drivers, by five year age groups, who self restricted their driving, highlighting that even younger cohorts of older people are likely to self-restrict their driving in some way.

**Figure 7:5 Proportion of Drivers Self-Restricting Their Driving by Age Group**



Total n=163, 70-74yrs n=55, 75-79yrs n=67, 80-84yrs n=26, 85+yrs n=15

The most commonly stated forms of self-restrictions included night-time driving, driving in the city and driving long distances. For many participants driving long distances also meant not driving as far as the regional city of Murray Bridge, the location of many services such as allied health providers, specialist care, and electrical and clothing stores. The alternatives to driving for older people in many rural regions are limited; for example only one town in the study region, Mannum, had a taxi service.

Three of the four SLAs in this study region were serviced by the state funded rural Community Passenger Network (CPN) scheme<sup>20</sup> which transports people door to door from outlying towns and farms into Murray Bridge and Adelaide at low cost, mainly for medical appointments. Appendix Seventeen shows a map of the CPN transport routes. For some of the older participants in this study despite the door to door nature of the CPN service this was not a viable form of transportation.

Three older participants in the outlying regions of the study area spoke of having to catch the 'medical bus' as early as 7am and return after 6pm at night in order to attend specialist appointments in the capital city of Adelaide, for one this was on a regular basis. Those living in the Mid Murray SLA did not have access to a CPN scheme at all. However the Blanchetown community in the northern area of the Mid Murray SLA had purchased its own community bus driven by volunteers, which provided fortnightly shopping trips to the nearby Riverland town of Waikerie as well as trips to Adelaide and the Barossa Valley region for medical appointments. This service relied on regular fundraising in the community and passenger donations to continue operating.

For those with personal mobility problems like arthritis, other joint and hip problems, and continence issues travelling for several hours in each direction by bus was impossible and the cost of regular overnight accommodation in Adelaide unaffordable. Many relied on family members, support workers or the hospital 'medical cars'<sup>21</sup> to take them to appointments. Some participants expressed concern about the imposition this placed on family members who were working and/or who did not live nearby.

There were also regular public bus routes along most of the main roads once or twice a week to Murray Bridge (and buses daily from Murray Bridge to Adelaide), however in addition to the inability of some older people to get on and off these buses, once in Murray

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<sup>20</sup> The Community Passenger Network Scheme is funded in South Australia by the Office for the Ageing and the Department for Transport. Similar schemes operate in other states and territories of Australia. In South Australia there are 11 CPNs operating in rural areas with a 12<sup>th</sup> planned for 2011. Their role is to provide information of transport services in the region, to broker transport services (particularly for the disadvantaged) and to directly provide transport services as a last resort (although most do provide some sort of transport – both buses and cars driven by volunteers). CPN services are available for all types of transport needs for disadvantaged people but over 60% of journeys are for medical appointments and colloquially it is often called the 'medical bus'.

<sup>21</sup> The Country Health SA also provides transport for medical appointments in both regional centres and the capital city, colloquially called the 'medical car'. This scheme is funded in part by Country Health SA and also by the CPN scheme.

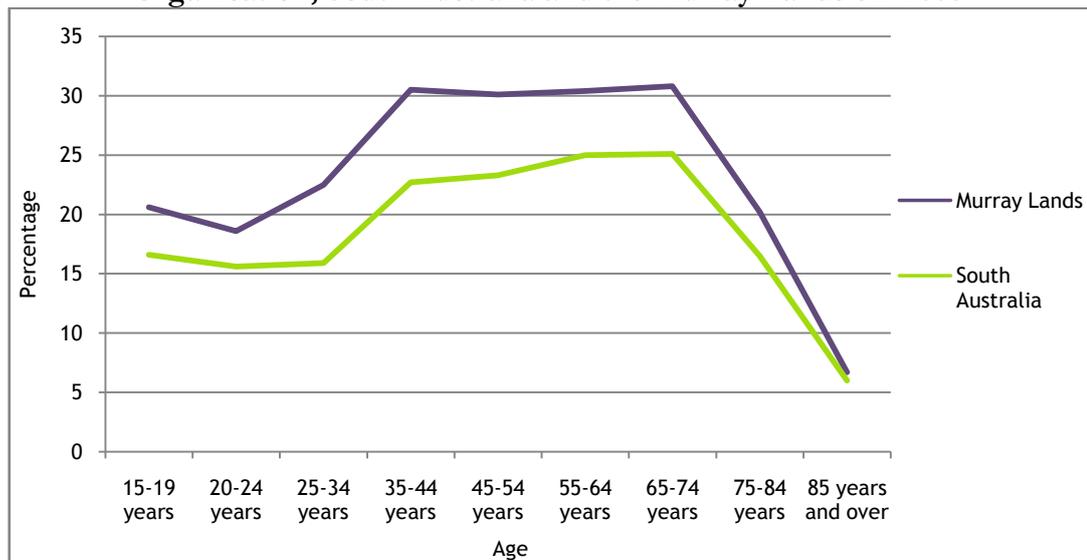
Bridge moving around the main shopping and service area was problematic without access to a car. For some participants this meant even simple tasks such as buying Christmas gifts for grandchildren or visiting a loved one in hospital or a nursing home was impossible without informal assistance from family or other community members. Some people had developed alternative resources. For example: one couple in their 90s from Karoonda employed a local lady to drive them to Murray Bridge once a month for specialist and allied health appointments, enabling them to also do some shopping and meet with a friend living in a nursing home. They paid the driver for the day, enabling them the flexibility to travel from task to task. Of course this convenience comes at a financial cost that other older rural dwellers may not be able to afford.

### ***7.2.3 Age, Work and Volunteering***

For many older people engagement with their local community and social networks comes from work, both paid and unpaid. The participation rates for South Australians aged 70 years and over in paid work were 7.1 percent for males and 2.0 percent for females in 2008 (Hugo *et al.*, 2009). In addition to paid work, unpaid work by older people contributes considerable value to national and local economies (de Vaus *et al.*, 2003; AIHW, 2007a; ABS, 2007d). Unpaid work may be a combination of ‘in-home’ work, such as caring for a spouse with a disability or illness, and ‘outside’ work, such as volunteering for a community organisation (de Vaus *et al.*, 2003).

The Australian Institute of Health and Welfare’s (2007b, p.29) examination of the volunteering rates of older Australians found 14.2 percent of Australians aged 85 years and over were estimated to be still volunteering compared to 22.4 percent of those aged 75 to 84 years and 32.6 percent of people aged 65 to 74 years. Figure 7:6 uses ABS 2006 Population and Housing Census data to compare the percentage of each age cohort volunteering for an organisation for South Australia and the Murray Lands. While the rates of volunteering follow the same pattern with the proportion of volunteers peaking between the ages of 35 and 74 years and then decreasing sharply after this, it is interesting to note that there were consistently higher rates of volunteering in the rural/regional area than for the state overall.

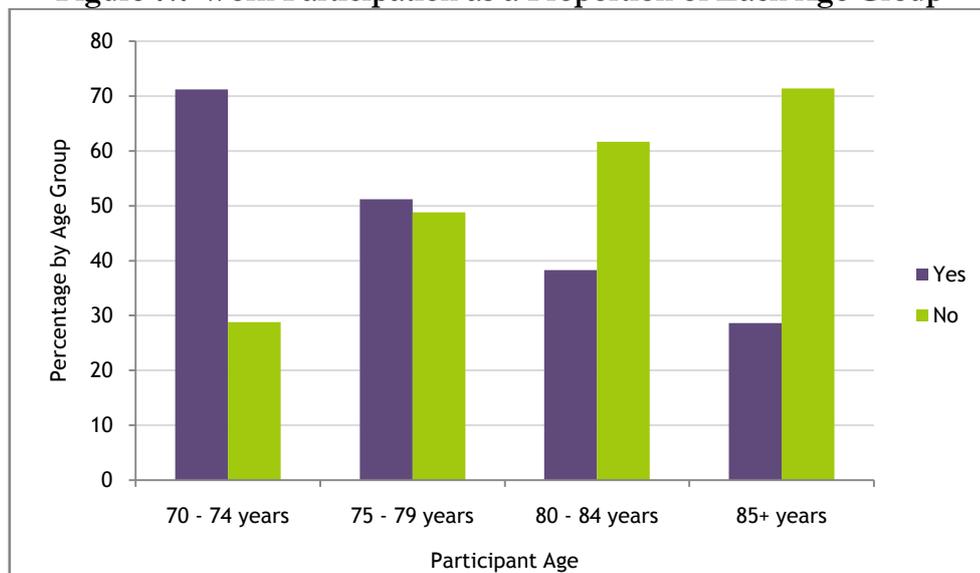
**Figure 7:6 Percentage of Population by Age Cohort Volunteering for a Formal Organisation, South Australia and the Murray Lands SD 2006**



Source: (ABS, 2008d)

Participants in this study were asked if they were involved in any kind of work including: paid work, unpaid work for their own or a family run farm or other business, volunteer work in the community, and/or work as a care giver. Participants with office bearing positions in community groups and organisations were also classed as volunteers. Slightly more than half (52.5 percent) of all respondents were still involved in some form of broadly defined work. Figure 7:7 shows all respondent responses to the question about work by age groups. When considering all types of work together participation rates clearly decrease with age.

**Figure 7:7 Work Participation as a Proportion of Each Age Group**



Total n= 223, 70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

This is similar to de Vaus *et al's* (2003) findings on the proportion of older people contributing to unpaid work. De Vaus' study, based on the 1997 Australian Time Use Survey, took into account unpaid work within the family home (in the form of household chores, gardening, food preparation and home maintenance), which was not considered in this current study. De Vaus' study showed decreasing proportions of people contributed to unpaid work outside the family home as age increased, while the rates of unpaid work within the home remain at a steady rate.

Participants in this study who responded 'yes' to the work question (n=117) can be further categorised as participating in paid work, unpaid work on the farm or in a family business, volunteer work, and care giving, as shown in Table 7:4. Some participants reported doing more than one kind of work (therefore figures do not total 117). Most participants nominating more than one type of work reported a combination of volunteer work and either care giving or unpaid work in a family business or on the farm.

**Table 7:4 Number of Participants by Work Type, Age Group and Gender, n=117**

	Age Groups			
	70 - 74yrs	75 - 79yrs	80 - 84yrs	85 +yrs
<b>Paid Work</b>	1	0	1	1
<b>Unpaid Work on the Farm or in a Family Business</b>	10	13	8	4
<b>Volunteer Work in the Community</b>	31	26	18	5
<b>Care Giving</b>	15	6	0	1

The three participants (all males) who reported doing some form of paid work all worked on farms – one, aged 71, still worked as a farmhand doing seasonal work and the other two were still managing and operating their own farms. The 95 year old still managing his own fruit block outsourced all the farm labour but managed the fruit block himself and also did small welding jobs for others in the community for cash.

Slightly more males than females discussed providing unpaid work (mainly on family farms). This group reported receiving some 'in kind' assistance for their efforts, for example: a proportion of expenses associated with accommodation, petrol, the use of a vehicle, or the purchase of groceries were often provided by the business. Women were more likely than men to be volunteering in community organisations at all ages, and over half of all volunteers reported volunteering for more than one organisation or group.

Interestingly, many older women (and some males) did not describe themselves as care-givers for a partner or spouse despite the poor health and/or frailty of their spouse. Many described providing a lot of care for their partners, and others were clearly observed in a caring role, but they did not consider this as unpaid work.

*‘It’s not really work; it’s what we do for each other. She needs a lot more help than me now and so it’s just part of your day.’* (M012, male 75 years)

This suggests that available data on unpaid carers may not be a true indicator of the number of hours older people provide caring for a spouse.

The higher number of care givers in the 70 to 74 years age group included those who were caring for grandchildren (mainly female). Grand-parents are the biggest providers of informal child care for children between birth and 12 years in Australia and in South Australia most unpaid child care for a child other than their own is provided by grandparents in the 55 to 64 age group (Hugo *et al.*, 2009). Some participants in this study were actively involved in caring for grandchildren on a regular basis, for a small number this was on a full-time basis including some Aboriginal respondents. Four of the eight Aboriginal respondents had grandchildren living in the same home, and two of these were the main care givers for these grandchildren. Two other non-Indigenous respondents also reported caring for grandchildren nearly every day.

For older participants most grandchildren were also older and no longer required care. Many participants cited being great-grandparents and great-great grandparents and enjoying contact with these children but no longer being required to take on the role of carer. It is also important to point out that for many, dispersed family ties meant grandchildren did not live by close by and therefore there were no opportunities to take on a caring role. One participant described this lack of opportunity:

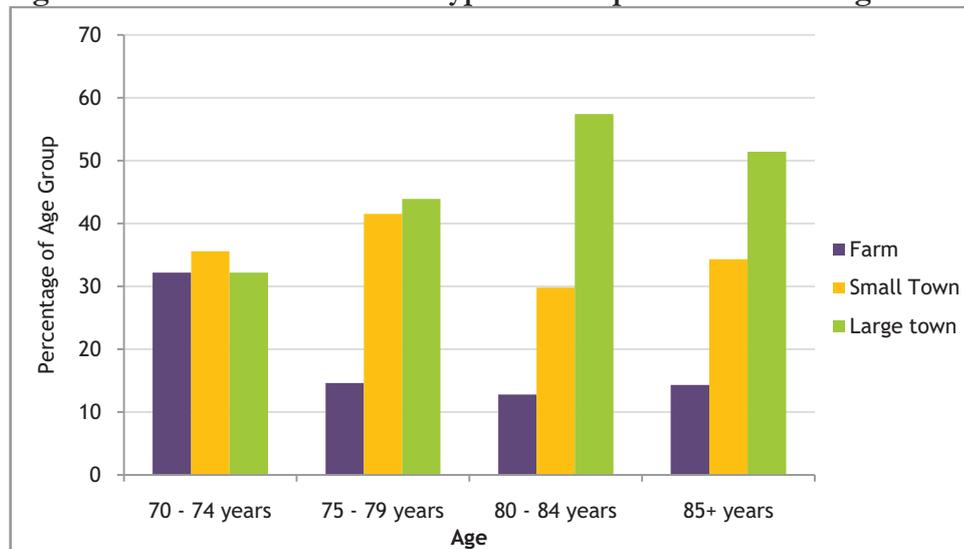
*‘It’s hard; we hardly ever get to see the grandkids. We would love to have them in the school holidays sometimes but they just live so far away ... it’s too far for us to drive and get them and it’s too expensive for them to fly down here. You miss out on so much, we feel like we can’t even help our kids out with the little things like babysitting.’* (M022, female aged 74 years).

#### **7.2.4 Age and Location**

Chapter Three highlighted the spatial variations in the general population by age across the four SLAs selected for this study using ABS 2006 Census data. Of note were the higher

concentrations of people aged 80 years and over in larger towns, where greater levels of services are usually found. This pattern of residence can also be seen in the study population, as shown in Figure 7:8, where the numbers of participants in the 70 to 74 years group were evenly spread over the three residence categories of farms, small towns and large towns. The number of people in the 75 to 79 age group living on farms drops, but the participant population remains evenly distributed for those living in small towns and large towns. It is only in the 80 to 84 years and 85 years and over age groups that likelihood of living in a large town predominates.

**Figure 7:8 Residence Location Type as a Proportion of Each Age Group**



Total n= 223, 70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

From a total of 82 participants aged 80 years and over, one quarter live in locations that do not have ready access to some form of medical service or hospital. Of the 59 participants aged 80 years and over who do live in towns with access to medical services over 80 percent live in towns that have regular GP services, a chemist and a hospital. This suggests choices have been made about moving closer to services (yet often remaining in the local area) as people grow older. Alternatively this may indicate that for older participants living in larger towns the availability of services and suitable housing has enabled and supported ageing-in-place compared to locations such as small towns and farms. Residential mobility will be explored further in Sections 7.3 and 7.4.

Whether a person lives alone or with others also impacts on their ageing experience. An older person living alone on a farm is likely to have a very different social network and differing support needs than an older person who is living with a spouse or living with

family on a farm. Table 7:5 shows a breakdown of age groups by residence type and living arrangements. It is clear that the majority of participants aged 80 years and over, who are living alone, are living in larger towns. The numbers for participants living with other family members were small and therefore have been combined with those living with a partner and presented as ‘living with others’. Of the 12 participants aged 80 years and over living on farms only two are living alone. This can be further contextualised by examining the spatial location of their networks, with both of these participants having family members living less than two kilometres from their residence.

**Table 7:5 Number of Participants by Living Arrangements, Age and Residence Location**

Current Living Status		Age			
		70-74	75-79	80-84	85+
Living Alone	Farm	2	4	0	2
	Small Town	8	7	7	5
	Large Town	6	14	17	12
Living With Others	Farm	17	8	7	3
	Small Town	13	27	7	7
	Large Town	13	22	10	5

Total n= 223, 70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

### 7.2.5 Age and Loneliness

As discussed in Chapter Two, loneliness is a complex, subjective human construct that is not easily attributed to any one facet of lifestyle or personality (Franklin and Tanter, 2008). This study used an adapted 10 question version of the UCLA Loneliness Scale<sup>22</sup> (Russell, 1996) to measure loneliness among participants. Variations of this scale have been widely used as a measure of loneliness. It has a high rate of validity and has been used on various population groups, including older people (Mellor and Edelman, 1986; Russell, 1996; van Tilburg *et al.*, 1998; Adams *et al.*, 2004; Beal, 2006). Each item is rated on a 4-point scale, ranging from ‘never’ to ‘most of the time’, with 5 of the 10 items being positively worded (requiring their scores be reversed) and 5 negatively worded. Scores are collated to provide a final loneliness score (lowest value 10, highest value 40), with a high score correlating with increased loneliness.

<sup>22</sup> The shorter adapted version of the UCLA Loneliness score has been used with other groups, and is ideal for embedding in longer surveys. See Appendix Twelve for a copy of the survey instrument.

Russell (1996) points out that loneliness is not strongly correlated with objective properties associated with social networks (such as network size, frequency of contact, number of kin and non-kin). This is supported by Mellor and Edelman's (1986, p.4) study which suggests that physical impairment or the lack of a confidante are more likely to be associated with loneliness in older age, not the size of the person's social network, nor the frequency of contact with network members. Carstensen's Socioemotional Selectivity Theory (1995) suggests that as individuals perceive their future time as limited (as in old age) they actively adjust their social networks to favour meaningful, emotionally sustaining relationships and 'discard' others. For example, people may participate in fewer groups and activities in favour of spending more time with family and close friends.

In effect this creates smaller, but more meaningful social networks, but does not mean older people are necessarily increasingly lonely as a result of these smaller networks. Utilising this approach it would be expected that the older cohorts of this study had smaller networks, but not necessarily higher loneliness scores and this is exactly what is seen. Table 7:6 shows a distinct decrease in network size until the age of 85 years, yet little variation in loneliness scores, supporting Carstensen's theory.

**Table 7:6 Comparison of Network Size and Loneliness Scores by Age Groups**

Age Groups	Median Social Network Ties	Median Loneliness Score
70 -74 years (n= 59)	16	13
75 - 79 years (n = 82)	14	13
80 - 84 years (n = 47)	12	14
85 - 89 years (n = 17)	10	14
90 + years (n = 18)	10	14

### ***7.2.6 Age and Social Networks***

When examining social networks by different categories of ties, as seen in Table 7:7, there are reductions in the mean number of network ties across most categories as age increases. The two exceptions are the neighbours category, which remains steady except for a dip in the 85 to 89 years age group and the service providers category, which shows an increase as age increases. These findings may also support Carstensen's theory (1995) that as people view their future time as limited, such as in very old age, networks become smaller. However, the reduction in social network size as people age is not necessarily only the result of conscious decision making about 'quality over quantity' and in this study is not

related to the loss of any particular category of network tie. It appears that the reduction in network size is perhaps a reflection of a combination of many elements associated with age, place and time.

**Table 7:7 Mean Number of Network Ties by Category and Age Group**

	70-74 (n = 59)	75-79 (n = 82)	80-84 (n = 47)	85-89 (n = 17)	90+ (n = 18)
Total Network Size	16.2	14.9	13.2	10.7	11.8*
Family **	7.6	6.5	5.1	5.0	4.3
Friends	2.8	2.9	2.2	1.0	1.9*
Neighbours	1.5	1.4	1.5	.9	1.6
Service Providers	.6	.8	1.5	1.4	2.0
Groups	.9	.9	.85	.6	.47
Activities	2.8	2.3	2.0	1.8	1.3

\* Two respondents in this small group had large networks, particularly a larger than average number of friends. Removing these outliers gives a mean of 10.1 'total network size' and a mean of 0.7 'friends' in the 90+ years age group.

\*\* Family members living together (such as daughter, son-in-law and grandchildren) were nominated as one network tie; one member of this network tie was usually nominated as the medium through which most contact was made.

The decrease in family network ties can be attributed, in part, to the loss of spouses, siblings and other kinship ties through death. Many respondents talked about the loss of siblings, parents, aunts, uncles and other kinship ties. In addition, generally as people age so do their friendship groups with the loss of long term friends through death also more common at older ages. For others, friends had moved from the area due to relocation to nursing homes or to be closer to their own families making maintenance of those friendships more difficult. Participants talked about the loss of friends and family as they discussed their network ties and many discussed not investing in new friendships at this time in their life. For some this was because opportunities to make new friends were limited by their location and/or mobility; for others it was just not something they considered doing anymore. Participants discussed 'being friendly' but not actively making new close friends.

*"Well I am always friendly to everybody but I don't think about going out and making new friends anymore."* (M080, female 86 years)

*"Oh I couldn't be bothered making any new friends now."* (S027, female 93 years)

*"Well you don't meet too many new people out here!"*(K023, male 89 years)

Natural attrition also applied to some groups and activities, particularly in smaller communities. Participants spoke of the loss of Senior Citizens groups, CWA groups, amalgamations of local sporting teams with other districts, churches being closed or only offering monthly services rather than weekly services and so forth. Closure of such groups is often the result of the loss of a threshold population needed to support such activities in local communities. This limits socialisation opportunities within the local community. Social networks are also impacted by personal adaptations and changes as well as natural attrition. For example, the loss of a driver's license, decreasing mobility and poor health also impact on the numbers of groups and activities that older people choose to take part in, as with the following case study.

#### Case Study: 'Mary' (S-009)

'Mary' is 92 years of age. She lives in a small town and had just lost her license two days before taking part in this study, something that upset her greatly. Most of her discussion during the interview centred on contemplating the adjustments she was going to have to make to her regular activities and routines. For example, 'Mary' was still making biscuits and delivering them to the local nursing home in the next town (20 minutes drive away) where she would have morning tea with her friend in the nursing home before she attended a craft group nearby. She was also a member of two other community groups in this town. Without any access to public transport 'Mary' was imagining what it was going to be like to give up these fortnightly activities. 'Mary' was also very involved in her local bowling club, which was located at the end of her street. Although she no longer played bowls she always helped with the morning tea and 'did the flowers' for the tables on bowls days. As the interview progressed 'Mary' began to plan a greater involvement in the local bowls club to compensate for the loss of her 'clubs' in the next town, but the impact on the size of her social network was still great.

*"Well my next door neighbour could still take me to 'town' every now and then to see my friend and drop off the biscuits to the 'home' but I can't see how I can keep going to CWA and the Red Cross. You can't ask people for lifts all the time can you? .... Of course that would give me more time for the bowling club, maybe I could help out more with the garden and the watering now, and my old team practises on Wednesdays so I could go down and watch that more often I suppose"*

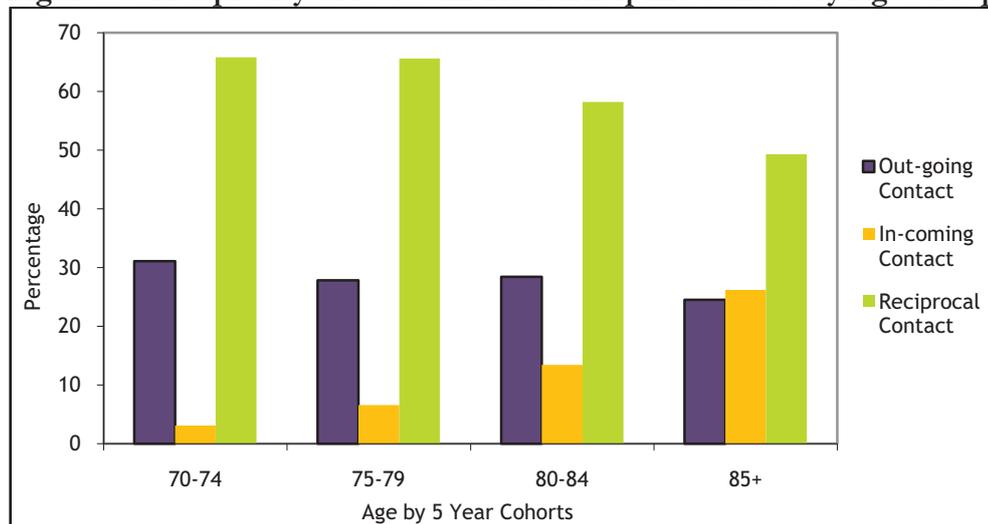
**Note:** 12 months after this interview 'Mary' had decided to move into an independent living unit in the next town, managing without transport in a small town had become too difficult for her.

It is not only the size and composition of social networks that change with age. Other elements of contact with network ties, such as reciprocity, also appear to change. Participants were asked to nominate whether contact with network ties was mostly instigated by them (outgoing), mostly instigated by the network tie (incoming) or if contact was reciprocal, with both parties instigating contact. Obviously some forms of contact are always going to be outgoing, such as attending a group or community activity; and some

forms will inherently be incoming, such as in-home services from a formal care giver. Other service providers mentioned included the local pub, the chemist, doctor and other allied health services, and the local shop keeper and post office; all of which are usually outgoing forms of contact.

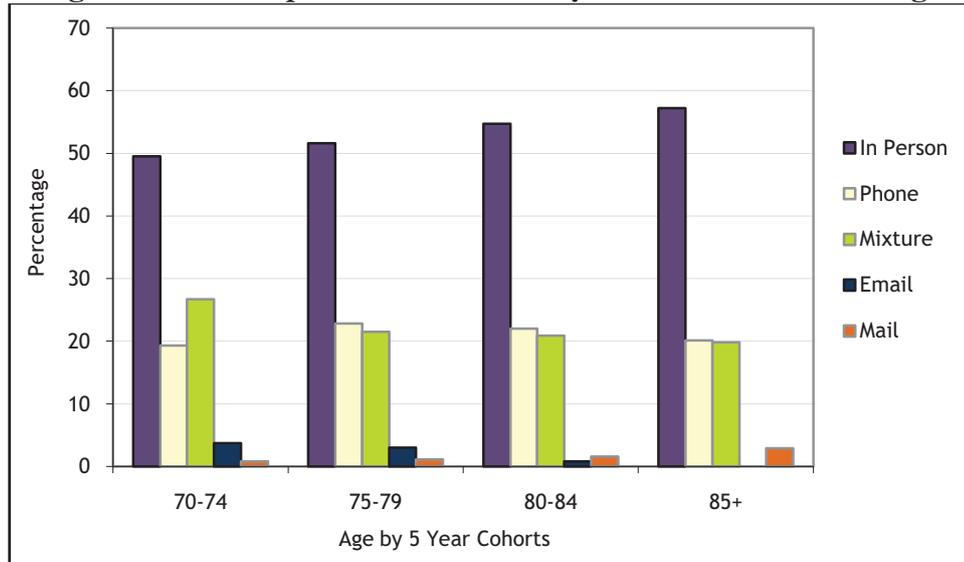
Some network relationships can be more reciprocal, such as contact with children and other family members. Figure 7:9 shows the changing nature of reciprocity with age for all 3,195 participant-network tie contacts. While levels of reciprocal contact consistently remained higher than other forms of contact for respondents, the levels of reciprocal contact with network ties falls slightly with age; as do levels of outgoing contact, with levels of in-coming contact increasing with age. This suggests a greater reliance on contact being by others to maintain social networks ties in older age.

**Figure 7:9 Reciprocity of Network Tie-Participant Contact by Age Group**



Total n= 223, 70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

The mode of contact between respondents and network ties also showed elements of change with age. Participants were asked to nominate the main mode of contact for each network tie, with five possible contact options: mainly in person (face-to-face), mainly by phone, a mixture of phone and face-to-face, mainly by e-mail, and mainly by letter. What is clearly evident, as shown in Figure 7:10, is that for most participants in this study the majority of their contact with network ties is face-to-face followed by phone contact or a mixture of the two. As already discussed this includes some elements of social network contact that will always be face-to-face, such as activities, groups and service provision. Additionally, most respondents talked about seeing their neighbours face-to-face.

**Figure 7:10 Participant-Network Ties by Mode of Contact and Age**

Total n= 223, 70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

Writing letters was the least favoured form of communication, although communication by mail was slightly more prevalent within the older age group. For some participants a lack of maintaining contact by letter writing was described as a physical limitation with arthritis and poor eyesight being the main factors mentioned in preventing letter writing. E-mail represented only a small proportion of contact with network ties. Eighteen participants reported using e-mail to remain in touch with network ties, and as respondent age increased the likelihood of nominating e-mail decreased, with only one respondent over the age of 80 years recording using e-mail. Similar results to this have been found in other studies (Czaja and Schulz, 2006; ABS, 2007a; Feist *et al.*, 2010).

Of note is the slight increased proportion of face-to-face contact with network ties for older respondents, particularly when taking into account the decrease in the number of nominated groups and activities (typically face-to-face contacts) with age, as shown in Table 7:7. Face-to-face contact relies to a great extent on proximity of network ties, suggesting that as people age proximal ties, and face-to-face contact increase in importance for social interactions.

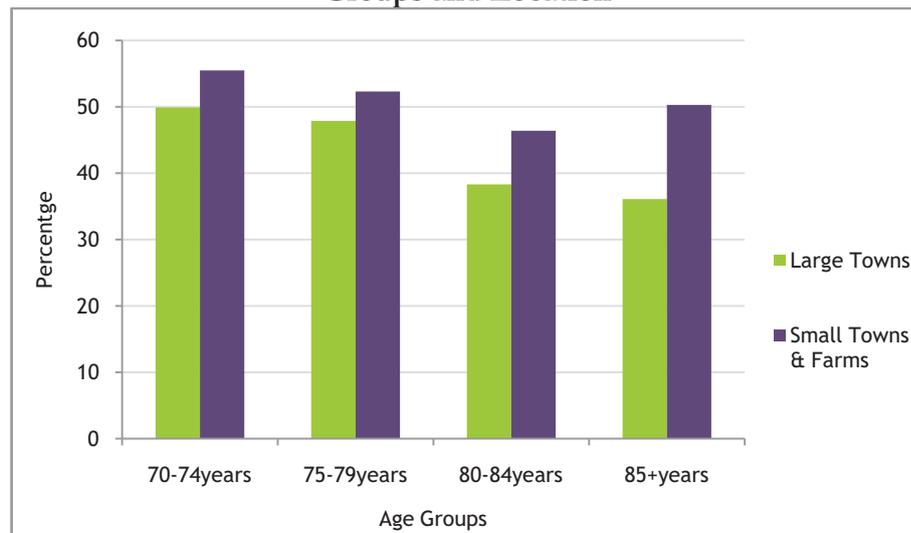
When reciprocity and mode of contact are examined together two elements of age need to be considered. Reduced mobility in age, particularly the loss of a driver's license as discussed previously, impacts of the ability on older people to maintain face-to-face connections outside their own community and for some older people activities and groups within their own community may also become more problematic. Hence, it could be

expected that this might result in higher telephone contact, at the expense of face-to-face contact, but this is not reflected in the data here. In fact, telephone contact remains reasonably constant across age groups, while face-to-face contact increases slightly, as shown in Figure 7:10.

More face-to-face contact could be expected as part of a *localised* social network, where most contact with others takes place within the home and immediate neighbourhood. Krause (2003) supports this idea of localised networks and neighbourhoods becoming the foci of older people's time. With just 2 percent of women and 7.1 percent of men over the age of 70 years employed outside the home in South Australia it is easy to understand why the home and neighbourhood becomes the centre of everyday life as most people age (Hugo *et al.*, 2009). Horgas, Wilms and Baltes (1998) found that people over the age of 70 years spent approximately 80 percent of a typical day at home. Therefore it seems likely that social networks would not only have a greater proportion of face-to-face socialisation over time but also would become *spatially* smaller, or more localised.

This is supported when examining distant network ties as a proportion of total network ties by age groups, as shown in Figure 7:11. The proportion of distant network ties decrease as age of participants increase, suggesting that social networks do become not only smaller in number but also more localised over time. Interestingly when place is taken into account, in the form of large towns, small towns and farms; the decrease in distant ties over time is less pronounced for participants living in small towns or on farms. This suggests that participants living in small towns and on farms have less localised opportunities for network ties and therefore need to maintain network ties at further distances; while participants growing older in larger towns, with more amenities and higher population densities, have more opportunities to maintain localised network ties at the expense of distant ties. However, participants on farms and in small towns still reduce the number of distant ties to a degree and tend to have smaller networks overall. Consideration needs to be given to how this may impact on quality of life and availability of social and instrumental support for this group.

**Figure 7:11 Distant Network Ties as a Proportion of All Network Ties by Age Groups and Location**



Total n= 223, 70-74yrs n=59, 75-79yrs n=82, 80-84yrs n=47, 85+yrs n=35

It is impossible to consider one element of social networks in relationship to ageing without consideration of others. Reduction in network size, composition and modes of contact are related to the physical changes associated with ageing *and* the physical nature of the environment in which the person lives. However, age is clearly related to many network properties, with changes in networks evident as age increases; but as the constant loneliness scores for all participant age groups suggest, not all change is necessarily negative. Many of the adjustments older people make to their social networks and patterns of daily life reflect adaptations that allow them to remain living in the location of their choice and retain their independence.

### 7.3 Length of Residence as a Life Course Influence on Social Networks

Place attachment and identity are developed from the synthesis of physical places, time and social relationships (Fried, 2000; Cresswell, 2004; Tuan, 1977; Rowles and Watkins, 2003). One measure of time and place attachment is time lived in the community. The longer an individual has lived in one place the greater the sense of memory, experience and familiarity attached to that place. This equates with Rowles' (2003) sense of autobiographical insiderness where accumulated layers of meaning associated with one place over time create a sense of identity.

Two measures of period of residence are used as an indication of place attachment and ageing-in-place in this study. Firstly, the number of years at, and the location of, participants' current and previous address is used to indicate length of time lived in the community. Length of time lived in the community is considered to be a better indication of place attachment than the simple measure of the number of years at the current home. As such, someone may have lived at their current location for a short period of time, yet lived in the same town or surrounding hinterland for most of their lifetime indicating long-term residence in the community. Many respondents talked about making the decision to leave the farm and move into town, or to move to a more manageable home as they aged, but doing so with-in their local community.

The second factor taken into account when examining length of residence as a measure of place attachment is the age of respondents when they first moved to the community they currently live in. This is used to help understand place attachment through memories and associations with place. As such, someone who has raised a family and worked in their current location before retirement carries richer layers of history and memories as part of their life course associated with that place than someone who experienced these things at another location before subsequently retiring to their current location. In this sense a measure of length of residence may be a confounding factor when considering community ties and attachment to place.

The movement of human beings is closely associated with different phases in their life course (Litwak and Longino, 1987). People have a heightened propensity to move at certain times in their lives. For example, the late teens and early twenties are times in the life course that are typically associated with seeking further education, finding work and finding a partner (ABS, 2009b). In Australia residential movement peaks in the early 30's as people develop steady careers, enter home ownership and create families, then declines steadily towards retirement age (Wulff *et al.*, 2010). However, it is now clear that migration patterns after retirement exist and are also very much influenced by lifecourse patterns. Litwak and Longino (1987) suggest that older people are under institutional pressures; such as changing kinship structures, greater wealth, increased mobility made possible by newer technologies and a sense of individualism, to make three basic types of moves: one when they retire (a 'lifestyle' move), a second when they experience moderate forms of disability (to be closer to forms of informal support such as family), and a third if they experience major forms of chronic disability (often into institutionalised care). Yet they emphasise that

migration at all ages is still very selective, 'not all persons are equally likely to migrate' (Litwak and Longino Jnr, 1987, p.272).

As discussed in Chapter Three the four SLAs in this study showed general population stability for people aged 65 years and over, with only small proportions of this cohort migrating into the region in the five years prior to the 2006 Australian census, and most of this movement being within the same SLA (ABS, 2008d). Re-locating is dependent on several factors in older age including housing prices, availability and location of health services and appropriate accommodation, and the location of other family members (Hugo *et al.*, 2009). The mean number of years participants in this study had lived at their current address was 24.4 years; with the longest length of time at one address 92 years. This suggests a stable population not subject to high levels of mobility. Overall, 28 participants (12.5 percent) had re-located to a new house in the preceding five years with very few of these participants (eight) having moved to their current home from another region in the preceding five years.

### ***7.3.1 Length of Residence in the Community***

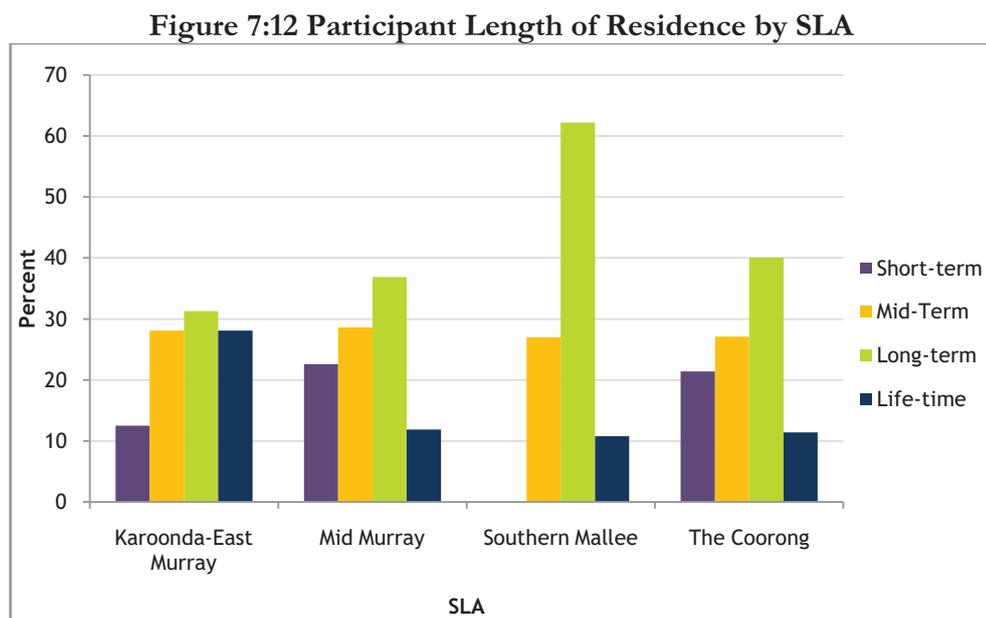
The mean number of years of local community residence for participants in this study was 41.3 years, with a median of 45 years (the standard deviation of 22.6 years reflecting the wide range of length of residence for the study population). The shortest length of time in the local community was one year and the longest 96 years. The average length of residence in the community was almost 20 years more than average length of residence in the current home, strengthening the sense of high levels of stability within this older population. Within the study region some SLAs appeared more sedentary than others.

For those participants living in both The Coorong and Mid Murray SLAs length of years in the community had a mean of 37.2 years. This is significantly less than the mean number of years of local residence for the Karoonda-East Murray and Southern Mallee SLAs of 50.5 and 50.3 years respectively. Additionally, while the minimum number of years lived in the community for participants in the Mid Murray and The Coorong SLAs was 1 and 2 years respectively for the Karoonda-East Murray SLA it was 13 years and for the Southern Mallee it was 18 years. This difference suggests higher numbers of participants having migrated to the two higher amenity, Arcadian locations of The Coorong and the Mid-Murray SLAs and a larger number of participants with more entrenched associations to farming in the Karoonda-East Murray and Southern Mallee SLAs.

Length of local community residence was divided into four categories:

- The Short-term residents (n=38), living in their current community for 15 years or less, indicating a move to a new community in later life.
- Mid-term residents (n=62) had lived in their current community for 16 to 40 years, usually indicating a move during working life for most participants.
- Long-term residents (n=92) had lived in their current community for the majority of their adult life, 41 to 65 years.
- Life-time residents (n=31) had resided in their current community for 66 years or more, indicating living in their current community since childhood or early adulthood.

Figure 7:12 shows length of residence in the community for participants in each of the four SLAs in the study region. For each SLA the clear majority of participants represented long-term lengths of residence in the community.



Karoonda-East Murray n=32, Mid Murray n=85, Southern Mallee n=37, The Coorong n=69

### ***7.3.2 Length of Residence, Age and Ageing-in-Place***

Length of residence can be linked to several other key variables. Firstly, the average age of participants increased with length of residence, as seen in Table 7:8. This would suggest that those participants who are categorised as life time residents are likely to be the ‘survivors’ of their cohort still living in their local community, and less likely to choose to

move as time goes by while others from within the same cohort may have already made the move to another location at an earlier age (Pickett and Pearl, 2001).

**Table 7:8 Mean Age of Participants by Length of Residence**

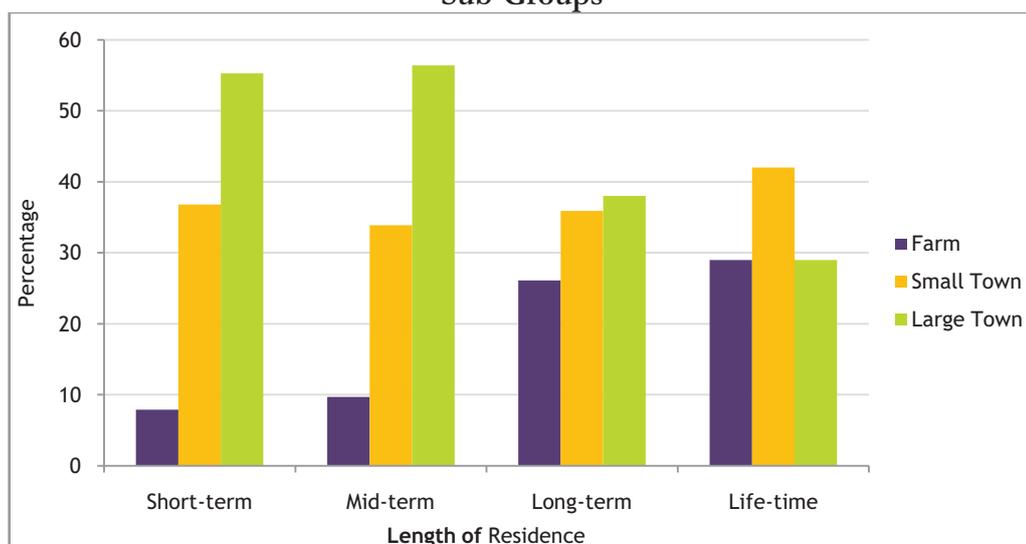
Length of Residence	Age (mean in years)
Short-term Residence (n= 38)	76.7
Mid-term Residence (n = 62)	77.5
Long-term Residence (n = 92)	79.3
Lifetime Residence (n = 31)	82.4

The younger age of the short-term residence group is partially explained by the presence of the ‘discretionary’ amenity-led retirees, a move that tends to occur post-retirement at a younger age (Litwak and Longino Jnr, 1987; Lovegreen *et al.*, 2010).

### 7.3.3 Length of Residence and Place

A second variable that correlates with length of residence is participant location. When number of years in the local community is examined by participant location (using the categories of farm, small town and large town) as shown in Figure 7:13, it shows that respondents currently living on farms were more likely to have been long-term or life-time residents; while short-term and mid-term participants were more likely to be living in a large town.

**Figure 7:13 Participants by Location Type as a Proportion of Length of Residence Sub-Groups**



Length of Residence: Short-term n= 38, Mid-term n=62, Long-term n=92, Life-time n=31

It is not entirely unexpected that older people moving to a new location upon retirement would move to a town location rather than to a farm location. Many participants who fell into the short-term residence sub-group, having moved to a new community in the last 15 years, cited retirement to a desirable location or moving to be closer to services and/or family as being the reason, highlighting the active decision making processes about housing many older people make. Fifty-seven participants had retired to their current location as a 'tree change' experience and for most (52) this was to a place where some personal sense of history and attachment already existed, such as to a traditional family holiday location.

*"Well we have been coming up here for years, so we knew this is where we wanted to retire".*

(M047, male aged 78 years living in small river community for the last 15 years)

*"I've always liked this town, it always appealed to me and I knew it fairly well, so I thought it would be a nice place to retire to."* (M039, male aged 84 years living in large river town for the last 6 years)

Therefore, while considered a move to a new community for the purposes of this study, in fact for many of these participants a sense of place attachment and familiarity, including the likelihood of localised social network ties, already existed.

The high proportion of 'life-time' participants represented in small towns includes participants who had moved from a farm into a nearby town upon retirement. For these participants this enabled them to maintain, and at times even strengthen, ties with friends, family and activities in their local community and for many it also accommodated their on-going assistance and interaction with the farm itself (Hugo, 2007a). Several participants spoke of on-going involvement in farming activities.

*"I would have been happy to move into Murray Bridge when we retired, but I knew Ray would be lost if he couldn't go out to the farm every day – he wouldn't know what to do with himself in Murray Bridge!"* (C007, female aged 76, living in a small town with her husband aged 79).

*"I still help out on the farm as much as I can, we moved in here about 11 years ago when my son took over the farm, but I still help him out. It's not easy to make a living on a farm these days and any help I can give him helps them stay on the farm too. ....I'm probably out there 3 or 4 days a week on average."* (S002, male aged 82, living in a small town)

The three participants who had a short-term length of residence and were living on a farm had moved to that location for housing reasons. For one respondent it was an opportunity to take up housing on traditional Aboriginal land, for another it was an opportunity for free

housing in return for caretaking a small farm, and for the third it was a combined business venture with other family members. All three were in the 70 to 74 year age group.

Of the 123 participants who were categorised with long-term and life-time lengths of residence 40 (32.5 percent) had moved house within their local community in the last twenty years. Three main reasons were given for these moves: retirement from the family farm into the local town, poor health (either their own or their partner's) instigating a move to more suitable housing, and moving to more manageable housing because of the burden of house and garden maintenance. This indicates active decision making by many older people about housing and lifestyle before they reach very old age, while choosing to remain in their local community (Olsberg and Winters, 2005). For some older people in rural locations the choice to move to more appropriate housing within their local region may be hampered by lack of necessary services, lack of family for informal support or lack of appropriate or affordable housing options, as described in the following case study.

#### **Case Study: 'Joan' (M013)**

Joan is aged 74 and has lived in a small town of approximately 100 people in the Mid Murray SLA for the past 45 years, since her husband took up a job there. Joan described how they had always intended to move to Mannum after her husband had retired from his job, particularly since their children no longer lived in the area.

*"We like Mannum; it was always our plan to move there when we got too old to manage here; to be closer to our friends, the shops and the hospital, things like that."*

This was no longer considered a viable option, as Joan explained:

*"Well a couple of years ago we thought it was time we started looking around for a place... but of course Mannum is so much bigger now and all those new housing estates are happening. So we just can't afford a place there now, our own place here is worth so little and everything there is way too expensive for us, so we're stuck really. We will just have to stay here now."*

This shows that some residential stability in rural areas is about lack of opportunity and choice rather than a desire to remain living in the same location. High amenity towns close to metropolitan areas, such as Mannum, have over time become desirable locations for many people and the increased housing prices associated with desirability mean these rural towns are no longer an option for many rural older people living in the surrounding regions. The growing disparity in housing prices also means that regional centres, such as Murray Bridge, where aged specific services and amenities such as nursing homes and

visiting specialists are generally located may also be an unaffordable choice for many older people living in smaller, less desirable rural locations. As an example of this the house prices for some of the SLAs in the region were compared using the Real Estate Institute of South Australia's (2010) quarterly median housing prices as a guide.

Table 7:9 shows two key aspects of property prices. Firstly, the disparity of median house prices between SLAs within the study region. For example, the difference between median housing prices in the rural SLA of Southern Mallee and the regional centre of Murray Bridge in 2010. The second point to note is the slump in housing prices in the more rural areas, such as The Coorong SLA and the Southern Mallee SLA, where the impact of drought on farming and the lower lakes dairy farming regions is reflected in a drop in median housing prices over time. Also of note are the increases in median housing prices (albeit small increases) in the regional city of Murray Bridge and higher amenity regions such as the Mid Murray SLA which are less affected by the drought.

**Table 7:9 Comparison of Median House Prices, 2009 and 2010**

SLA\*

NOTE:  
This table is included on page 209  
of the print copy of the thesis held in  
the University of Adelaide Library.

\*Figures unavailable for Karoonda-East Murray SLA,  
Source: (Real Estate Institute of South Australia, 2010)

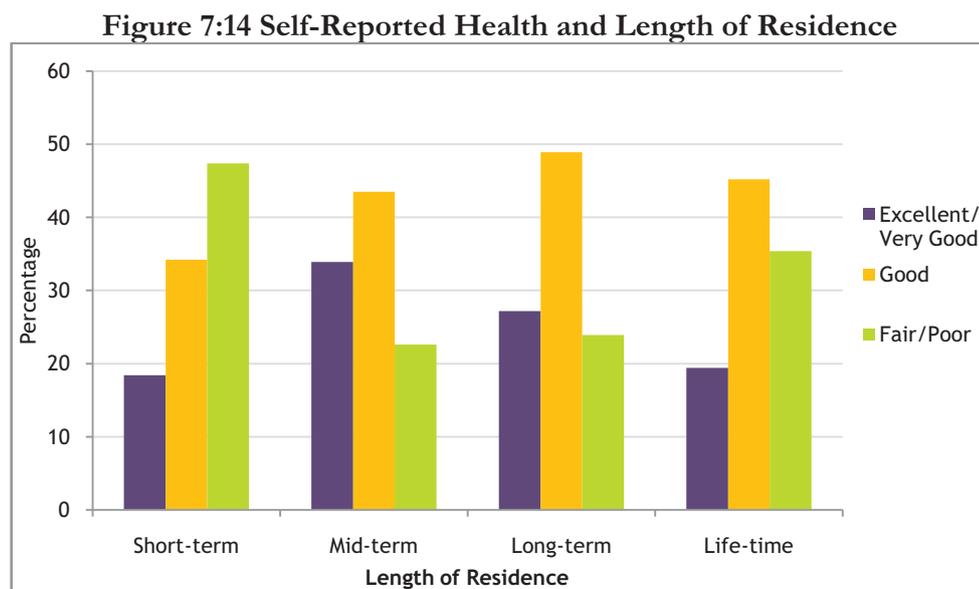
#### ***7.3.4 Length of Residence and Well-being***

There were no significant relationships between length of residence and the UCLA loneliness scores, the SF-36 summary mental health or SF-36 summary physical health scores, although participants with short-term length of residence did show a slightly higher average loneliness score, as seen in Table 7:10. This is explored further in Section 7.4.

**Table 7:10 Length of Residence by SF-36 Summary Health Scores and UCLA Loneliness Scores**

	<i>UCLA Loneliness Score (mean)</i>	<i>SF-36 Summary Physical Health Score (mean)</i>	SF-36 Summary Mental Health Score (mean)
Short-Term (n = 38)	16.2	65.8	73.4
Mid-Term (n = 62)	14.6	71.2	81.1
Long-Term (n = 92)	15.0	68.9	79.3
Life-Time (n = 31)	14.6	61.2	75.9

There is some correlation between self reported health scores (SF-1) and length of residence, as seen in Figure 7:14. Short-term residents are more likely to rate their health as 'fair' or 'poor' and have the lowest levels of 'excellent' or 'very good' health, despite having a lower median age and larger social networks. This may be a reflection of those older people who have moved in recent years to be closer to family or services because of poor health or it may indicate that moving at an older age impacts negatively on health; this is discussed further in 7.4. Also of note, within the 'life-time' participant group no one rated their health as 'poor'. It is difficult to know if this reflects a cohort of 'survivors' remaining in the community while others, who have experienced poor health, have already relocated to be closer to appropriate services and/or family members at an earlier age; or if it indicates that long-term attachment to place acts positively on self-identity and well-being (Rowles, 1993; Pickett and Pearl, 2001; Rowles and Watkins, 2003). Further research on the link between length of residence in rural places and a self-rated health would be required to investigate this association in more depth.



Length of Residence: Short-term n= 38, Mid-term n=62, Long-term n=92, Life-time n=31

### ***7.3.5 Length of Residence and Social Networks***

Length of residence shows some relationship with aspects of participant social network ties. Participant social network categories were cross-tabulated with length of residence, with the noteworthy associations highlighted in yellow in Table 7:11.

**Table 7:11 Participant Social Network Properties and Length of Residence**

	Short-term Residence (n = 38)	Mid-term Residence (n = 62)	Long-term Residence (n = 92)	Lifetime Residence (n = 31)
<b>Total Social Network Ties (mean)</b>	16.7	15.2	13.4	12.7
<b>Family Ties (mean)</b>	5.5	6.5	6.1	6.4
<b>Friend Ties (mean)</b>	4.8	3.5	1.6	0.71
<b>Group Ties (mean)</b>	1.1	0.84	0.78	0.68
<b>Neighbour Ties (mean)</b>	1.6	1.4	1.4	1.2
<b>Activity Ties (mean)</b>	2.2	2.2	2.4	2.1
<b>Service Provider Ties (mean)</b>	1.4	0.66	1.1	1.4

Overall size of participant social networks decreases as length of residence increases. This may be related to other indicators already highlighted in this Chapter, such as increased median age or the greater likelihood of not living in a large town with increased length of residence as seen in Figure 7:11. What it may also suggest is that the longer a person has spent in the one rural community the smaller the ‘pool’ of available people to create network ties with over time; while those that have lived in more than one community over time have had more opportunities to create broader social networks, across more than one location.

Krause (2003) suggests that living in a neighbourhood for an extended period of time provides a sense of continuity, thereby strengthening identity, independence and autonomy and exerting a positive sense of well-being. He also suggests that it may not be the neighbourhood itself that is providing the sense of wellbeing, but rather the people in it that matter (Krause, 2003). Social support has strong links to a sense of wellbeing and thus it may be the social networks and social support that exists *within* the neighbourhood that influence perceptions of wellbeing and health (Wenger, 1997; Antonucci, 2001; Krause, 2003).

Overall, participants with short term and mid-term lengths of residence were more likely to have an increased number of distant ties as shown in Table 7:12, supporting the idea that newer residents maintain social network ties from their previous location. However, Table 7:12 (and Figure 6:11) shows that short-term length of residence is also associated with a higher number of localised social network ties. It is unclear if this is a result of a lower median age, a greater likelihood of living in a large town (and therefore a larger ‘pool’ of localised ties to interact with) or perhaps the result of actively seeking new localised ties

through connecting with new groups and activities as a means of becoming integrated into the local community.

**Table 7:12 Mean Number of Proximal and Distant Ties by Length of Residence**

	Short-term Length of Residence	Mid-Term Length of Residence	Long-Term Length of Residence	Life-Time Length of Residence
Mean Number of Distant Ties	8.4	8.0	6.0	6.6
Mean Number of Proximal Ties	8.3	7.1	7.4	6.1

The main spatial difference in social networks as length of residence increases is the number of proximal family ties; with participants of short-term and mid-term length of residence much more likely to have no proximal family ties, refer to Figure 6:12. As family ties were the most frequently nominated form of social network tie and the most likely to be nominated first in social network lists it can be assumed that these ties play an important role in creating a sense of place attachment and greater sense of well-being. Thus, those rural older people who have proximal family ties may be more likely to remain within the community because of meaningful social network ties such as family, and they are more likely to have a greater sense of social support and well-being because of those meaningful proximal ties.

#### **7.4 Age at Time of Last Residential Move**

The longer someone has spent living in a community or neighbourhood the more accumulated memories and experiences they have associated with that place. However, the age at which someone has moved to a community may also impact on their attachment to that place. Within this sample of participants aged 70 years and over it is possible for two participants to have lived in the same location for 25 years and yet have very different associations with that place based on the age they were when they moved there. If one person is now aged 70 and has moved to that community at the age of 45 they are more likely to have had experiences associated with raising a family and being employed within that community than someone aged 90 who has experienced these life stages elsewhere and moved to that community upon retirement. Most importantly these differences are likely to impact on the location of important network ties such as family.

Litwak and Longino (1987) outline three types of moves that people may make in later life, based on life course events, sequences and pressures:

- The first is a ‘discretionary’ move, based on a lifestyle choice (often to high amenity areas). Litwak and Longino suggest that individuals who make this type of move are generally younger, wealthier, married, and in better health.
- The second move is described as an ‘assistance seeking’ or ‘pushed’ move, often as a result of diminishing personal resources. These movers are more likely to be poorer, living alone, in poorer health and in need of informal care giving.
- The final type of move is the ‘forced’ move. These movers tend to be much older and are more likely to have chronic disability. This move is described as most likely to be to residential care or some other form of institution.

All participants were asked how long they had lived at their current location, where they had lived previously and the reason they had moved. These data, combined with their current age, enabled establishing the age at which they had moved to their current location. By asking the reason for the move it was possible to categorise participants as ‘non-movers’ (people who had lived most or all of their adult lives in the same community), ‘discretionary movers’ (people who had chosen moved to a new community as a lifestyle choice upon retirement) and ‘pushed movers’ (people who had moved to be closer to services and/or other family members). Eighty-six (38.6 percent) study participants were aged 50 years or over when they moved into the community they were interviewed in (regardless of length of residence). Included in this group are three female participants slightly younger than this age who cited their husband’s retirement as their reason for moving to their current community. This sub-group does not include those participants who have moved *within* their own community in this time frame, thus a move from a farm to retire into the local town or a move to a smaller home within the same town is not included. This groups are considered ‘non-movers’ for the purposes of this exercise.

Within this group of movers two of Litwak and Longino’s (1987) migration categories were evident. For one sub-group (n=57) the move to a new community was a discretionary move as a retirement choice.

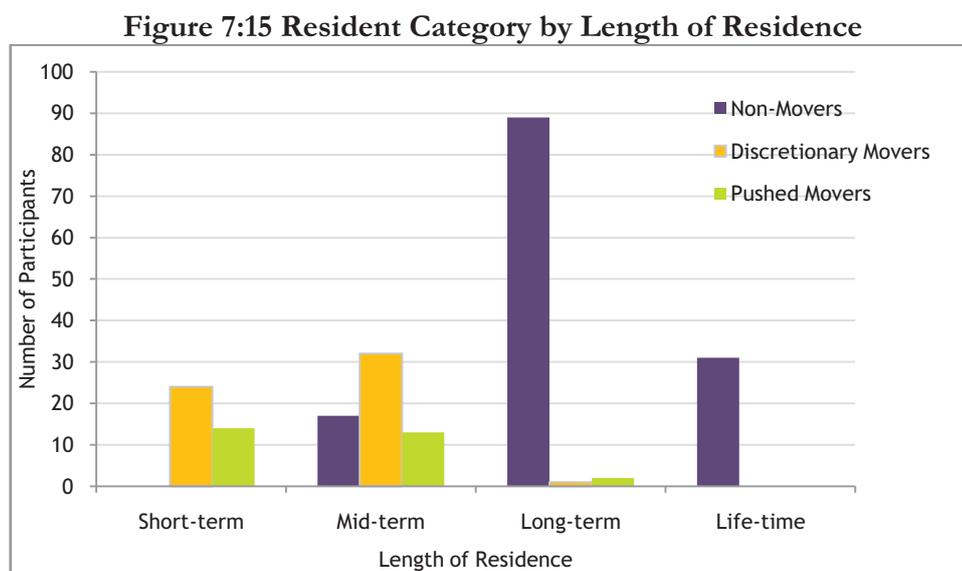
*“We liked the area, we knew we wanted to retire to a rural location and we have always liked the river so we looked around until we found a spot we felt would be right for us – not too far from the city but still very much a country town.”* (M077, female aged 72 from Adelaide)

For another sub-group of participants, the ‘pushed’ movers (n=29), the move to a new location at a later age was precipitated by a decision to be closer to other family members or to be closer to services.

*“After my husband died I realised how hard it was to live in such a small place on your own. I am not a confident driver and none of my family lived there anymore so I decided to move here – to be nearer to my son and his family and to be closer to the doctor and hospital and things like that.”* (C014, female aged 83 years).

The final participant sub-group included all the ‘non-movers’ (n=137). While this term is slightly misleading, with many of this group having made moves within their own community (some moving into the local town from a farm to be closer to services, some into smaller, more manageable housing within the same town); it refers to their choice, or ability, to remain in their community. Obviously no participants were characterised as ‘forced’ movers as this study did not include individuals living in any form of supported accommodation.

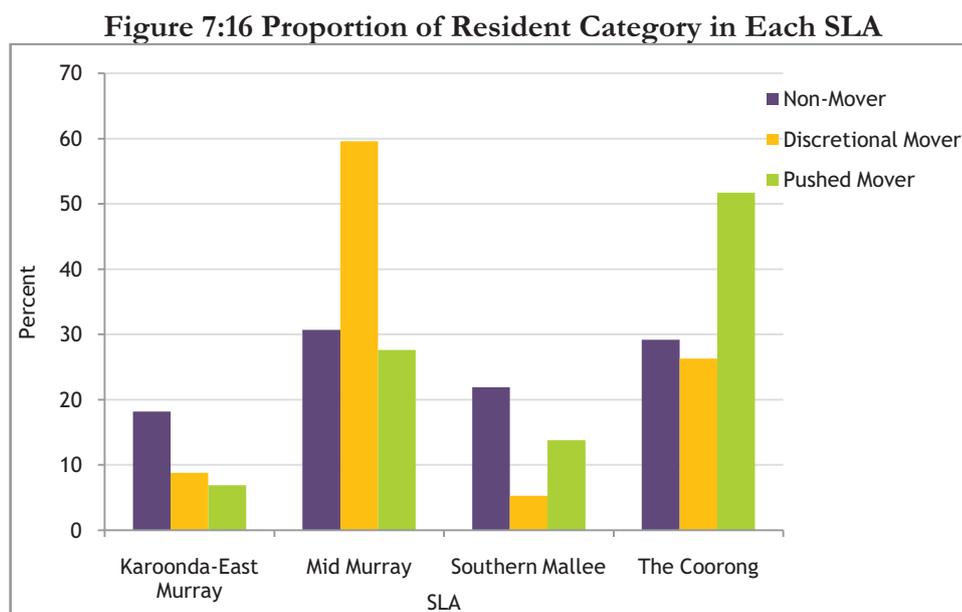
Figure 7:15 shows the relationship between length of residence in the community and being a mover or non-mover. Not surprisingly there is considerable overlap between length of residence and the type of move, with most non-movers being long-term and life-time residents. Also as expected, most movers had short-term and mid-term lengths of residence. The three movers (one ‘discretionary’ and two ‘pushed’) who had long-term length of residence were all aged over 90 years at the time of the interview.



Short-term n= 38, Mid-term n=62, Long-term n=92, Life-time n=31

As a result of this distribution of participants most of the comparisons made in Section 7.3 about length of residence also relate to the age of the participant upon moving to the community. Thus the ‘movers’ are more likely to live in large towns than in small towns and on farms (Figure 7:13); are more likely to be younger (Table 7:8) and are more likely to be living in higher amenity regions, such as the Mid-Murray and The Coorong SLAs (Figure 7:13). However, this examination of length of residence does not highlight the differences between the ‘discretionary’ movers and the ‘pushed’ movers.

For example, in Figure 7:12 the proportions of participants with short-term and mid-term length of residence were comparable between The Coorong and Mid-Murray SLAs yet Figure 7:16 shows that the proportions of ‘discretionary’ and ‘pushed’ movers (both shown to be most likely to be short-term and mid-term lengths of residence) varies considerably between the two SLAs. The Mid-Murray SLA shows a much higher proportion of ‘discretionary’ movers compared to ‘pushed’ movers and The Coorong SLA shows a much higher proportion of ‘pushed’ movers.



Discretionary Movers n=57, Pushed Movers n=29, Non-Movers n=137

Table 7:13 highlights some of the differences in personal characteristics for ‘discretionary’ movers and ‘pushed’ movers and compares these to characteristics of non-movers. The ‘pushed’ movers are more likely to be female, widowed and living alone than the other two sub-groups of participants. Of the 18 discretionary movers who were widowed, 12 (66.7 percent) were widowed after their last move. Of the six widowed discretionary movers who

had made a lifestyle move after the death of a spouse, three were female and three were male.

Table 7:13 shows that ‘pushed’ movers were more likely to be living with other family members, with 20.7 percent of this group nominating living with other family members compared to 7.2 percent of the non-movers and only 1.8 percent of the ‘discretionary’ movers. This affirms the greater likelihood of ‘pushed’ movers making an intentional move to a new community based on the location of their children or other family members.

**Table 7:13 Personal Characteristics of Discretionary Movers, Pushed Movers and Non-Movers**

	‘Discretionary’ Movers %	‘Pushed’ Movers %	Non-Movers %
<b>Gender</b>			
Males	43.9	31	44.5
Females	56.1	69	55.5
<b>Marital Status</b>			
Married	66.7	41.4	58.4
Widowed	22.8	51.7	34.3
Other*	10.6	6.8	3.6
<b>Living Status</b>			
With Partner	66.7	37.9	53.3
Alone	31.6	41.4	39.4
With Family	1.8	20.7	7.2
<b>Future Moving Intentions</b>			
No Intentions to Move	80.7	55	77.4
Definite Intentions to Move	5.3	0	0.7
Undecided	14.0	44.8	21.9

\* Divorced, Separated and Never Married

Discretionary Movers n=57, Pushed Movers n=29, Non-Movers n=137

Interestingly, the ‘pushed’ movers were more likely to be undecided about their future intentions for ageing-in-place compared to the other two groups. This is in part explained by the participants in this group who were living with other family members. Participants in this group were most likely to suggest that their decision to move in the future was dependent on their children’s decision making around moving, particularly for those co-located with family members on farms. As one participant described it:

*“Well my future is really tied up with my son and daughter-in-law now; I will stay here as long as they stay on the farm. It’s really not my decision to make anymore. I guess I’ll go*

*where they go, but we haven't really talked about it.*" (M065: female aged 72 years, living with son and family)

Table 7:14 highlights some of the differences in well-being for 'discretionary' movers, 'pushed' movers and non-movers. Discretionary movers not only had better health, as defined by the SF-36 General Health Score, but were also less likely to see their health as definitely getting worse in the future. Interestingly, they were less likely to self-rate their health as fair or poor compared to the 'pushed' movers but they were more likely to have fair or poor self-rated health than the non-movers. As with Figure 7:14 this may suggest that long-term length of residency and place attachment has positive outcomes for perceptions of health and well-being (Rowles, 1993; Pickett and Pearl, 2001; Rowles and Watkins, 2003).

**Table 7:14 Health Characteristics of Discretionary Movers, Pushed Movers and Non-Movers**

	'Discretionary' Movers	'Pushed' Movers	Non-Movers
<b>SF36 General Health Score</b>			
Median	75	55	65
<b>SF1: Self-Rated Health</b>			
Excellent/Very Good	26.3%	17.2%	28.5%
Good	42.1%	41.4%	46.0%
Fair/Poor	31.6%	41.4%	25.5%
<b>SF35 Perceptions of Future Health: "I expect my health to get worse"</b>			
Somewhat or Definitely True	38.6%	65.5%	56.9%
Don't know	42.1%	24.1%	31.4%
Somewhat or Definitely False	19.3%	10.3%	11.7%
<b>UCLA Loneliness Score</b>			
Mean	15.5	14.6	14.9

Discretionary Movers n=57, Pushed Movers n=29, Non-Movers n=137

The 'pushed' movers not only had the lowest SF-36 General Health scores (indicating poorer health) but also the highest proportion of participants self-rating their health as fair or poor. They were also most likely to perceive their health as getting worse in the future, Table 7:14. This compares with other studies where the health of different types of older movers has been examined. Wilmoth (2010) found in her study of over 30,000 adults aged 51 years and over in the American 1992 to 2006 Health and Retirement Study that individuals who made amenity led retirement moves had relatively high self-rated health

and fewer health limitations compared to those individuals who made ‘assistance seeking’ moves. This group tended to be older, had poorer health and were often widowed (Wilmoth, 2010, p.876). This also compares favourably with the findings of Litwak and Longino’s (1987) study on the migration patterns of older people.

Of note, the ‘pushed’ movers in this study had the lowest mean UCLA Loneliness scores, while the ‘discretionary’ movers had the highest loneliness scores. The difference is minimal but it may be attributed to the lack of proximal family ties for the ‘discretionary’ movers compared to the other two groups.

Table 7:15 highlights some of the differences in social networks characteristics for the three sub-groups. Of note is that the ‘pushed’ movers, despite their poorer self-rated health, have the highest mean number of total network ties and the highest mean number of nominated family ties. They also have the same high mean number of friend ties as the ‘discretionary’ movers when compared to the non-movers. This contrasts with the findings presented in Figure 5:5 and Table 5:1, where poor SF36 health scores and poor self-rated health is associated with small social networks. It is possible that those ‘pushed’ movers who are living with other family members or living in accommodation that is age specific (such as in retirement villages) have ‘access’ to a larger network of social ties compared to non-movers and ‘discretionary’ movers.

It was anticipated that the ‘pushed’ movers would have a higher number of service ties compared to the other two sub-groups considering their lower health scores and the fact that many stated the reason for their move to a new community was to be closer to services, but in fact Table 7:15 shows that the median number of service ties is only marginally higher than the other sub-groups.

Interestingly, Table 7:15 also shows that both ‘pushed’ movers and ‘discretionary’ movers have a higher mean number of proximal ties compared to the non-movers. ‘Pushed’ movers also reported the highest mean number of distant ties. Consistent with expectations, both ‘discretionary’ and ‘pushed’ movers reported a lower number of proximal children ties compared to the non-mover sub-group; with the ‘discretionary’ movers least likely to have proximal children ties. This lack of proximal children is most evident when comparing the proportion of participants in each sub-group who nominated no proximal children ties, with over 65 percent of the discretionary movers having no proximal children ties compared to 41.4 percent of the ‘pushed’ movers and fewer than 30 percent of the

non-movers. This suggests that as the 'discretionary' movers age and their personal resources (such as health and mobility) diminish they may re-assess their decision to stay and age-in-place.

**Table 7:15 Social Network Characteristics of Discretionary Movers, Pushed Movers and Non-Movers**

	'Discretionary' Movers	'Pushed' Movers	Non-Movers
<b>Mean Number of Network Ties</b>			
Mean	15.3	16.7	13.3
<b>Mean Number of Network Ties by Network Category</b>			
Family Ties	5.7	7.0	6.2
Children Ties	2.7	2.8	2.9
Friend Ties	4.0	4.0	1.7
Neighbour Ties	1.6	1.3	1.3
Group Ties	0.9	1.1	0.8
Activity Ties	2.0	2.1	2.4
Service Ties	1.1	1.3	1.0
<b>Mean Number Proximal and Distant Ties</b>			
All Proximal Ties	8.0	8.1	7.1
All Distant Ties	7.0	8.6	6.3
Proximal Children Ties	0.5	0.8	1.1
Distant Children Ties	2.2	2.0	1.8
No Proximal Children Ties	66.7%	41.4%	29.2%

Discretionary Movers n=57, Pushed Movers n=29, Non-Movers n=137

Stoller and Longino (2001) suggest that older individuals who have made a post-retirement amenity move are unlikely to plan or anticipate a return move unless they have maintained strong network ties in the 'back home' community. This does not imply that this group may not make a second 'pushed' move later in life, just that it may not be back to their original community location. 'It is not place ties alone, but personal attachments that may motivate the second type of move, the move that occurs in the face of declining resources' (Stoller and Longino Jnr, 2001 p.97). This suggests that it is the location of available resources that, in part, determines decisions to re-locate and therefore understanding the spatial dispersion of an older person's social network ties and the community resources available to the individual, will assist in anticipating the likelihood of 'pushed' and 'forced' moves later in life, particularly for the 'discretionary' movers who are less likely to have

proximal children ties, the usual source of informal support (Wenger, 1997; Wenger and Tucker, 2002).

### 7.5 Future Intentions for Ageing-in-Place

This argument is strengthened by comparing participants' future intentions to remain at their current address by length of residence and residence type. While the overall number of participants who were definitely not staying at their current address, depicted as a 'no' response to the question "Do you intend to stay at this address in the future" was very small (four), three of these were short-term residents and one was a mid-term resident. Looking more closely at these four participants they were all discretionary movers who were now planning a 'pushed' move because of different circumstances. The participant with mid-term length of residency was planning to move into a small flat at her daughter's home closer to Adelaide now that her husband was in permanent residential care in Adelaide, two of the short-term length of residence participants were planning moves back to Adelaide after more than 10 years living in a river community in the Mid-Murray SLA – one because of her own health, another because of her husband's poor health. The remaining short-term length of residence participant had been residing in the family's holiday shack since his divorce 12 years earlier. However, a property settlement meant this place was being sold, he was still deciding where his next move would be – either to a retirement unit in a nearby larger town or to live near his daughter in another state<sup>23</sup>.

Additionally, participants who were undecided about their intentions to stay at their current address were represented in all length of residence sub-groups, as shown in Figure 7:17. This group, unsure of moving in the future, included 51 participants. Of particular note were the 6 life-time participants, all of whom suggested that if they were to make a residential move in the future it would be within their local area. Possible reasons for such a move included loss of a partner, deteriorating health, loss of driver's license or to be closer to services. Also of note were the eight 'discretionary' movers who suggested they were unsure about moving in the future. Five of these suggested that whether they stay or go was related to their future health or their partner's health and two said they would consider moving back to Adelaide at an older age.

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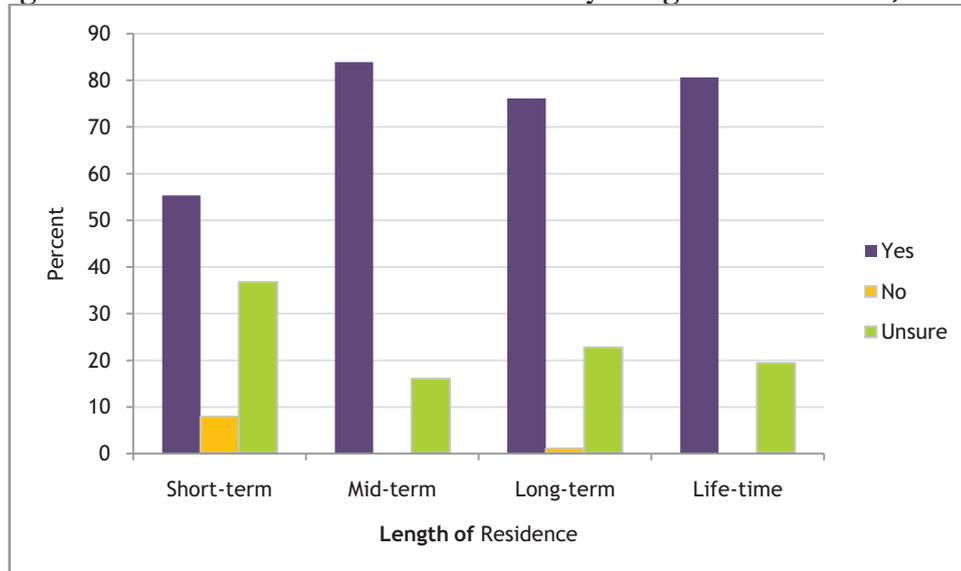
<sup>23</sup> This participant eventually moved to live near his daughter in Victoria, over 450 km away. He had never lived in Victoria before and knew no-one there but his daughter and her family.

*“I guess when I get a lot older I would most likely move back to Adelaide. I never considered living here as a long-term prospect – we did it for the lifestyle, to be near the river. If I got sick or my husband got ill we’d go back in a minute” (M054: female aged 70)*

Thirteen ‘pushed’ movers were also undecided about future moves. For five of these participants any future moves were dependent on a wider family decision about moving, two were considering moving into residential care in the future and two felt their current circumstances were very much dependent on their health.

Further to this point, many of the short-term residents in this study have social networks that ‘bridge’ more than one community, as they maintain ties with friends and family as part of their former communities as well as building new network ties in the current location, as seen in Table 7:12 and Table 7:15; many of these in the nearest capital city, Adelaide, as shown in the maps in Chapter Six. As suggested by Stoller and Longino (2001) and Litwak and Longino (1987) it is the combination of the location and strength of these network ties (particularly children ties), along with future life course events and a sense of current place attachment through length of residency that will determine the likelihood of future residential moves.

**Figure 7:17 Future Intentions to Re-locate by Length of Residence, n=223**



Length of Residence: Short-term n= 38, Mid-term n=62, Long-term n=92, Life-time n=31

Most participants in this study represent a stable population of non-movers and indicated that they want to stay in their own home and are not anticipating future residential moves.

However the existence of a number of ‘pushed’ movers who are now ageing in new communities in order to be closer to necessary services and/or to the informal support provided by family members suggests that this will not be the case for all participants in the future. In addition, the 51 participants (22.8 percent), of all lengths of residency, who are unsure about future residential moves adds weight to the uncertainty around ageing-in-place. This fits with Lawton’s theory on Person-Environment Fit (Lawton, 1980; Lawton, 1985; Lawton, 1998) and Wahl and Lang’s Socio-Physical Over Time model (Wahl and Lang, 2004) where both personal and environmental presses influence decisions on housing, location and service use.

This study also shows that many ‘discretionary’ movers have clear intentions to remain in their current community of choice in the future; but the presence of ‘pushed’ movers suggests that as circumstances change, particularly around health and mobility resources, that intentions may change for some. It would be useful to compare both non-movers and ‘discretionary’ movers living in rural communities over time as future research to examine the differing propensities to move later in life, based on the availability of informal support through localised network ties and future life course events that impact of personal resources enabling or challenging ageing-in-place.

## **7.6 Conclusion**

This study shows that age, as a component of the life-course, is one determinant influencing where people choose to live later in life; with a greater likelihood of living closer to services and informal support as age increases. Section 7.2 also showed that social networks tend to get smaller, more localised and have increased proportions of face-to-face contact as age increases. Other factors that influence the social spaces in older age and the ageing-in-place decision include health, living alone or living with others, loss of a driver’s license and current residential location. The option to choose to age-in-place has been strengthened in recent years by the rise in the availability of community aged care services and this has seen a fall in the number of ‘pushed’ movers within the older Australian population (Hugo, 2007a). However, within the Australian population, the decrease in ‘pushed’ movers has been masked by the rise in ‘discretionary’ movers in recent years (Hugo, 2007a).

The presence of both ‘discretionary’ movers and ‘pushed’ movers in this study across all SLAs, along with almost one quarter of participants who had either made plans to move in

the future or were undecided about moving in the future, emphasises Litwak and Longino's (1987) notion that older people are likely to make a range of different moves in later life; but in line with Lawton's P-E Fit theory (1998) and Wahl and Lang's Socio-Physical Over Time theory (2004) it is changing life course events, as environmental and physical 'presses' that may impact on quality of life and ageing-in-place.

The dispersion of family ties and the loss of community groups and services at the local level in many small rural communities impacts on the ability of some older people to stay and age-in-place as their own personal resources (such as health and mobility) are also depleted. For others, as seen with the case study of 'Joan', the decision to move later in life is restricted by exogenous circumstances such as the disparity in property prices at their current location and their desired location. Thus some residential stability in rural areas is about lack of opportunity and choice rather than a desire to remain living in the same location. Consideration of one element of social networks in relationship to ageing-in-place without consideration of others is difficult. Reduction in network size, composition and modes of contact are all inter-related with the physical changes associated with ageing *and* the physical nature of the environment in which the person lives, driving decisions about ageing-in-place. Sections 7.3 and 7.4 emphasised the active choices many older people make about housing and lifestyle, as changes in the life-course occur.

People, and thus also communities, are not static entities. For the current generations of older people the emphasis on activity, choice and independence in later life, combined with greater levels of wealth than has been seen before has seen a rise in the number of healthy and wealthy 'young-old' moving to high amenity locations as a retirement choice (Hugo, 2007). However, the often overlooked impact of demographic ageing-in-place ensures that there will be a shift from communities with 'young-old' migrants to 'old-old' residents with a greater need for informal support and service use over time. This will impact and change community at the local level. 'In the absence of a continuing stream of new migrants to constantly reinvigorate the community, the result may be evolution of a vulnerable and high-cost geriatric enclave generating a community image that may actually serve as a constraint on future economic development' (Rowles and Watkins, 1993 p.515). As people age-in-place their resource needs may shift, their social networks may change and the community they are living in may no longer enable ageing well.

Whether people choose to stay and age-in-place or to go elsewhere as part of a ‘discretionary’ move, a ‘pushed’ move or a ‘forced’ move (and *where* they go) is dependent on the location and availability of network ties, their sense of place attachment, and external (often unanticipated) life course circumstances that enable or challenge those choices. Life course events over time can change these intentions and an individual’s perceptions of their ability to age-in-place well.

## **CHAPTER 8: CONCLUSION AND IMPLICATIONS**

### **8.1 Introduction**

This study of an ageing rural population focused on the socio-physical contexts in which people age-in-place. One important aspect that shapes an older person's living environment is the availability of resources; both basic services such as shops, transport and medical care, and life enriching resources such as family, friends and social opportunities (Lawton, 1983; Smailes, 2006). By examining the interactions between individuals and their social network ties this study explored the symbiotic relationship between social spaces and rural places, and the influence this has on growing older in small rural communities in the Murray Lands region of South Australia. Social networks have been used as a measure of both social and spatial perceived boundaries to personal resources that may enable or challenge ageing-in-place for older people in these small rural communities.

The findings of this thesis demonstrated that social networks and potential informal support are impacted upon by the dispersed geography of family ties. However, localised community ties and a strong sense of place attachment provide some compensation for this, with the clear majority of other nominated network ties (groups, activities, friends, neighbours and services) being proximal. This creates a duality in the social networks of older people in rural areas – on the one hand they place emphasis on, and maintain strong links to, family despite increasingly dispersed family networks. On the other, a sense of place attachment and local community provides strong bonds for many older people, but may require high levels of localised social support to enable older rural people to successfully age-in-place.

This final chapter will summarise the major findings of the study, consider the contribution to theory and discuss the implications for Australian ageing policy and service provision, and further research. As part of this discussion the limitations to the study's approach will be addressed.

### **8.2 Summary of Major Findings**

The aim of this thesis was to explore the social networks of older people in rural communities as 'life spaces' and how the spatial, social and temporal constructs of social networks influence growing older in these rural spaces. This approach incorporated four key research objectives, each of which is addressed below.

### ***8.2.1 Objective One: How Older People in Rural Places are Connected to their Communities***

This objective was achieved by examining participant social network ties. Understanding who is in a person's social network offers insight into who is important to the person at this time in their lives, what kinds of resources they have available to them as they grow older, where those resources are located and how this impacts upon future residential intentions.

Social network ties for participants in this study consisted of varying mixes of activities, services, family and other people. Social networks represented a combination of both distant and localised ties, maintained by different modes of contact and at different levels of frequency and reciprocity; all influenced by variables such as gender, location, living alone or with others, health and age, reflecting the complexities of human interaction.

Examining the number and types of social network ties provided an understanding of the breadth of connections participants have to others, and also provided an indication of potential instrumental and emotional support. Chapter Five showed that while many singular factors appear to have a relationship with social network size, such as age, health and gender, it is the cumulative effect of a combination of factors, such as being male, with poor health and living alone in a small town, that may have the biggest impact on social networks and potential social support. However, in support of Carstensen's Socio-Emotional Selectivity Theory (Carstensen, 1995), higher loneliness scores were not associated with smaller social networks.

It is clear that family were an integral part of the social networks of participants, with almost half of all nominated network ties in this study being family ties. Of particular interest is the subset of participants who nominated no family members or only one family member in their social networks as this group is most likely to require formal support services as they grow older (Wenger and Keating, 2008). While family members represented the largest proportion of all social network ties, and were most likely to be nominated first in social network lists highlighting their importance to participants; they were also the most likely to be distant network ties emphasising the difficult balance between growing older in a place of choice and access to traditional forms of informal supports, such as family.

In addition to nominated proximal social network ties such as neighbours, friends, groups, activities and services informal localised interactions with others were discussed as being a part of everyday life for many participants. While difficult to quantify, these localised, informal encounters were consistently described as being a part of community life. The high proportion of localised community ties and these informal localised interactions not only provide a sense of connection and place for the older person but in addition strengthen the social capital of the rural communities older people live in, create a stronger sense of place attachment and increase the likelihood of residential inertia. This duality between localised community-based social networks and the dispersed nature of important network ties such as family, highlights the challenges of ageing-in-place in small rural communities.

### ***8.2.2 Objective Two: The Spatial and Demographic Dimensions of Social Networks***

In support of Tobler's First Law of Geography, that everything is related to everything else, but near things are more related than distant things (Tobler, 1970; Miller, 2004), it was anticipated that participants would form ties with people who are geographically proximal. Chapter Six mapped social network ties, highlighting how distance shaped participants' social network connections. All participant social networks consisted of both proximal (localised) network ties and distant ties highlighting that social networks are neither completely place-based community networks nor are they only 'communities of interest', made up of distant ties. Instead, social networks represent a mix of the two with the overall number of nominated proximal and distant ties relatively even. However, proximal and distant ties varied considerably by category.

Social network patterns showed surprisingly strong associations with local settlement patterns. Proximal ties indicated high levels of localised community connections with over 70 percent of nominated activities, groups and services, and nearly 60 percent of friends, being located within ten kilometres of participants. However family ties were more likely to be distant ties, only 16.3 percent of nominated proximal network ties were family ties and even less (12.7 percent) were nominated proximal children ties. Thus distance influences and shapes the patterns and types of social interactions and perceived sense of community connectedness for older people in rural places. However, this also emphasises that family are considered an important component of social networks *regardless of distance*. The location of family may have an impact on the availability of informal physical support as rural people age-in-place but it appears that contact with distant family members remains

important to the older rural person, suggesting that emotional support from family members is still strong.

For those participants with localised family ties, interaction was frequent and likely to be in person but for distant family ties contact was more likely to be by telephone and less frequent in nature. This shows that distance shapes social networks by influencing how often and by what means those connections are maintained and what types of support are available from network ties. While meaningful social network relationships were maintained despite distance; a sense of local community and belonging, in the form of frequent, (usually) face-to-face social interactions, sustained daily life and a sense of place.

As people age and become less mobile they are more likely to participate in, and therefore see themselves as part of, a localised community (Le Mesurier, 2004). This study showed that the proportion of distant network ties decreased as the age of participants increased, suggesting that social networks become not only smaller but also more localised over time. In support of Smailes' (2006) and Argent's (2008) views of rural community boundaries, community identity was clearly 'bounded' by local settlement patterns for this participant group, suggesting that while some social network ties were dispersed and disparate a sense of localised community was still important. This study would argue that for these older cohorts of rural residents place identity and community interactions were strongly bounded to the immediate local settlement.

### ***8.2.3 Objective Three: The Role of Place and Place Attachment***

Informal, localised interactions within the community, in combination with the social network ties described in this study, not only provided a sense of community but also worked symbiotically to create a sense of identity and place attachment for participants. Social networks portray a great deal of information about who people are, their sense of place and their life experiences. When asked to discuss the people and activities that were important to them at this time in their lives participants in this study also described past activities and associations, the people and places they had known before and memories associated with those people and places providing not only a sense of identity and history, but also the context for a sense of place.

Age, as one aspect of the lifecourse, is shown to be related to many facets of life, including self-rated health, mobility, volunteering and the likelihood of living alone. Changes in social networks were also evident as participant age increased. Overall network size decreased,

with localised ties increasing proportionally compared to distant ties and levels of face-to-face contact increasing. However, as the consistent loneliness scores for all age groups suggested, not all lifestyle and network changes were necessarily negative. Many of the adjustments older people make to their social networks and patterns of daily life reflected adaptations that allow them to remain living in the location of their choice and retain their independence.

One lifecourse influence on ageing-in-place and place attachment is length of residence. The longer an individual has lived in one place the greater the sense of memory, experience and familiarity attached to that place. Participants in this study represented a very stable population, with an average of over 41 years in the local community. Higher amenity regions such as the Mid-Murray (in particular places located along the Murray River) had a much lower average length of residence than the more rural, dry land farming regions, highlighting that not all rural places have similar residential patterns. Many of these discretionary movers with lower lengths of residence discussed having moved to a community with which they already had some personal sense of history and attachment, such as to a traditional family holiday location.

Chapter Seven showed that length of residence had a positive effect on a self-perceived sense of well-being despite participants being older and having smaller social networks. A longer length of residence was also associated with a greater likelihood of intending to ageing-in-place. It is suggested that this is not only related to attachment to place but also a result of connections to other people residing in those places. This argument is strengthened when considering that almost one third of participants with life time and long term lengths of residence had moved house within their local community in the last twenty years, suggesting that it is the community, not the family home that is the basis for place attachment. This also highlights the on-going, dynamic decision making many older people have made about housing and lifestyle before they reach very old age, yet choosing to remain in their local community.

Place attachment obviously played an important role in future decisions about ageing-in-place with only four of the 223 participants in this study indicating that they had definite intentions to move in the future. It must be remembered that participants in this study were aged 70 years and over and were likely to represent the 'survivors' of their cohorts; with those that were unlikely to stay and age-in-place having already left by this age.

However, supporting the idea that the ageing-in-place decision making process is dynamic and on-going, 22.8 percent of participants (across all lengths of residence, locations and age groups) were undecided about future intentions to move; describing health and availability of community resources as factors influencing this decision. This supports Litwak and Longino's (1987) model that includes 'pushed' movers as one stage of later life migration.

The fourth aim of this study was to contribute to the development of policy, practice and further research. This objective will be addressed in the remainder of this Chapter.

### **8.3 Theoretical Implications**

Three aspects of theoretical development are raised as a result of this study: the differences between community and social networks, defining meaningful social boundaries and the development of Wahl and Lang's (2004) Socio-Physical Over Time (SPOT) conceptual framework.

#### ***8.3.1 'Community' or Social Network?***

Walmsley (2006) suggests that despite the on-going debate about communities without propinquity, localism is still important in people's lives; with the challenge for social science being to conceptualise community change while incorporating the salience of place. This study has highlighted the duality of connectedness for participants as a mix of 'community' in the form of localised activities in addition to a sense of belonging as part of a larger, non-proximate social network mainly consisting of family. This study maintains that in this sense 'community' represents one spatially bounded layer of network connections that gives participants a strong sense of place, but within a wider, more broadly defined dispersed social network.

It was anticipated at the outset of this study that social network ties would be more spatially dispersed, reflecting the changing nature of (more mobile) kinship structures and the regionalisation of many rural services and activities. However, community in this study was found to be a representation of geographically defined proximal interactions; particularly nominated ties such as friends, neighbours, groups, activities, services and the informal interactions that occur as part of daily life, such as picking up the mail at the local post office or chatting with people in the street. This supports Argent's (2008) and Smailes' (2006) suggestions that the spatial distribution of social connections that form part of daily life can still be viewed as an indicator of local community life. This study has shown that

for older people living in these small rural settlements localised community life is very much a part of their ageing-in-place experience, but does not necessarily define their entire social network and sense of belonging.

Non-proximal family and friends continue to play an important role in wider social networks. These ties were shown to be important to participants; they made up a significant proportion of social networks and were likely to be nominated first. This supports previous research that has shown the key role family play in providing emotional and informal social and physical support (Phillips, 2007; Wenger and Keating, 2008). This suggests that while local community obviously represents an important component of an older person's life it does not represent the sum of their social network, access to support or sense of connectedness. Therefore while practical forms of informal and formal support are necessary components of ageing-in-place that need to be localised, emotional support and a sense of belonging can also come from less proximal sources, such as dispersed family ties.

### ***8.3.2 Meaningful Social Boundaries***

The Population and Census data used in this study utilises arbitrarily constructed boundaries that do not necessarily reflect meaningful local communities for respondent data (Fischer, 2001; Hirshorn and Stewart, 2003; Smailes, 2006). This study has shown that for this particular group of older rural people a sense of place and community life is quite narrowly defined by settlement patterns. With the exception of family and a small number of specialist medical services, friends, and groups that were located at a more regional or state level, most nominated social ties were located within town boundaries.

Smailes' conceptualisation of meaningful rural communities argues that in spite of the increased access to non-local, or external social contacts and services, the need for the local remains strongly entrenched in human society (Smailes, 2006). This is particularly relevant in rural areas where time and distance still exercise constraints on interactions outside of the local. This study suggests this is even more so for older people, many of whom have additional limitations on connecting with others outside the local from limited transport options, lack of knowledge and access to new technologies, and physical health limitations. The close affiliation of nominated community based network ties with settlement boundaries suggests that Smailes' patterns of community identification, as discussed in

Chapter Two, is a true representation of community life and sense of place for participants in this study.

### ***8.3.3 The SPOT Conceptual Framework***

This study was framed within a life course perspective and utilised a theoretical direction based on several underpinning relevant theories including: Carstensen's Socio-Emotional Selectivity theory, Lawton's Person-Environment Fit theory and Tobler's First Law of Geography. Consideration of these theories led to the use of Wahl and Lang's (2004) Socio-Physical Over Time (SPOT) conceptual framework. The SPOT conceptual framework suggests that both the social and physical environments act as major resources or constraints for an older person's quality of life and daily activities.

Within the SPOT framework both social-physical agency and social-physical belonging inform understanding of change over time (as people age) in the person-environment relationship. Social-physical agency refers to an individual's attempts to use and actively shape both material-physical and social resources in order to achieve life goals and satisfaction. One example of social-physical agency for this study is the active decision making around residential location. Over half (119) of participants had made a residential move in the past 20 years suggesting active management of their physical environments to meet individual needs. Changes in residential location for this group were for different reasons. Some participants had relocated to a new area as a retirement choice, others had chosen to relocate from the farm into a town or from a larger home to a smaller, more manageable home and another small group of participants had elected to move closer to family support due to changes in health or other personal circumstances. Relocating represented active choices about lifestyle (retiring to high amenity, desirable locations), and managing physical surroundings (moving to a small or home or moving off the farm). These relocations had already been made, emphasising that for most participants active choices about ageing have been made as 'discretionary' moves through personal agency; although for some this represented a 'pushed' move later in life as a result of exogenous environmental pressures.

The high proportion of activities within social networks provides a second indicator of social-physical agency within this participant group. Overall, activities represented the third highest form of nominated network tie after family and friends, and if combined with group network ties was the second highest form of social network tie after family. This

reflects a high level of social agency within this group, with participants being actively involved in community. It is argued that this is part of the on-going process of shaping and strengthening both personal social resources and, because of the proximal nature of these activities, a sense of belonging and place.

According to Wahl and Lang (2004), social-physical belonging represents a goal in its own right; fostered through long-term attachment to places and people. Place attachment and a sense of belonging are bound up in an individual's social identity. Social identity is developed through involvement in social activities and relationships with others. It is as much about affective ties with others, as it is about the physical space of the community itself (Smailes, 2006; Peace 2006, Wiles, 2005). Several aspects of this study support this view of social-physical belonging:

- Most obvious were the high proportions of participants who had lived in the local community long-term. While participants represented a diverse range of lengths of residence the overall mean number of years living in the local community was 41.3 years compared to a mean of 24.4 years in the current home. Number of years living in the community provided a better reflection of place attachment and belonging than the number of years in the current home, highlighting that place attachment is often about the community and interactions within that community, not the home itself.
- Many participants had moved from farms into nearby towns in order to maintain their connection to both the local community and to the farm itself, suggesting that a sense of social-physical belonging, and particularly the sense of attachment to the land and a desire to support family still running the farm, is high for this group.
- The high proportion of participants (over 75 percent) intending to stay in their current community in the future and age-in-place suggests a strong sense of social-physical belonging. In addition to this group of participants intent on staying were a further 22.8 percent who were uncertain about moving in the future, many of whom would prefer to stay where they were but who felt this was dependent on future 'presses' in their life course such as health and housing. This sense of belonging appears to be just as much about place as it does about people, particularly when considering that almost half of all nominated social network ties (including large proportions of family ties) were distant ties.

- The final aspect of the social network analysis that supports the importance of social-physical belonging is the role of family and friend network ties. Both of these social network categories are primarily about nurturing and belonging. They are the greatest forms of emotional support and family are the greatest providers of informal support. Thus, regardless of distance, they were seen as important components of social networks for participants highlighting that as individuals we have an attachment to people as well as to places.

The SPOT conceptual model suggests that both social and physical environments act as major resources or constraints in an older person's life. Rural living appeared to offer both resources and constraints to quality of life for the participants in this study. The most obvious forms of constraint for this group were the impacts of distance and location on mobility associated with rural living. The lack of flexible, localised transport options for those no longer driving, the high proportion of drivers who self-restricted their driving, and the poor local infrastructure (in terms of footpaths and roads with fast moving, heavy transport) in many small rural towns emphasised that mobility issues impacted heavily on quality of life. The case study of Mary after the loss of her driver's licence highlighted the decision making and adjustments to lifestyle that must be negotiated for rural dwelling older people as mobility changes.

A second important constraint that arises from rural living was the dispersed nature of many social network ties, particularly family ties. The examination of usual mode of contact and frequency of contact with network ties suggested that distance mattered; with localised network ties more likely to be face-to-face contact and weekly or more often in frequency. With family ties being the most likely to be distant ties and family the most likely to be providers of informal support this has obvious impacts on ageing-in-place.

However, the frequent and face-to-face nature of localised ties can be viewed as a resource, suggesting local community ties were strong and therefore offered opportunities for support and a strong sense of social-physical belonging. The anecdotal evidence provided about informal localised community interactions also added substance to the image of rural communities being rich in social capital and supportive environments in which to grow old.

This study supports Wahl and Lang's (2004) SPOT conceptual framework and has shown that both the physical and social environments in which older rural people live work to

shape their sense of place, their social networks, their ageing experiences and future decision making about ageing-in-place.

#### 8.4 Rural Ageing-in-Place, Implications for Policy

Much of Australian aged care policy in recent years has been built on the expectation that ageing-in-place and community based aged care are enabled by informal family support (AIHW 2007b, 2008a; Foskey, 1998). The AIHW (2007a, p.103) reported that among all older people receiving assistance 83 percent were receiving help from informal providers. This is congruent with the more traditional societal approach to growing older that emphasised close intergenerational family ties with localised support (often from within the same household) (Phillipson *et al*, 2001). Phillipson (1998) suggests that this societal approach to ageing is changing, reflecting a shift in the relationship between the older person and the family. This is partly driven by changing kinship structures, including the spatial dispersion of family ties, with family members less likely to cohabit or live in close proximity to each other in many modern western societies. The decrease in available family carers is complicated by smaller family size and the rise of women (the traditional providers of informal care) participating in the workforce. It is also the result of changing expectations of older people themselves through the rise in individualisation and independence which, despite the obvious importance of family in social networks, was reflected in the oft cited phrase by participants in this study of ‘not wanting to be a burden on family’.

*“They have their own lives to live, I don’t expect them to drop things to look after me”*

(C030 Male aged 80 years)

*“I would hate to be a burden on my family; they have enough to worry about as it is”*

(M031 Female, aged 90 years)

These policy directions and societal shifts are made more difficult by the issues of distance and the dispersed nature of family ties in many Australian rural areas. The overall orientation of the Australian aged care policy does not always take into account the diversity of the Australian older population, including the difference associated with rural ageing. While the clear majority of participants in this study indicated that they want to age where they are living now, the spatial distribution of their social network ties suggest that most family network ties (particularly children ties) do not live close enough to provide any form of on-going physical informal support. It is unclear if this means that older people in rural areas will have higher expectations of formal services to fill this vital gap or if it will

mean a greater likelihood of a ‘pushed’ move to a new location (closer to family but away from their established sense of place) in later life. Several policy issues are considered here under this general theme.

#### ***8.4.1 Staying or Going? The Challenges of, and Influences on, Residential Mobility in Later Life.***

It was anticipated that this group of participants would represent a very stable population with clear intentions to remain and age-in-place, based on the 2006 census data presented in Chapter Three. While Chapter Seven showed that very few participants (less than two percent) had definite intentions to move in the future it also highlighted that a further 22.8 percent were undecided about future decisions around moving or staying. This chapter also showed that over half of participants had already actively made a residential move in later life. This represents the clear majority of this study population who have already moved in later life or were anticipating a potential move in the future, and this does not include movers who may re-locate due to un-anticipated future life course changes; for example as a result of sudden changes in health or the death of a spouse. Therefore, potentially most older people living in small rural communities face a (planned or unplanned) residential move in the future.

Much of the decision making about future moves rests on two key issues: the location and availability of both informal support (such as family) and formal services (such as medical care, transport and in home assistance). Chapter Seven showed that indecision around future moves was not limited to participants with short-term and mid-term lengths of residence, with participants from all lengths of residence contemplating a move in the future. While some participants had indicated that any future moves would be within their local region, for others this was not as definite because of the lack of family and/or required services in their current location. The movement of older people, both within the region and to other regions, has impacts on the need for, and planning of, appropriate localised housing choices, provision of aged specific services and the need for transport.

Home ownership and age may be drivers for ageing-in-place but there are other drivers that influence decisions to move (Beer and Faulkner, 2009; Olsberg and Winters 2005). Many older people make decisions to move as their age increases – these decisions may be based on the increased likelihood of living alone due to widowhood, increased poor health, reduced mobility, cessation of driving, a desire to live in smaller, more manageable housing,

to be closer to the informal support provided by other family members, or to be closer to formal supports such as medical services, allied health services and formal aged care services. Increased poor health can have ‘flow on effects’ into reduced mobility, cessation of driving, and increased need for both formal and informal services and alternative housing choices. Therefore the choice of housing location in relation to access of both formal and informal care and suitable housing options becomes a major factor in decisions around moving. In order to provide services efficiently and effectively to a growing older population it is important to understand not only where older people are living now but what their intentions and probability is for moving in the future.

#### ***8.4.2 Service Provision in Rural Areas***

With informal ‘hands on’ care clearly restrained by geographical distance (Gilleard and Higgs, 2005) older people with limited proximate network ties may face greater challenges ageing in their communities, while those with family nearby have more potential for assistance (Wenger, 2008). Nominated service ties for this group of participants represented a small proportion of all network ties and encompassed a wide variety of services including local stores, post offices and other mainstream community based services. The collection of information pertaining to current and anticipated future service use would have added depth to this study. In further research related to older people living in the same study area (Feist, Parker, Howard and Hugo, 2010) 201 interviews were carried out with older people where, after the initial (unprompted) social network list was developed, questions relating to specific areas of community, such as service use, were asked highlighting that very few participants saw services and service use as part of their social networks. This additional information enabled the mapping of service use against location of the participant, broadening the social network information by incorporating service use information often not considered as part of a social network.

Chapter Six showed that most nominated services ties were found to be located within ten kilometres of the participant, with the exception of a few specialist medical services that were accessed at a regional level or in the capital city of Adelaide. For many small towns in this study region localised services such as banks, general stores, pharmacies and home maintenance and so forth have been subject to regionalisation and centralisation or simply closed due to low population densities.

In-home community care services by definition need to be provided at the local level. For small rural towns there may be issues with the availability of local workers and perhaps

issues with confidentiality and privacy when localised workers are involved in providing care in small communities. Provision of services to rural communities raise important challenges to governments, communities and individuals alike as the balance is addressed between efficient and effective service delivery in a market-orientated environment and equitable, relevant services for older rural people particularly with the growing emphasis on person-centred care in Australia. The types of services that people need in their home and communities, and their sources of support are place, space and person dependent. If Australian aged care policy concentrates on the service and not the individual or their location, this diversity in people and their spaces and places of ageing are discounted (Keating 2008). This begs the question: does the current service and policy response for an ageing Australia have enough flexibility and funding to cater for increasing proportions of rural and remote older people?

#### ***8.4.3 Enabling Connectedness, Enabling Positive Ageing-in-Place Experiences***

Some research has suggested that new technologies have lessened attachment to place and increased a sense of attachment to ‘virtual communities’ (Rowles 2004, Delanty 2001). However, it could also be argued that new technologies have the potential to enable older people to continue to age-in-place where they choose, regardless of the dispersal of kinship ties and friends. A high proportion of participants in this study maintain links to dispersed family and friend network ties providing them with a sense of belonging and emotional support despite the wide geographical dispersal of these people. The use of new technologies, along with the roll out of the National Broadband Network (NBN) for reliable internet connection regardless of location, offers the current generation of older people, and in particular future generations of older people, alternative methods of staying connected to their social networks and accessing community services and support, regardless of location.

### **8.5 Implications for Future Research**

The critical components of any research should include a critique of the approach taken. This section of the conclusion will address the identification of ways this research can be enhanced, acknowledging any gaps in the research agenda.

#### ***8.5.1 Population Mobility and Older People***

Australia’s ageing population is of national interest and is the focus of attention for policy makers, service providers and the general population. However, much of that focus has

been on change at the national level, or at best a state level. In fact there is enormous variation in patterns of ageing between local areas (Hugo *et al* 1984; Hugo 2007a). Where older people live, and the impetus for changing place of residence is often overlooked in demographic analysis yet raises critical issues for planning and policy. Much of this service provision occurs at the local and regional level and therefore provision of these things requires greater knowledge of understanding where older people live and the context of that location. Aggregated global and national statistics on population ageing tend to conceal the complexities of demographic ageing and the impacts of migration and ageing-in-place at the regional or local level. Examining the spatial distributions of population ageing at regional and sub-regional levels enables better planning of services, communities, infrastructure and support systems.

Almost 25 percent of the study's participant group were undecided about future moves. It can be argued that this group were most likely to be influenced by policy directions, changes in community resources and changes in personal social networks. There will always be a certain proportion of the older population who are definitely going to move and those who are going to stay and age-in-place, but it is the proportion of the older population who are undecided that are most influenced to make a decision for their future based on their personal resources at the time. Examination of the current spatial distributions of older people combined with further examination of the location of current resources, particularly in rural areas, would enable a better understanding of who is likely to move in the future.

### ***8.5.2 Comparison of Rural-Urban Differences in the Social Connectedness of Older People***

This study has focused on the social networks of older people living in the rural Murray Lands region of South Australia. The data collected was not intended to be representative of all rural older people. This is not to say that the conclusions presented here about the social networks of older people in the Murray Lands do not also apply to older people living in other rural areas of Australia, or regional or urban centres of Australia. A comparison study with older people in other rural regions or with urban and rural populations of older people would assist in determining which aspects of the social networks in this study are specifically rural and which are specific to older people in general. While some of this information can be drawn from other existing international studies that have been conducted over time, an Australian perspective is not available. This

would assist in understanding what is specific about the Australian rural ageing-in-place experience and what can be generalised to the broader ageing experience of social networks.

### ***8.5.3 Looking Ahead – Future Cohorts of Older People in Rural Areas***

While this study has investigated people aged 70 years and over, the current generation of older people, it is acknowledged that the next generation of older people, the Baby Boomers, will approach later life, residential mobility and social networks very differently than their predecessors (Hugo, 2007a). The Baby Boomers will begin entering the 65 years and over group in 2011 which will see the emergence of a substantial shift towards an ageing population in the coming years. The Baby Boomers bring with them into older age different life course experiences. They are more likely to have higher divorce and separation rates, are more likely to be living alone in older age, and they will have fewer children (and therefore less access to informal care) than previous generations of older people (Hugo, 2007a). They will also have higher levels of education and experience with new technologies than previous generations, experience less gender inequality and greater ethnic heterogeneity and although they are likely to be more health conscious they will also live with higher levels of chronic conditions and disability than previous generations (Hugo, 2007a).

Most significantly, recent changes in retirement ages and the impact of the global financial crisis on superannuation may impact on when they retire and *where* they retire. Research focusing on the Baby Boomers as the future cohort of older Australians is growing, but understanding where this cohort is likely to live and age, and what their future levels of mobility in older age will be like would add to this burgeoning research focus.

### ***8.5.4 New Technologies and Staying Connected***

New technologies have increasingly become a part of everyday life in high income countries such as Australia. New information and communication technologies (ICT) such as the Internet, web-based mobile phones and new user-friendly computers and touch pad devices offer the potential for increasing quality of life for older people including: as a medium to connect with family and friends regardless of their location, better access to community information, integrated service delivery, and promotion of lifelong learning and self-efficacy (Feist *et al*, 2010). New technologies represent a potentially ideal medium to foster and strengthen both localised, place-based community connections and dispersed

social network ties for rural older people. There is a need to understand the needs and preferences of older people for learning and using new technologies to enable the incorporation of these into daily life and service provision.

### ***8.5.5 Changes in Social Networks over Time***

By adopting a lifecourse approach to place-making the temporal influences on the conceptualisation of place can be developed further in order to more fully understand how place is a dynamic, fluid concept influenced by time, experiences and changing social structures (Massey, 1997). This is best achieved through the collection of longitudinal social network data to capture changes in networks over time. Through an extensive, on-going study (Feist *et al*, 2010) located in the same region several participants (eight) from this study were randomly recruited for the ensuing project three years later. In addition to this, because the researcher has continued to work on other projects in the area, follow-up anecdotal information was offered relating to a further nine participants from this study in the ensuing three years after the original data collection. Even within this short period of time eleven of these seventeen participants had experienced significant changes to both their social networks and/or their residential location. Five had since moved (only one of these had been planned at the time of this study's interviews), two had since been widowed and a further two had partners who had gone into residential care. A further four known participants had died. Even from this small informal, follow-up sample it can be seen how significantly life-course circumstances can change in a short period of time, altering the structure and dynamics of individual social networks. Further evidence on the changes and decline in social networks and available social support would be useful for targeting formal social support and service provision to those most likely to need it later in life.

## **8.6 Conclusion**

Place needs to be considered as part of a negotiated, dynamic process of ageing, not as a static setting or a simple background to life events. Thus location becomes a part of an individual's daily life, social connections, memories and the ageing process. This is particularly relevant in rural settings where space and place, changing and ageing communities are combined with a policy agenda that favours ageing at home and in the community setting. Policy makers, service providers and researchers in ageing alike, need to further their understanding of what influence rurality has on community connectedness, social relationships and the ageing process. It is not only relevant for the understanding of

the individual and their relationship to the other people and activities, it is also important to contextualise how place has defined (and continues to define) those relationships.

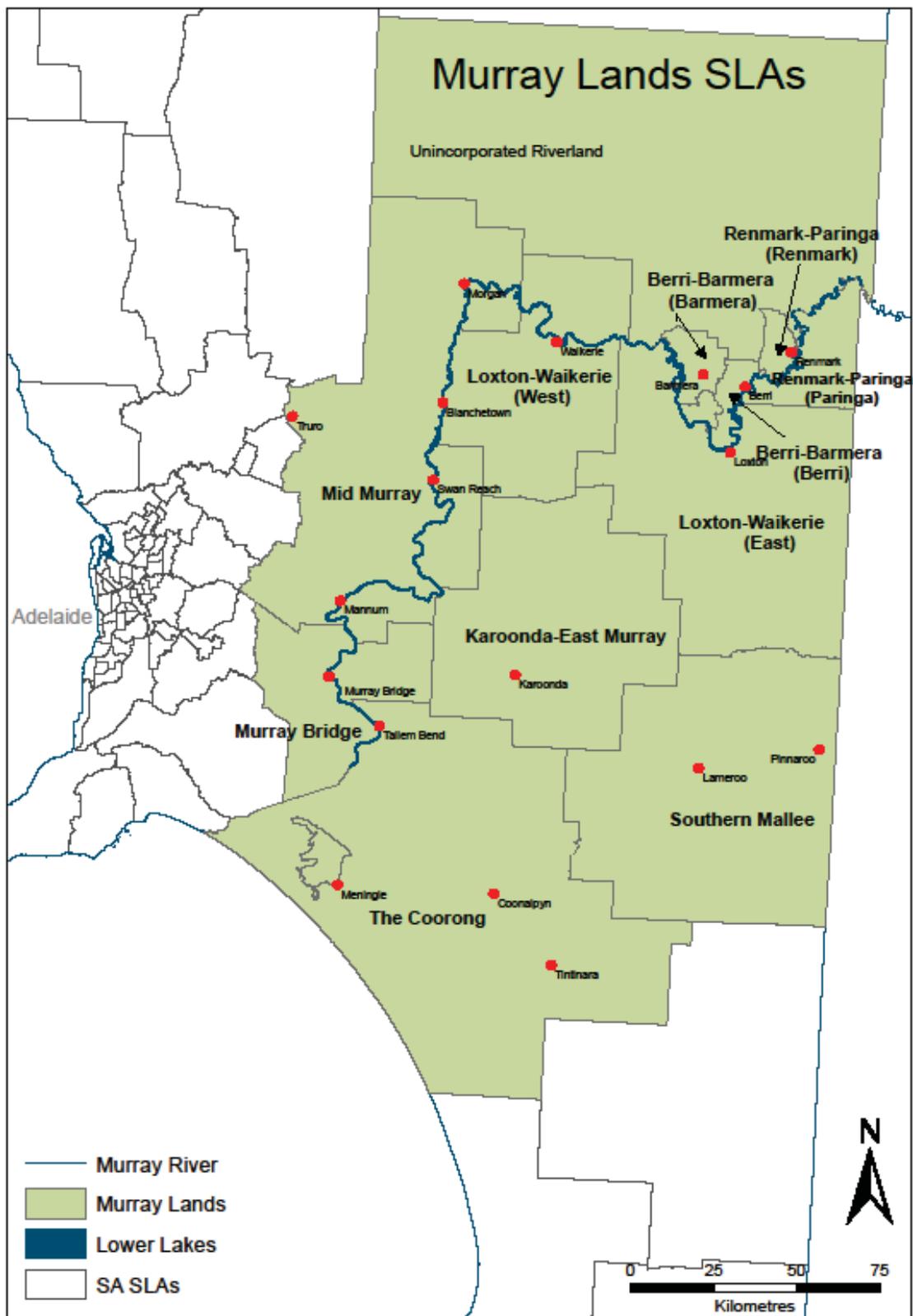
It is impossible to consider one element of social networks in relationship to ageing without consideration of others. Reduction in network size, composition and modes of contact are related to the physical changes associated with ageing *and* the physical nature of the environment in which the person lives. However, age is also related to many network properties, with changes in networks evident over time; but as the constant loneliness scores for all age groups suggest, not all change is necessarily negative. Many of the adjustments older people make to their social networks and patterns of daily life reflect adaptations that allow them to remain living in the location of their choice and retain their independence. It is how those adaptations and choices are enabled by policy, service delivery and community support that may enhance the quality of ageing-in-place for older Australians living in rural settings.

NOTE:

This map is included on page 243  
of the print copy of the thesis held in  
the University of Adelaide Library.

APPENDIX ONE: A Topographical Map of South Australia

**APPENDIX TWO: Map of the Study Region, Showing SLAs**



### APPENDIX THREE: Comparison of Five Social Network Classification Systems

	Wenger & Tucker (2002)	Fiori <i>et al</i> (2007)	Litwin (2001)	Pahl (2004)	Wenger & Keating (2008)
1.	<b>Wider community-focused network</b> absence of nearby relatives but active contact with distant relatives, usually children, a high number of friends and local activities.	<b>Diverse Supported</b> primarily married, large networks, less proximal ties, many activities and frequent contact with both friends and family	<b>Diverse</b> a variety of network supports and activities, mainly married, at least one proximate child, frequent contact with children, neighbours, friends	<b>Friend-like</b> contains more friends than family, a wide range of friends with family only in the inner circle if very close	<b>Diverse</b> mixture of kin and non-kin. Large networks, frequent contact with a variety of people, at least one friend and high number of neighbours
2.	<b>Locally integrated support network</b> close relationships with local family, friends and neighbours	<b>Friend Focused (supported)</b> usually unmarried, frequent contact with friends, reported high levels of support	<b>Friend Focused</b> similar to diverse networks but less contact with neighbours	<b>Friend-enveloped</b> more friends than family, but family is in the inner ring if considered very close friends	<b>Friend-based networks</b> predominantly friends-based but with close, intimate ties, or friends based but with cordial, rather than intimate ties.
3.	<b>Localised, family-dependent network</b> focused on family ties, few neighbours and peripheral friends - respondents less likely to be in good health	<b>Friend Focused (unsupported)</b> usually unmarried, frequent contact with friends, high number of activities, low levels of social support	<b>Neighbour Focused</b> unlikely to be married, frequent contact with neighbours and family but not with friends	<b>Family-orientated</b> more family than friends, family only in the inner ring and a small number of confiding, close friends in the outer rings	<b>Family based networks</b> small, almost wholly kinship ties, particularly adult children with few friends or neighbours.
4.	<b>Local, self-contained network</b> more distant and/or infrequent contact with at least one relative but mainly reliant on neighbours	<b>Family Focused</b> tend to be married with frequent family contact, lower frequency of friend contacts and activities than the 'Diverse Supported' group	<b>Family Focused</b> frequent contact with an average of 5 proximate children, regular activities but minimal contact with neighbours and friends	<b>Family-dependent</b> (family members outnumber friends and re relied on for a wide range of support, with friends playing a restricted role)	<b>Small networks</b> a few, tenuous social ties, friendship poor, socially isolated, little interaction outside the home, minimal contact with children.
5.	<b>Private restricted network</b> absence of localised kin, few nearby friends, low levels of community involvement	<b>Restricted non-friends (unsatisfied)</b> primarily unmarried, small networks, few activities, below average contact with friends	<b>Restricted</b> limited contact with networks, unlikely to be married, limited contact with family, little contact with friends or neighbours	<b>Partner-focussed</b> both friends and family play a minor role	
6.		<b>Restricted non-family (unsupported)</b> primarily unmarried; small, non-local networks, infrequent contact with family, low in activities		<b>Professional dependent</b> both family and friends play a minor role	

## APPENDIX FOUR: Mannum Development Plans

**Mannum Retirement Village.** This development is currently under construction, Phase One opened in 2010.

NOTE:

This image is included on page 246 of the print copy of the thesis held in the University of Adelaide Library.

**Media Images for the Mannum Retirement Village.**

NOTE:

These images are included on page 247 of the print copy of the thesis held in the University of Adelaide Library.

## The Mannum Marina Development Plans

NOTE:

This text is included on page 248 of the print copy of the thesis held in the University of Adelaide Library.

Source: Mannum Waters Marina and Residential Development Plan (2005) p.15

This development began clearance of the site and preliminary construction in 2010.

NOTE:

This map is included on page 248 of the print copy of the thesis held in the University of Adelaide Library.

Some of the local press from 2007 associated with the new developments:

NOTE:

These articles are included on page 249 of the print copy of the thesis held in the University of Adelaide Library.

## APPENDIX FIVE: University Ethics Approval



RESEARCH BRANCH  
RESEARCH ETHICS AND COMPLIANCE UNIT

SABINE SCHREIBER  
SECRETARY  
HUMAN RESEARCH ETHICS COMMITTEE

THE UNIVERSITY OF ADELAIDE  
SA 5005  
AUSTRALIA

TELEPHONE +61 8 8303 6028  
FACSIMILE +61 8 8303 7325  
email: sabine.schreiber@adelaide.edu.au  
CRICOS Provider Number 00123M

6 December 2006

Professor GJ Hugo  
Geographical and Environmental Studies

Dear Professor Hugo

**PROJECT NO:** *Community connectedness and the social networks of older people in rural communities: 4 South Australian case studies.*  
**H-165-2006**

I write to advise you that I have approved the above project on behalf of the the Human Research Ethics Committee. Please refer to the enclosed endorsement sheet for further details and conditions that may be applicable to this approval.

Approval is current for one year. The expiry date for this project is: 31 December 2006

Where possible, participants taking part in the study should be given a copy of the Information Sheet and the signed Consent Form to retain.

Please note that any changes to the project which might affect its continued ethical acceptability will invalidate the project's approval. In such cases an amended protocol must be submitted to the Committee for further approval. It is a condition of approval that you immediately report anything which might warrant review of ethical approval including (a) serious or unexpected adverse effects on participants (b) proposed changes in the protocol; and (c) unforeseen events that might affect continued ethical acceptability of the project. It is also a condition of approval that you inform the Committee, giving reasons, if the project is discontinued before the expected date of completion.

A reporting form is available from the Committee's website. This may be used to renew ethical approval or report on project status including completion.

Yours sincerely

A black rectangular box redacting the signature of Professor Garrett Cullity.

Handwritten signature of Professor Garrett Cullity.  
Professor Garrett Cullity  
Convenor  
Human Research Ethics Committee

## APPENDIX SIX: Example of Local Press Release for Participant Recruitment

### **Researching Older People across the Murray Mallee**

Helen Feist is a PhD researcher at the University of Adelaide with a special interest in older people living in small rural communities. Her research is concerned with older people 'ageing-in-place' in small rural and river communities or on farms across the Murray Mallee region. How older people manage to stay at home and remain connected to their communities is a growing area of interest, not only for researchers but also for policy makers and service providers.

People are now encouraged to continue living at home as they grow older and usually this is also their personal choice. However we are seeing this changing focus on ageing at the same time as we are seeing many changes in rural communities. Some are growing rapidly, often with lots of incoming "tree change" retirees, which may put a strain on limited services. Other towns have smaller and older populations as younger families move to the city or regional centres in search of work and better schooling, leaving older people with smaller support networks and limited resources.

Do older people have the services they need, do they still have the family and community supports they need, how has their community changed over the years, how do they connect to a community and its services as a new resident, and is the day to day cost of rural living making staying at home harder? These are some of the questions Helen intends to explore through her research. It is hoped that this research will assist older people to remain living in, and be supported by, their rural communities.

Helen is currently looking for volunteers to take part in this research, particularly in the river communities in the Mid-Murray council and surrounding regions. If you are aged 70 years or over and currently live in one of these communities you can help! All that is required is about 45 minutes of your time for a chat and a few questions with Helen, at a place and time that is convenient to you. *This is not a part of an aged care assessment process or a 'plug' for an aged care service; it is purely a research project.* If you would like to volunteer, or you would like an information sheet to be posted to you, just call 8532 2255 or 0404 220 379.

## APPENDIX SEVEN: Recruitment Flyer



### **Researching Older People in the Murray Mallee Region**

Are you aged 70 years and over?

Do you live in the Mid-Murray, Karoonda-East  
Murray, Southern Mallee or Coorong Council  
Districts?

Do you have 40 minutes to spare to chat to a  
researcher about your life and your community?

Helen Feist is a post-graduate researcher at the University of Adelaide who is interested in talking to older people living the Murray Mallee region. Helen is currently conducting surveys in these four regions and is looking for more participants to take part. If you would like more information about Helen's research and how you can be a part of this please call (08)8303 5899 or 8532 2255 during business hours and an information sheet will be sent to you.

## APPENDIX EIGHT: Study Information Sheet



### **The Social Networks of Older People Living in the Murray Mallee Survey Information Sheet**

Hello, my name is Helen Feist. I am a Ph.D. student at the University of Adelaide in the School of Geographical and Environmental Studies. I am currently researching the social networks of older people in rural areas, specifically the Murray Mallee region. I am interested in finding out more about how older people are connected to, and supported by their communities and whom they see and interact with on a regular basis. We hope that this research will assist older people to remain living in, and supported by, their communities.

I would like to talk with as many people as possible aged 70 years and over who are currently living in the Mid-Murray, Karoonda East-Murray, Southern Mallee and Coorong council districts. I am particularly interested in finding out more about you, who you interact with on a regular basis, any organisations you belong to, and activities that you take part in.

If you choose to take part in this survey it would involve approximately 30 minutes of your time, at a time and place that is convenient for you. I am able to visit you at home if that is most suitable to you. You would be welcome to have a family member or an advocate present during the survey. You will be asked a short series of questions about yourself (such as your age, if you still drive, if you live alone etc.) and then you will be asked to develop a list of people who are important to you at this time in your life, people you see or communicate with on a regular basis – this may be friends, neighbours, family or other community members such as a carer or service provider. I will ask you a few details about the location of each person so that we can better understand the size

and complexity of your social network. This process should not take long; it's a bit like making an invitation list for a party!

All the information that you provide is kept confidential. Your identity, and the identity of the people in your social network, will remain anonymous and no one will be identified in the final reporting of the research. The personal information you provide will only be accessible to myself as the researcher coming to visit you. All the information you provide will be coded after collection and kept in a locked filing cabinet in my secure office at the University. You are not obligated to answer any questions that you don't wish to and you can choose to stop the interview at any time.

The results of the survey will form part of my thesis for the University of Adelaide and may be presented in further publications and presentations. If you would like to know more about the study before taking part, or you would like to volunteer you can contact me on the following numbers:

**Mobile: 0404 220 379 or Work: (08) 8303 5899**

Or speak to the person who gave you this information sheet and they will let me know you are interested and I can contact you.

If you have any further comments or queries regarding this research you may also contact the School of Geography's Post Graduate Coordinator or my supervisor:

**Dr. Di Rudd**  
Post Graduate Coordinator  
GES  
University of Adelaide  
Tel: (08) 8303 4109

**Professor Graeme Hugo**  
Ph. D. Supervisor  
GES  
University of Adelaide  
Tel: (08) 8303 5646

Please refer to the independent complaints form (attached) if you wish to speak to another University authority about your involvement in this research.

I look forward to hearing from you soon.

Kind regards,

*Helen Feist*

## APPENDIX NINE: University Complaints Procedure

### THE UNIVERSITY OF ADELAIDE HUMAN RESEARCH ETHICS COMMITTEE

*Document for people who are participants in a research project*

#### CONTACTS FOR INFORMATION ON PROJECT AND INDEPENDENT COMPLAINTS PROCEDURE

The Human Research Ethics Committee is obliged to monitor approved research projects. In conjunction with other forms of monitoring it is necessary to provide an independent and confidential reporting mechanism to assure quality assurance of the institutional ethics committee system. This is done by providing research participants with an additional avenue for raising concerns regarding the conduct of any research in which they are involved.

The following study has been reviewed and approved by the University of Adelaide Human Research Ethics Committee:

Project title:

**...The Social Networks of Older People in the Murray Mallee....**

1. If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the project co-ordinator:

*Name: .....Professor Graeme Hugo.....*

*Telephone: ...8303 5646.....*

2. If you wish to discuss with an independent person matters related to
  - making a complaint, or
  - raising concerns on the conduct of the project, or
  - the University policy on research involving human participants, or
  - your rights as a participant

contact the Human Research Ethics Committee's Secretary on:  
phone (08) 8303 6028

## APPENDIX TEN: Participant Consent Form

I,.....

*(please print name)*

consent to take part in the research project entitled

### **The Social Networks of Older People in the Murray Mallee**

I acknowledge that I have read the Information Sheet entitled: **The Social Networks of Older People in the Murray Mallee.**

I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.

I have been given the opportunity to have a member of my family or a friend present while the project was explained to me.

I have been informed that, while information gained during the study may be published, I will not be identified and my personal results will not be divulged.

I understand that I am free to withdraw from the project at any time.

I am aware that I should retain a copy of this Consent Form, when completed, and the attached Information Sheet.

.....*(signature)*

*(date)*

### **WITNESS**

I have described to..... *(name of subject)*  
the nature of the research to be carried out. In my opinion she/he understood the explanation.

Name: **Helen Feist** .....

Date.....

## APPENDIX ELEVEN: Participant Confirmation Letter

### The Social Networks of Older People Living in the Murray Mallee



#### Interview Confirmation Letter

Dear Mr Lacy,

09/02/2007

Thankyou for agreeing to participate in the survey as a part of this research in the Murray Mallee region. I will be coming to visit you on the 19<sup>th</sup> of February at 4pm as agreed when we spoke. You are welcome to have a family member or advocate present if you desire.

Just to remind you, this survey should take about 40 minutes of your time. To begin with you will be asked some simple questions about yourself and then we will spend some time talking about people who are important in your life right now. You might like to think about who would be on this list before we meet. I am interested in knowing who you see or talk with on a regular basis – this could be your family, friends, neighbours or carers. I would also like to know more about organisations you belong to or activities that you do. Think of it as developing an invitation list for a party!

If you need to change the time or the day of the appointment for any reason just let me know and we can arrange another appointment. My telephone numbers are:

**Mobile: 0404 220 379    or    Work: 8532 2255**

I look forward to seeing you on Monday the 19<sup>th</sup> of February.

Yours Sincerely,

*Helen Feist,*

Geographical and Environmental Studies  
University of Adelaide

## APPENDIX TWELVE: Survey Instrument

### Household Questions

**These first few questions apply to your household as a whole:**

1. How many people currently live in this household?  
.....
2. What is the current housing status?
  - a. Own current home
  - b. Purchasing
  - c. Renting
  - d. Other (please specify) .....
3. Into which bracket would the total **weekly household** income fall?
  - a. \$1 – 199
  - b. \$200 – 299
  - c. \$300 – 399
  - d. \$400 – 499
  - e. \$500 – 599
  - f. \$600 – 699
  - g. \$700 – 799
  - h. \$800 – 899
  - i. \$900 – 999
  - j. \$1,000 – 1,499
  - k. \$1,500 and over
4. Is this income adequate to your household needs? Yes No
5. Do you own other assets and/or property that impact on your income? Yes No

### Individual Questions

**I am now going to ask a few questions that will provide a demographic profile of you.**

6. Are you:
  - a. Male
  - b. Female
7. What is your age? .....
8. Where were you born? .....

9. Do you identify yourself as....
- a. Aboriginal
  - b. Torres Strait Islander
  - c. Australian of European descent
  - d. Other (please specify) .....

10. What is your current marital status?

- a. Married
- b. Never Married
- c. Widowed
- d. Divorced
- e. Separated

10a. If you are widowed/divorced/separated how many years have you lived alone?

11. Do you currently live:

- a. Alone
- b. With a partner
- c. With other family members
- d. Other .....

12. Do you hold a current Driver's Licence?

- a. Yes
- b. No

13. Are you currently still driving? Yes No

If yes, are you on a restricted license? Yes No

If no, when did you give up driving? .....

13a. Do you self-restrict your own driving in anyway

If yes, what kind of self-restrictions.....

14. Are you still involved in any kind off work? Yes No

If yes, what kind of work are you involved in?

- a. Paid work
- b. Unpaid work in own or family business
- c. Volunteer work in the community

15. What kind of work did you do in the past? .....

.....

(\*\* last position held and longest or most important position held)

**And now we have a few questions about your health and wellbeing.**

(The following series of 11 questions are from the SF 36 Health Survey)

16. In general, would you say your health is:

- a. Excellent
- b. Very Good
- c. Good
- d. Fair
- e. Poor

17. Compared to one year ago, how would you rate your health in general now?

- a. Much better than one year ago
- b. Somewhat better now than one year ago
- c. About the same as one year ago
- d. Somewhat worse now than one year ago
- e. Much worse than one year ago

18. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much? (circle one number for each line)

Activities	Yes, limited a lot	Yes, limited a little	No, not limited at all
a. <b>Vigorous activities</b> , such as running, lifting heavy objects, participating in sports	1	2	3
b. <b>Moderate activities</b> , such as moving a table, pushing a vacuum cleaner, playing bowls or golf	1	2	3
c. Lifting or carrying the groceries	1	2	3
d. Climbing several flights of stairs	1	2	3
e. Climbing one flight of stairs	1	2	3
f. Bending, kneeling or stooping down	1	2	3
g. Walking more than 1 kilometre	1	2	3
h. Walking several street blocks	1	2	3
i. Walking one street block	1	2	3
j. Bathing or dressing yourself	1	2	3

19. During the past 4 weeks, have you had any of the following problems with your regular daily activities as a result of your physical health?

- a. Cut down the *amount of time* you spent on activities?                      Yes    No

- |  |     |    |
|--|-----|----|
| b. Accomplished less than you would like to  | Yes | No |
| c. Were limited in the <i>kind</i> of activities you would normally do                             | Yes | No |
| d. Had difficulty <i>performing</i> your regular activities<br>(for example: it took extra effort) | Yes | No |

20. During the past 4 weeks, have you had any of the following problems with your regular daily activities as a result of emotional problems (such as feeling anxious or depressed)?

- |   |     |    |
|---|-----|----|
| a. Cut down on the amount of time you spent on regular activities | Yes | No |
| b. Accomplished less than you would like                          | Yes | No |
| c. Didn't carry out your usual activities as carefully as usual   | Yes | No |

21. During the past 4 weeks, to what extent has your physical health interfered with your normal social activities with family, friends, neighbours or groups? (Check one)

- a. Not at all
- b. Slightly
- c. Moderately
- d. Quite a bit
- e. Extremely

22. How much physical pain have you had during the last 4 weeks?

- a. None
- b. Very mild
- c. Mild
- d. Moderate
- e. Severe
- f. Very severe

23. During the past 4 weeks, how much did pain interfere with your normal daily activities? (Check one)

- a. Not at all
- b. A little bit
- c. Moderately
- d. Quite a bit
- e. Extremely

24. These next few questions are about how you feel and how things have been with you during the past 4 weeks. Please give the answer that is closest to the way you have been feeling for each item.

	All of the time	Most of the time	Good bit of the time	Some of the time	Little of the time	None of the time
a. Did you feel full of life	1	2	3	4	5	6
b. Have you been a very nervous person	1	2	3	4	5	6
c. Have you felt so down in the dumps that nothing could cheer you up	1	2	3	4	5	6
d. Have you felt calm and peaceful	1	2	3	4	5	6
e. Did you have a lot of energy	1	2	3	4	5	6
f. Have you felt downhearted and blue	1	2	3	4	5	6
g. Did you feel worn out	1	2	3	4	5	6
h. Have you been a happy person	1	2	3	4	5	6
i. Did you feel tired	1	2	3	4	5	6

25. During the past four weeks how much of the time has your emotional health interfered with your social activities?

- a. All of the time
- b. Most of the time
- c. Some of the time
- d. A little of the time
- e. None of the time

26. How true or false are the following statements for you?

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
a. I seem to get sick a little easier than other people	1	2	3	4	5
b. I am as healthy as anybody I know	1	2	3	4	5
c. I expect my health to get worse	1	2	3	4	5
d. My health is excellent	1	2	3	4	5

**(The following series of 10 questions are from the UCLA Loneliness Scale,**

27. How often do you feel people are around you but not with you?

- a. Often
- b. Sometimes
- c. Rarely
- d. Never

\*28. How often do you feel there are people you can talk to?

- a. Often
- b. Sometimes
- c. Rarely
- d. Never

29. How often do you feel isolated from others?

- a. Often
- b. Sometimes
- c. Rarely
- d. Never

\*30. How often do you feel people really understand you?

- a. Often
- b. Sometimes
- c. Rarely
- d. Never

\*31. How often do you feel close to people?

- a. Often
- b. Sometimes
- c. Rarely
- d. Never

\*32. How often do you feel you have people you can turn to?

- a. Often
- b. Sometimes
- c. Rarely
- d. Never

\*33. How often do you feel you have a lot in common with people around you?

- a. Often
- b. Sometimes
- c. Rarely
- d. Never

34. How often do you feel you lack companionship?
- a. Often
  - b. Sometimes
  - c. Rarely
  - d. Never
35. How often do you feel no-one really knows you much?
- a. Often
  - b. Sometimes
  - c. Rarely
  - d. Never

36. How often do you feel left out by others?
- a. Often
  - b. Sometimes
  - c. Rarely
  - d. Never

**And now a few questions about where you live.**

37. How long have you lived at this current address? .....
38. Where was your previous place of residency? .....
39. How long did you live at that address? .....
40. What were your reasons for moving? .....
41. Do you intend to stay at this address in the future?
- Yes
  - No
  - Unsure/Undecided

41a. If no, where are you planning to move to? .....

**42 Social Network Interview:**

I would like you to spend a bit of time thinking about the people who are important to you at this time in your life. These may be friends, neighbours, family members or people who assist you in some way. I would like to be able to develop a list of all the people that you consider important in your life right now, who they are, where they live and how often you see them. We will also include any groups or activities you regularly take part in and organisations that you might belong to.

*See Appendix Twelve for a typical social network sheet.*

# APPENDIX THIRTEEN: Typical Social Network Interview

## Survey Questions for Household Members Aged 70+

I would like you to spend a bit of time thinking about the people who are important to you at this time in your life. These may be friends, neighbours, family members or people who assist you in some way. I would like to be able to develop a list of all the people that you consider important in your life right now, who they are, where they live and how often you see them. We will also include any groups or activities you regularly take part in and organisations that you might belong to.

Name	Location	Network Role	Frequency of Contact	Mode of Contact	Reciprocity of contact
Jane + 2 sons.	Prospect, S.A.	Daughter + Grandkids.	Weekly	Phone	↔
Tony + Marie	Maartlands	friends.	Fortnightly	In Person	↔
Annela	Tallem Bend	Carer / Service	2 x week	In Person	←
Riverside Social Club	Tallem Bend	Activity	Weekly	In Person	→
Nigel	Tallem Bend	Friend	Weekly	In Person	↔
Nancy	Tallem Bend	Neighbour	2 x week	In Person	←
Man St. Rob	Tallem Bend	Activity / Service	2 x week	In Person	↔
Bob	Bendigo, Vic.	Brother	Monthly	Phone	↔
Telecross Callers	Tallem Bend.	Service	daily	Phone	←

Usually meet at the pub.

Also at the pub. walks his dog.

More often recently due to illness.

Network Role: Friend, Family Member, Neighbour, Service Provider, Organisation, Regular Activity, Regular Group, Other  
 Frequency: Daily, Weekly, Bi-Weekly, Fortnightly, Monthly, Less often  
 Mode of Contact: In Person, Phone, E-mail, Both Person & Phone  
 Reciprocity: Participant makes most contact (→) Network member makes most contact (←), Contact is reciprocal (↔).

\*\* Who would be the most important people to you on this list

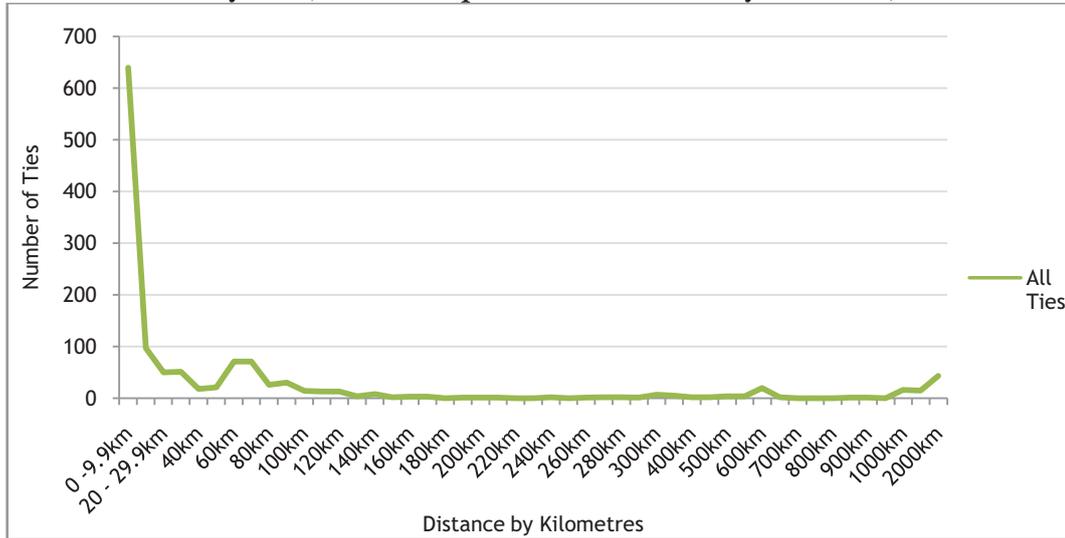
### APPENDIX FOURTEEN: Coded Social Network Data

Respondent/ Actor	Latitude Respondent	Longitude Respondent	Latitude Network Actor	Longitude Network Actor	Network Role	Frequency of Contact	Mode of Contact	Reciprocity
K005_1	-35.09226300000	139.82157100000	-35.09793100000	139.81562000000	1	1	1	3
K005_2	-35.09226300000	139.82157100000	-34.45706800000	140.56835800000	1	2	3	3
K005_3	-35.09226300000	139.82157100000	-35.12900000000	139.28353100000	1	2	3	3
K005_4	-35.09226300000	139.82157100000	-34.71261600000	140.02841600000	1	3	3	3
K005_5	-35.09226300000	139.82157100000	-35.09152400000	139.89667600000	1	2	1	3
K005_6	-35.09226300000	139.82157100000	-35.13328600000	139.24903400000	1	3	3	3
K005_7	-35.09226300000	139.82157100000	-35.10793800000	139.84356500000	3	1	1	3
K005_8	-35.09226300000	139.82157100000	-35.11169700000	139.83122200000	3	1	1	3
K005_9	-35.09226300000	139.82157100000	-35.09510500000	139.89377500000	6	1	1	1
K005_10	-35.09226300000	139.82157100000	-35.09543800000	139.89075400000	6	2	1	1
K005_11	-35.09226300000	139.82157100000	-35.09488900000	139.89482000000	6	3	1	1
K005_12	-35.09226300000	139.82157100000	-34.91415800000	138.65804700000	2	4	3	3
K005_13	-35.09226300000	139.82157100000	-35.12895600000	139.27403900000	2	4	3	3
K005_14	-35.09226300000	139.82157100000	-35.09838900000	139.89307200000	1	2	3	3

## APPENDIX FIFTEEN: Participant Network Ties by Distance and SLA

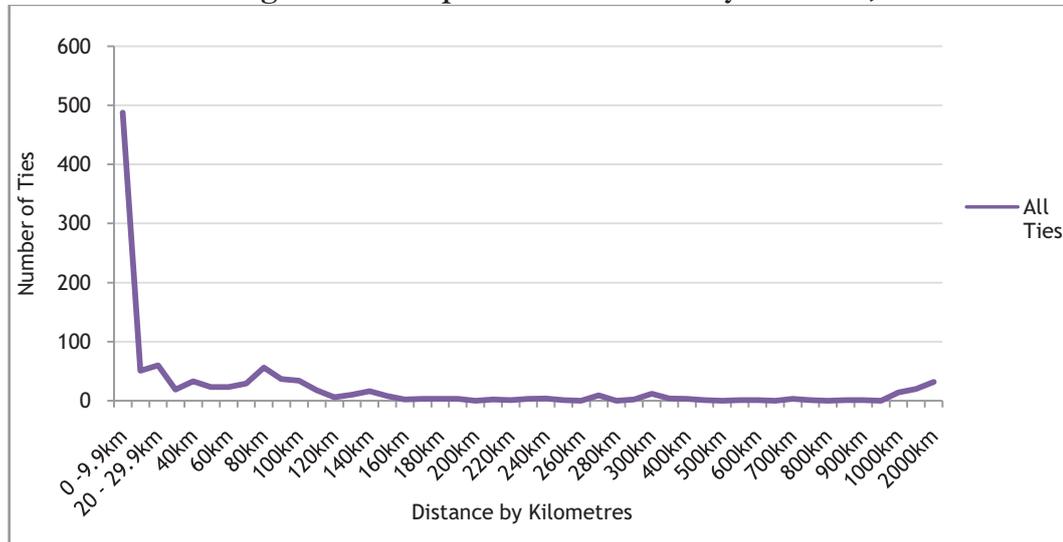
The following figures highlight the similarity in the pattern of network ties by distance for each of the four SLAs in the study area.

**Mid-Murray SLA, All Participant Network Ties by Distance, n=1268**

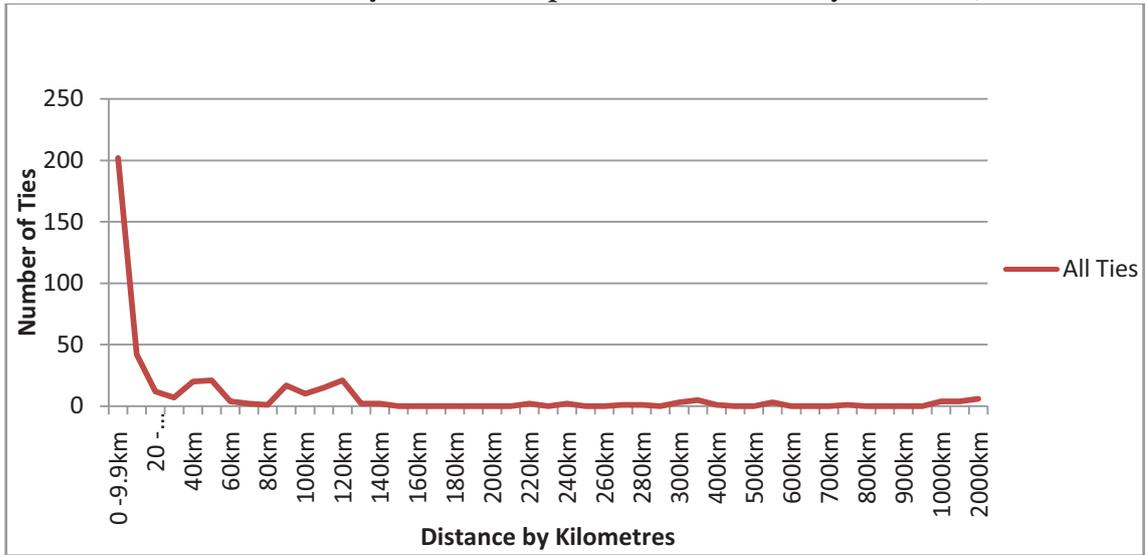


Adelaide is approximately 180 kilometres away. The slight rise in network ties at the 20 to 29 kilometre mark is associated with network ties being nominated between the key towns in this SLA, Lameroo and Pinnaroo. The Southern Mallee SLA shows the smallest peaks in distant ties. Interestingly it is also the most rural and remote of the four SLAs.

**The Coorong SLA Participant Network Ties by Distance, n=1038**



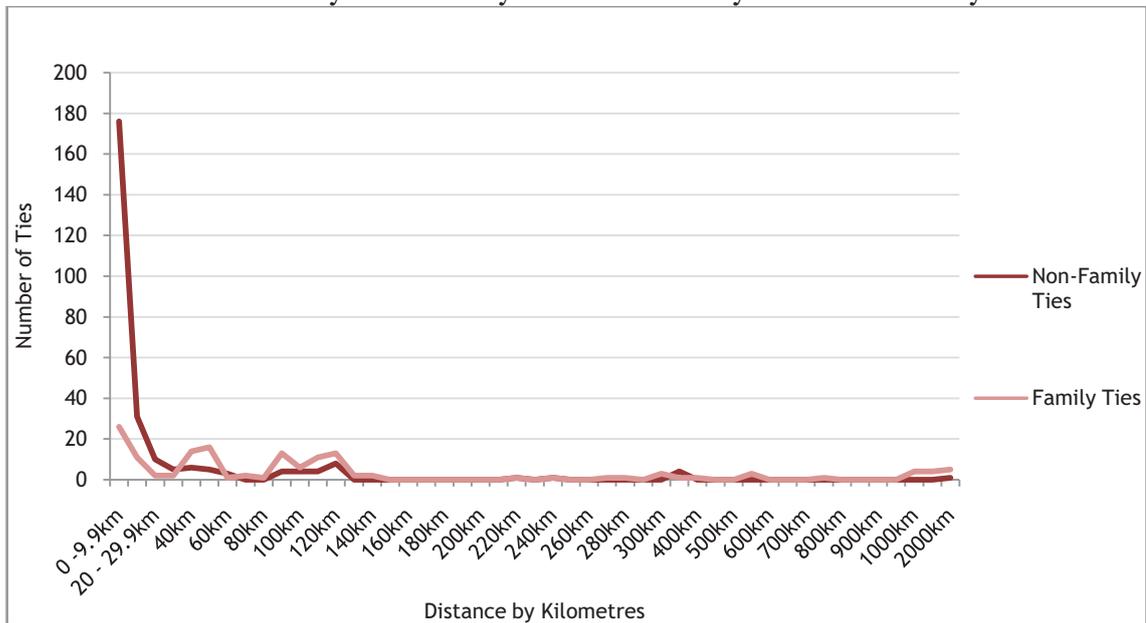
Karoonda-East Murray SLA Participant Network Ties by Distance, n=411



## APPENDIX SIXTEEN: Family and Non-Family Ties by Distance

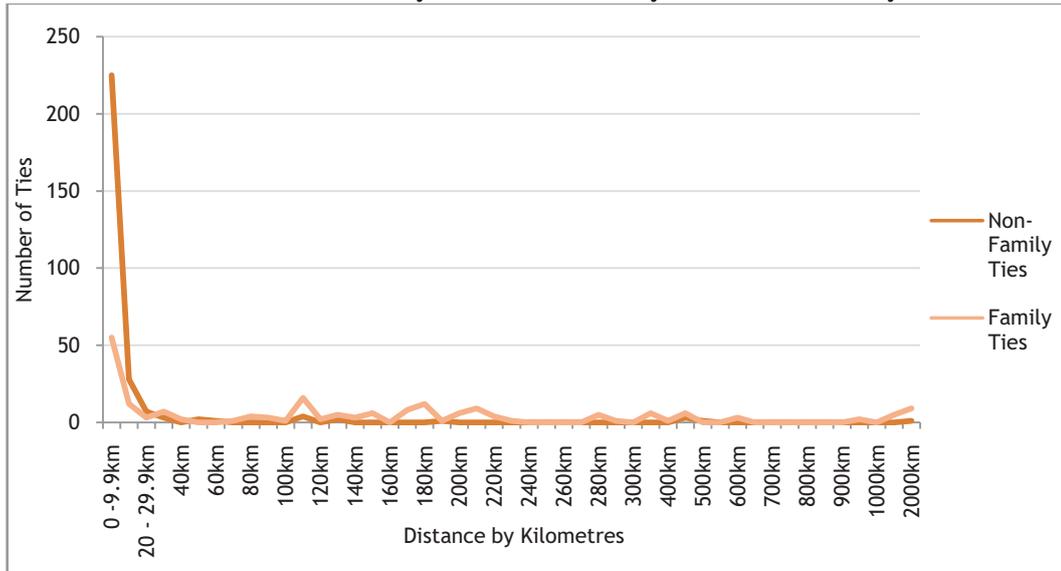
Both family and non-family ties show some increases at key distance points for the regional city of Murray Bridge and the state capital Adelaide, but the peaks at these points are generally higher for family ties than they are for non-family ties. The Southern Mallee SLA shows a much smaller peak for non-family ties at these two key points, suggesting that the more remote nature of this SLA fosters less non-family network ties over distance than the other areas.

**Karoonda-East Murray SLA Family and Non-Family Network Ties by Distance**



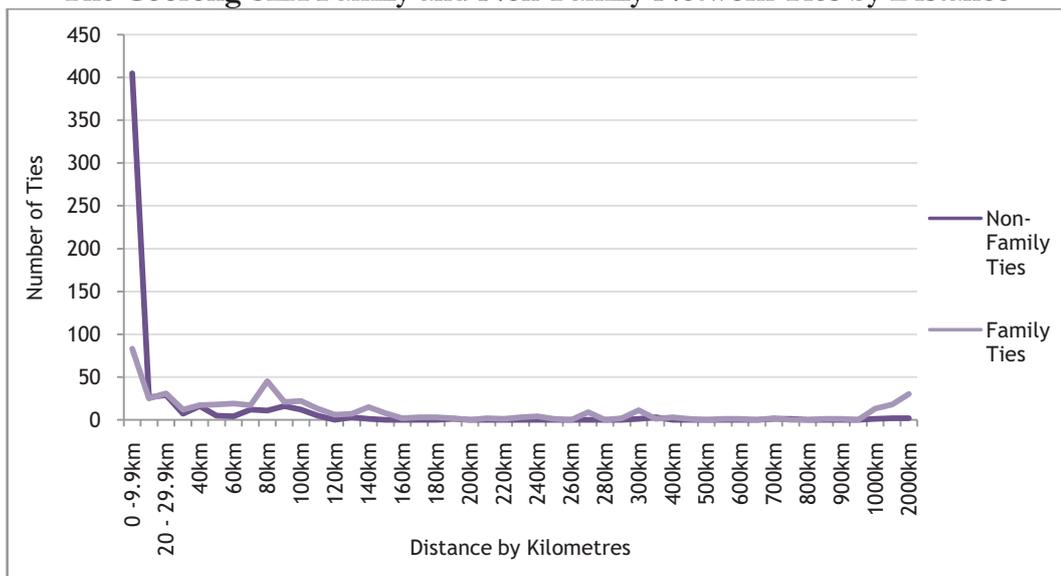
Family ties n= 148, Non-Family Ties n=263

### Southern Mallee SLA Family and Non-Family Network Ties by Distance



Family Ties n=199, Non-Family Ties n=279

### The Coorong SLA Family and Non-Family Network Ties by Distance



Family Ties n=474, Non-Family Ties n=562

## APPENDIX SEVENTEEN: Map of CPN Transport Routes

NOTE:

This map is included on page 272 of the print copy of the thesis held in the University of Adelaide Library.

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