

Community Attachment: Determinants, Indicators and Measures

Working Paper for Building Attachment in Communities Affected by Residential Mobility and Transience

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Abstract

This paper explores the range of meanings of community attachment and provides an overview of the determinants, indicators and measures of community attachment. Over 50 selected articles on community attachment and residential movement are reviewed. Researchers have come up with multiple definitions of community attachment that involve cognitive, affective and relational elements that bind an individual to a place. Distinguishing between determinants, indicators and measures is not always consistent across studies. Determinants of community attachment can be broadly divided into those based on: exogenous factors, and factors related to individual socio-demographic characteristics and behaviours. Researchers have identified a wide range of indicators and measures of community attachment. There is no one, accepted set of indicators and measures, although several studies present comprehensive indicator instruments. Three types of indicators and measures of community attachment are discernable in the literature reviewed. These are related to: attitudes; behaviour; and aggregate measures. The main indicators and measures discussed are: place identity; satisfaction; participation; informal social interaction; and locus of activity.

The relationship between community attachment and residential movement is also considered. Both individual length of residence and high aggregate levels of residential stability in an area are noted in a variety of studies to be significant predictors of attachment to a community. However, the research has also thrown up disparate and seemingly contradictory results about length of residence and residential stability as determining factors of attachment. This is because different studies have focused on different geographic levels of place, and there has been lack of attention to the possibility of multiple, varying attachments to a range of places.

1. Introduction

This paper explores the range of meanings of community attachment and provides an overview of the determinants, indicators and measures of community attachment. It is part of the Building Attachment in Families and Communities Affected by Residential Mobility and Transience research programme, which explores the dynamics and drivers of residential mobility and transience, and the relationship between movement and attachment to a community.

Information from this paper will contribute to development of:

- a classificatory system for understanding the determinants of community attachment
- systematic measures of community attachment, and
- national and local surveys of community attachment.

This paper comprises the following sections:

- Method and overview of research covered
- Defining community attachment
- Units of analysis
- Determinants of community attachment
- Indicators and measures of community attachment
- The relationship between community attachment and residential movement, and
- Concluding comments

2. Method and Overview of Research Covered

Over 50 selected articles on community attachment and residential movement are reviewed in this paper. Articles were sourced through bibliographic data bases, the internet, recent issues of journals known to publish work in the area, and the bibliographies of previously identified studies.

While this is not an exhaustive review of the literature, it has been compiled to cover the following:

- Articles that focus on community attachment and residential movement.
- Community attachment definitions, determinants, indicators or measures.
- A focus on attachment related to particular socio-demographic groups and/or settlement types.
- Compilation and assessment of work relating to community attachment (e.g. literature review).
- Accessibility of the article.

Most of the articles reviewed are informed by the disciplines of sociology, human geography, demography and social psychology. A few articles are drawn from the fields of communications research, community development, econometrics, gerontology, home economics and tourism research. Most of the literature covers the mid 1980s – 2004. A few earlier articles are included either because they provide important theoretical context, or introduce key concepts or methods.

The majority of the articles are based on USA data and experience, although research conducted in England, Scotland, Canada, Sweden, France, Taiwan and New Zealand is also included.

The articles are predominantly quantitative analyses. Several are based on surveys of large numbers of individuals (e.g. McAuley and Nutty 1982, 1985; Goudy 1982; Wasserman 1988; Ross et al 2000; Sampson 1988; Parkes et al 2002). Others use panel data (e.g. Parkes and Kearns 2002; Stovel and Bolan 2004). Smaller scale surveys are conducted with residents in specific locales (e.g. Groves et al 2003; Robinson and Wilkinson 1997), with older people (e.g. Walters 2002a) and with members of different ethnic groups (e.g. Ball-Rokeach et al 2001). One study, Bartik et al (1990) uses econometric modelling to estimate the determinants of residential mobility and their implications for residential attachment.

Eight studies using qualitative methods were examined. They include age related movement such as youth out-migration from the Scottish Borders (Jones 1999) and residential change for older people in New Zealand (Chalmers and Joseph 1998). Two articles consider movement experienced by migrants, including multi-locality connections of Italian immigrants in Britain (Fortier 1999) and central American immigrant families in the United States (Leslie 1992). Scott and Kearns (2000) look at the return migration of Maori to Northland, New Zealand. Other qualitative studies look at neighbourhoods that are dealing effectively with problems (Groves et al 2003); the importance of storytelling in determining belonging to neighbourhoods (Ball-Rokeach et al 2001) and the relationship between place attachment and mobility (Gustafson 2001).

The six commentaries cover idotopy (geographical identification) and idiotope (place identification) (Pascual-de-sans 2001); the concept of home as it relates to mobility (Settles 2001); the role of travel in social networks and social capital (Urry nd); and older people's residential satisfaction (Kahana et al 2003). Shumaker and Stokols (1982) review residential mobility as a social issue and research topic. An interdisciplinary review of recent literature on elderly migration by Walters (2002b) is also included.

2. Defining Community Attachment

Both 'community' and 'attachment' are ambiguous terms that are difficult to operationalise. Nevertheless, they have real salience and everyday meaning for individuals.

Researchers have come up with multiple definitions of community attachment. Community attachment is one of several similar terms that are often used interchangeably to denote some connection with a geographical area and/or people within in. Sixteen of the articles reviewed provide a definition that uses the term community attachment, or a similar term. Those terms include community sentiment, community ties, community belonging, community satisfaction and sense of community.

Some researchers explicitly identify dimensions of attachment. Bolan (1997) distinguishes between attitudinal attachment (comprising evaluation and sentiment), and behavioural attachment (comprising informal interaction and formal participation in the community). Miller (1999) defines three aspects of community attachment: amity (local friendships), sentiment (satisfaction) and involvement in the community. Stinner et al (1990) use three concepts to denote community attachment that are almost identical to Miller's – amity (local friendships), involvement (participation in the community), and sentiment (degree of satisfaction with the community).

Other terms to denote community attachment are:

- Stedman (2002) defines *place attachment* as a bond between people and their environment based on cognition and affect. Gustafson (2001, Young et al (1996), Liao (2004) and Williams et al (nd) also provide definitions of place attachment.
- Sampson (1988) uses the term *collective attachment* to refer to the level of sentiment and attachment to a community.
- Feldman (1990) defines *settlement identity* as "patterns of conscious ideas, feelings, beliefs, preferences, values, goals and behavioural tendencies and skills that relate the identity of a person to a type of settlement, and provide dispositions for future engagement with that type of settlement."

- Robinson and Wilkinson (1997) refer to *cohesion* as a strong sense of community, frequent acts of neighbouring and strong attachment to living in and remaining in the community.
- Buckner (1988) refers to a *psychological sense of community*, a sense of belongingness, fellowship, we-ness and identity that is experienced in a geographical context.
- Bartik et al (1990) offer another dimension to attachment with the term *psychological moving cost*. This refers to the increasing familiarity that households build up with their dwelling, places and people nearby by that creates a cost in moving to another dwelling.

The range of definitions demonstrate several similar elements. Community attachment involves cognitive, affective and relational elements that bind an individual to a place. Common to most definitions are elements of belonging, bonding and interacting in a specific place (e.g. Settles 2001; Liao 2004; Buckner 1988; Cuba et al 1993). Williams et al (nd) specifically include attachment to landscapes in their definition.

3. Units of Analysis

Two units of analysis are considered in reviewing the articles:

- the social unit of analysis (individual, family, household), and
- the settlement unit of analysis.

Social unit of analysis

When considering attachment, a fundamental decision needs to be made about whose attachment will be investigated. Almost all the articles focus on the attachment of the individual to a place, rather than the attachment of the family or household to a place. One article focused on family as well as individual attachment to the community (Settles 2001), and one on household attachment to the community (Bartik et al 1990).

Settlement unit of analysis

Attachment to a range of places or settlements is investigated in the articles. Locales of differing scale, from dwelling, to neighbourhood, community or region can all generate attachment.

Community (generally undefined) is the most common settlement type considered in the articles under review. Attachment to neighbourhood is also commonly researched (e.g. Ross et al 2000; Woolever 1992; Kang and Kwak 2003; Groves et al 2003; Parkes et al 2002). Neighbourhoods are usually but not always defined, e.g. by local government administrative, census, housing or other criteria. The size of neighbourhoods differs greatly from study to study.

Less commonly researched is attachment to dwelling at one end of the residential scale, or region at the other. Seven articles examine attachment to dwelling, home or immediate surroundings (Kearns and Parkes 2002; Parkes and Kearns 2002; Moser et al 2002; Kahana et al 2003; McAuley et al 1985; Liao 2004; Cuba and Hummon 1993). Three articles specifically focus on attachment to a region (Cuba and Hummon 1993; Stedman 2002; Williams et al nd), while Scott and Kearns (2000) examine Maori attachment to and the return to ancestral land.

A scattering of articles deal with attachment to ethnic group in a locality (Fortier 1999) or on-line community (Matei and Ball-Rokeach 2001). Stovel and Bolan (2004) consider attachment to a 'place type', arguing that people move between the same types of residential forms (such as small town or city), rather than specific locations.

Sixteen articles compare attachment to different settlement locales. These include comparison between different neighbourhoods (Groves et al 2003; Ross et al 2000; Buckner 1988), communities (Robinson and Wilkinson 1997; Goudy 1990; Sampson 1988), poor/deprived and other areas (Parkes et al 2002; Kearns and Parkes 2002), settlements in different climates (Longino et al 2002), ethnic community locations (Matei and Ball-Rokeach 2001), new and old immigrant community locations (Ball-Rokeach et al 2001), urban and rural areas (Young et al 1996), urban and provincial or suburban areas (Stinner et al 1990; Fried 1982; Moser et al 2002), and different place-types (Stovel and Bolan 2004).

Individuals may express a sense of identity with and attachment to more than one place (see section 5.1). Moser et al (2002) consider how individuals construct a cognitive and behavioural relationship with the environment at three different levels – their housing, neighbourhood and city. Cuba and Hummon (1993) explore the factors that affect identification with places of different scale.

4. Determinants of Community Attachment

As well as the variety of definitions and terms denoting community attachment, researchers have also identified a wide range of determinants of community attachment. For the purposes of this paper, a **determinant** is a factor that is expected to lead to, influence or cause community attachment.

Distinguishing between determinants, indicators and measures is not always consistent across studies, as one study may focus on a factor as a determinant of attachment, while another study uses the same factor as an indicator of attachment. For example, length of residence has been examined in the literature as both a determinant and indicator of community attachment. The association of attachment to community with length of residence is explored in section 6.

Appendix 1 summarises the references that discuss determinants of community attachment, which can be broadly divided into those based on:

- exogenous, macro-social or contextual factors, and
- factors related to individual socio-demographic characteristics and behaviours.

Exogenous vs individual factors

Numerous studies have debated whether exogenous factors such as population size and density significantly influence an individual's attachment to a neighbourhood or community, or whether other factors relating to the individual's movement history, social interaction and socio-demographic characteristics are more important. This is often referred to as the linear development vs systemic model of community attachment (Goudy 1982 & 1990; Sampson 1988; Wasserman 1982; Stinner et al 1990).

Consideration of exogenous factors as determinants of community attachment is based on the model of societal transformation from 'community' to 'mass society' that argues that attachment is inversely related to size of place, and density and heterogeneity of population. This model is based primarily on the work of Wirth and

others of the Chicago School who studied the impacts of urbanisation on social interaction.

The linear development model of community attachment posits that community size has an independent inverse effect on attachment; i.e. residents of urban areas are expected to be less integrated into and involved in their communities than people in areas with a small population. Primary social ties and the social importance of the local community are assumed to weaken with urbanisation. High-density living, coupled with anonymity and increased social disorder are expected to result in diminished attachment to the community.

Research in the 1980s and 1990s has found less support for the linear development model, instead arguing that the degree of attachment is predicted by individual social characteristics (the systemic model). In particular, length of residence has been found to be a significant influence on community attachment. Significant effects of other individual attributes such as socio-economic status, age, family life-cycle stage, religious status and home ownership have also been posited, although the evidence is mixed (Stinner et al 1990).

Despite the duality of the linear development and systemic models, several authors point out that regardless of individual social characteristics, the conditions of the living environment can affect residents' subjective evaluations about where they live, and consequently their attachment to an area. Stinner et al (1990) found that individual social characteristics had different effects on community attachment. Some effects were dependent on community size, while others were not. They concluded that community attachment should be viewed multi-dimensionally, and that elements of both models are relevant.

4.1 Exogenous factors

The 'types of places' or exogenous factors that have been examined in the literature can be broadly divided into those to do with:

- population
- housing
- crime or social disorder
- amenities, facilities and services
- labour market
- information technology, local communications and media
- natural environment.

Population factors

The population factors identified as determinants of attachment are population size, population density, degree of population heterogeneity, and rapidity of population change. However, the research does not provide a clear conclusion about the significance of population factors as attachment determinants.

Goudy (1982, 1990), in his research in Iowa communities, argued that population size and density relate only weakly to community attachment, as measured by social bonds and local sentiments. He found that length of residence, income and age were more strongly related to bonds and sentiments. It should be noted that Goudy's studies used mainly rural and small town data.

Wasserman's (1988) results differed from some studies using the systemic model of attachment. In his analysis of data from the nationwide Quality of American Life

Survey, Wasserman found that small size of place, not length of time in the community was the statistically significant determinant of community satisfaction. He also found that increased density was significantly related to residents' dissatisfaction with their community.

With regard to population heterogeneity, Wasserman concluded that the racial composition of the community impacted on individuals' satisfaction with their community. However, Woolever (1992) found that a high level of population diversity was not detrimental to attachment.

Housing factors

An extensive range of housing factors have been identified as determinants of community attachment. These include housing density, type, tenure and condition; the housing market and household crowding.

Fried (1982) concluded from a survey of urban and suburban populations in the United States that features of the physical environment, much more so than local social interactions and relationships determined satisfaction with one's place of residence and attachment to the neighbourhood. In this study, two key variables influencing satisfaction were housing quality, and home ownership. Furthermore, Fried makes the point that people of different social classes, ethnic groups and in different urban and suburban settings appeared to value the same things about their residential environments. He suggested that other studies' findings of a positive relationship between high social class and satisfaction is clearly mediated by differential access to better housing stock. Also using United States data, Woolever (1992) found that high housing density was related to dissatisfaction with the neighbourhood and weaker ties of attachment.

Parkes et al (2002), using a survey of English housing, found that people living in high density built forms were one-third more likely to be dissatisfied with their neighbourhood. Using Scottish panel data, Parkes and Kearns (2002) concluded that it is dissatisfaction with home and neighbourhood that is likely to result in movement. In particular, dissatisfaction with house size, more than any other dwelling factor, was found to be a significant predictor of both movement intentions and actual moves. Moser et al's (2002) study of 76 Parisian families suggested that in urban areas, residential satisfaction is the result of a complex interaction between size of dwelling, feelings about the locale and availability of facilities in the neighbourhood.

Ross et al (2000) and Sampson (1988) looked at household crowding as a determinant. Neither identified crowding as a major factor influencing attachment.

Walters (2002a & b) noted features of the housing market, such as the availability of low cost housing, to be factors determining older people's decision about moving. However, he found that destinations with an abundance of low cost housing were not necessarily attractive, although it was suggested that individuals were seeking low cost housing in high housing cost areas.

Crime and social disorder

Studies that deal with crime and social disorder as determinants of attachment consider a wide range of factors. These include aspects of the physical environment and appearance of the neighbourhood that may be associated with crime, safety or nuisance, such as graffiti, abandoned vehicles, presence of empty or dilapidated houses, noise and pollution.

Several of the studies reviewed found that fear of crime and feelings of personal safety are important predictors of neighbourhood satisfaction and appear to influence attachment. Sampson (1988) found that fear of crime depresses attachment. In the Bournville Estate Birmingham, Groves et al (2003) found that the incidence of crime and antisocial behaviour are key factors contributing to residents' satisfaction and the relative success of a residential neighbourhood. Bartik et al (1990) found that mobility declines if the neighbourhood becomes safer from crime or improves its physical conditions.

Parkes et al (2002) found that important factors in predicting residents' satisfaction with their neighbourhood are feeling safe in the home, and a perception of having friendly neighbours. However, Parkes et al also note that other studies have found that perceived safety is less important for neighbourhood satisfaction compared to environmental factors such as noise and sunlight. Parkes and Kearns (2002) found that decreased neighbourhood satisfaction was not only related to disorder, but also to noise, poor access to food stores and recreational areas, and dissatisfaction with house size and condition.

Kearns et al (2002) found that unhappiness with disorder in the immediate surroundings, along with dissatisfaction with the home, significantly increased the likelihood of a move. However, they also noted that people who perceived their neighbourhood to be in decline were also more likely to report being 'stuck' in that location.

Walters (2002b) found five studies in which property crime was a predictor of out-migration in later life and confirmed this with his own analysis of three different retirement groups (amenity seekers, economically disadvantaged and severely disabled). However, Walters (2002a) also found that retirees generally avoid high crime rate areas mainly through movement locally, rather than long-distance migration.

Amenities, facilities and services

A wide range of studies consider access to and satisfaction with amenities, facilities and services as determinants of community attachment. These studies are mostly concerned with satisfaction with:

- leisure, recreation and entertainment
- shopping
- education services
- health services
- employment opportunities
- housing
- transport

Theodori (2001) notes several studies that found a negative association between community satisfaction and desire to migrate. Level of satisfaction with public services and economic opportunity were particularly associated with migration intentions. Bartik et al (1990) found that mobility declines if the neighbourhood improves its schools. Migration upon retirement is often associated with seeking particular amenities or services, such as leisure amenities, housing or health services (Walters 2002a & b).

Filkins et al (nd) noted that the services that seemed to most influence satisfaction with the local community are local government, shopping/restaurants/entertainment,

and education. However, they conjecture that the availability of locally based services is now less important. Commuting and information technology mean that rural dwellers now have more choices of services. They are able to interact, shop and work far beyond their geographical community; therefore satisfaction with local services is not such an important determinant of attachment.

Parkes et al (2002) make a general observation that the significance of access to amenities, facilities and services is little understood, and is open to considerable ambiguity of response. In order to understand the connections between the availability of amenities, facilities and services and community attachment, they advocate for more specific research on the quality of amenities, facilities and services; and identification of which services are most important in particular areas, to whom and why.

Labour market

Some research has given particular emphasis to the influence of labour market factors on attachment. Young et al (1996), Jones (1999) and Filkins et al (nd) noted employment opportunities and conditions as possible determinants of community attachment.

Robinson and Wilkinson (1997) considered the effects of a major labour market event, the loss of a main industry, on community cohesion in several Canadian communities connected to that industry. They found that cohesion differed among the communities, with being unemployed having a powerful effect on cohesion in the smaller communities. This was assumed to be a result of loss of work reducing social interaction in those communities. In the largest community, the loss of a job did not affect cohesion, and was assumed to be related to solidarity felt amongst the unemployed workers. Workers who were laid off and then retired or went on to disability benefits (i.e. were not in the labour force) retained high cohesion with their communities, whereas those defined as unemployed had lower cohesion. Those with low cohesion were more likely to move out.

Information technology, local communications and media

There is a growing literature about the impact of information and communications technologies on attachment to the community. Current research indicates general support for a link between media use and community involvement. Although some have argued that increased television use is a symptom of decreasing social capital, others have argued that those who use media (particularly local media) and communications technologies are attached to and involved in their local communities. As well as supporting local interactions, telecommunications enable people to interact over long distances, and thus support new ways of maintaining attachments (Donovan et al 2002, Urry nd; Gustafson 2001).

Several commentators consider that the internet can be an effective tool for community building. Kavanaugh and Patterson (2001) looked at whether community computer networks in a small town in the United States contribute to community involvement, social capital and residents' quality of life. They suggested that the introduction of community computer networks do not appear to increase involvement in the community, but build on existing social networks. They found that early adopters of information technology were already participating in their communities.

Matei and Ball-Rokeach (2001) looked at the relationship between on-line and off-line ties in seven ethnic communities in the United States. They found that the internet

was used to reinforce pre-existing social ties, and that a higher level of belonging in actual communities translated to a higher propensity to interact online. Donovan et al (2002) also noted evidence that email is supplementing, rather than replacing other forms of communication.

The availability of local communications infrastructure as a determinant of attachment was explored by Ball-Rokeach et al (2001) in old and new immigrant communities in the United States. They contended that storytelling is an essential part of people's paths to belonging, and concluded that a local integrated 'storytelling system' consisting of local media, community organisations and interpersonal discourse helps construct shared values. They found that older migrant areas have more integrated storytelling systems than new migrant areas.

Natural environment

A few of the studies reviewed focus on the natural environment, through consideration of the influence of climate, environmental and landscape features on attraction to or attachment to an area.

Walters (2002a) found that mild winter climate is the most important predictor of the migration of older people seeking amenities. Longino et al's (2002) study of retired people in the Midwest and Florida also found that climate was the major motivating factor in the decisions of both those who decided to remain in the Midwest, and those who migrated to a sunbelt destination. However, it was not necessarily a desire for a warm climate that drove migration, it was also a preference for climate features such as seasonal change and moderate summers that influenced attachment to the northern location.

In looking at older people's residential satisfaction, Kahana et al (2003) considered 'stimulation' or 'peacefulness' of a place. They found that satisfaction with relocating to a place on retirement was affected by people's preferences for city, compared to rural or remote settings.

Stedman's (2002) survey of Wisconsin property owners in a rural tourism and recreational area included consideration of the symbolic meaning of the landscape. Of more importance than meanings related to social relationships with neighbours, were meanings of the place as: escape from civilisation, the real 'up north', environmental quality and a pristine wilderness. He also found that those who identified more with the natural values of the area were more willing to fight against encroachment by development than those who emphasised the community attributes of the place. Williams et al's (1995) survey of residents of Southwestern Virginia also suggests that individuals may express ties to a particular landscape, rather than to a community. In his surveys of 42 urban and suburban municipalities across the United States, Fried (1982) found that one of the strongest predictors of residential satisfaction was ease of access to nature, through available outdoor spaces.

Other exogenous factors

The articles reviewed identify several other exogenous factors that may influence movement decisions and play a part in determining attachment to a place. These include:

- Tax regimes. Specific tax conditions concerning income, property and inheritance taxes may vary across areas (e.g. state to state or country to country) and influence migration, particularly of older people, although the evidence for a link

between tax rates and later-life migration is not especially strong (Walters 2002b).

- Particular cultural and historic attributes of a place. Wasserman's (1988) survey of residents in 36 states included analysis of residents in southern states, in acknowledgement of the unique cultural features of the south. Fortier (1999) considered how the Italian population in London retains its Italian identity by marking out spatial and cultural boundaries with cultural and religious practices. Scott and Kearns (2000) identified the strong pull of links with ancestral land and whanau for Maori.
- Community or neighbourhood residential stability, i.e. the aggregate turnover of residents in an area. This is discussed in more detail in section 6, which looks at research on the relationship between community attachment and residential movement.

4.2 Individual factors

The main groupings of individual factors determining community attachment that are considered in the literature reviewed are:

- individual socio-demographic factors
- life course characteristics
- housing tenure
- length of residence

Individual socio-demographic characteristics

There has been a major focus in the literature on individual socio-demographic characteristics in predicting attachment. These include sex, age, ethnicity, occupation, income, and education. Such variables have been described as 'types of people' predictors of community attachment (Bolan 1997).

Young et al (1996), who looked at the factors driving identification with community, concluded that the main driving factors are individual characteristics, rather than the features of where individuals live. However, several researchers caution that attachment cannot be understood as simply an exercise in matching individual attributes to attitudes or behaviour (Pascual-de-Sans 2001; Woolever 1992; Bolan 1997). Parkes et al 2002 caution that individual demographic variables appear to be less important in understanding and predicting attachment and satisfaction than neighbourhood environmental factors, and satisfaction with housing.

Some of the findings linking particular individual characteristics and attachment are outlined below:

- **Age** was found to be a strong individual predictor of attachment by Sampson (1988) and Young et al (1996). Goudy (1982) and Kahana et al (2003) note age as an important determinant of satisfaction with one's community. Groves et al (2003) concluded that membership of residents and tenants' associations had a highly significant relationship with age (it increased with age). There was also a relationship between membership of other local organisations and age, although the relationship varied according to the type of organisation.
- **Sex and gender.** Some studies suggest that gender mediates place attachment, with women being more likely than men to use the home as a spatial reference point, and more likely to have a developed concept of the neighbourhood (Cuba and Hummon 1993). In contrast, Kahana et al (2003) note studies that negatively correlate femaleness with residential satisfaction.

- **Income.** Socio-demographic factors hypothesised to be associated with higher residential satisfaction include high income, and high social status. Goudy (1990) found that higher income was related to bonds and sentiments, but that this varied from community to community surveyed. Higher income was negatively related to contact with friends and relatives, but an important variable in terms of people known and organisational membership. Kearns and Parkes (2002) found residential dissatisfaction to be notably higher among residents in poor areas.
- **Employment.** Those in work appear to have higher residential satisfaction, although one study of a resource community affected by loss of its industry found community cohesion was higher among those not in employment (Robinson and Wilkinson 1997).
- **Marital status.** Varying results have been found for marital status. Buckner (1988) found no relationship between marital status and sense of community or cohesion. Liao (2004) found that marital status was among several individual characteristics that have a significant, direct association with the propensity to move. Walters (2002b) noted death of a spouse could lead to increased mobility, while Bartik et al (1990) also found that changes in marital status increase mobility. Kahana et al (2003) cited studies that show married status to be negatively correlated with residential satisfaction. Marital status is more usefully considered in the context of the relationship between life cycle and community attachment.
- **Education.** Both low and high education have been found to be associated with residential satisfaction (Parkes et al 2002). Buckner (1988) found that higher education was associated with lower community cohesion, and concluded that further research was needed to understand the reasons for the finding.
- **Religious status.** Stinner et al's (1990) Utah survey found that those involved in religion showed higher levels of community sentiment.

Life course characteristics

Several studies suggest that particular lifecycle stages are important determinants of community attachment (Goudy 1982; Sampson 1988; McAuley and Nutty 1982; 1985; Liao 2004; Shumaker and Stokols 1982). Life course, or life cycle characteristics are closely related to age, marital and familial status.

The relationship of attachment and lifecycle stage appears to be complex. Some researchers have found lifecycle stage to be an important predictor of satisfaction with housing, neighbourhood and community; and that satisfaction is strongly associated with expressed desire to stay or move (McAuley and Nutty 1982, 1985). Individuals at different stages, such as young single adulthood, bearing and rearing children, and post-retirement, are expected to have differing attachments to places. Stovel and Bolan (2004) examine how individuals' movement patterns and attachment to different kinds of places evolve over the life course. Walters (2002b:41) comments that "individuals' place preferences are determined at least partly by their stage in the lifecourse".

The key life cycle stages in the research reviewed are:

- young adults
- family formation and child-rearing
- old age.

Jones (1999) looks at the changing attachment of young people to two communities in Scotland. She observed that some children are socialised into migrating out of the community by their parents, whereas others are socialised into remaining. Stovel and Bolan (2004) note that young people frequently “try out” new types of places before returning to more familiar residential forms. They speculate that “out-and return” trajectories relate to life course transitions such as marriage, family formation or job changes.

With regard to family formation and child-rearing, the presence of school-aged children in the household is assumed to increase ties with a locality (McAuley and Nutty 1985; Sampson 1988).

Some research suggests that both the neighbourhood and one’s own dwelling place become increasingly important foci of identity and social ties for older people (Cuba and Hummon 1993; McAuley and Nutty 1985). However, old age can also be a time of movement, as shown by Chalmers and Joseph’s (1998) observations of old people’s changing needs for accommodation and personal support. Walters (2002b) found that older life circumstances only sometimes lead to moving, with higher mobility rates being associated with decline in health (not simply poor health) and the years immediately following the death of a spouse (not widowhood per se).

Housing tenure

Investment factors, such as home or property ownership have been found in some studies to contribute to community attachment (Bolan 1997; Parkes et al 2002; Theodori 2001; Woolever 1992; Kang and Kwak 2003; Ball-Rokeach et al 2001; Shumaker and Stokols 1982). Stinner et al (1990) noted that home ownership as a determinant of community attachment has been neglected in research, although its positive effects on community involvement and satisfaction have been identified.

Bartik et al (1990) focused on low-income renters in two US cities, and found that, although they did not own their homes, for them the psychological costs of moving were high, i.e. that a substantial component of household moving costs, over and above financial moving costs or changes in rental costs, must be attributed to the household’s attachment to its current dwelling and neighbourhood. Furthermore, Bartik et al noted that households remaining in the same dwelling were less likely to move. They concluded that, if the psychological costs of moving were so important for renters, then they would be even more important for home owners.

Groves et al’s (2003) study considered the importance of housing tenure mix, and concluded that it did not, in itself ensure an integrated or socially cohesive community.

Length of residence

The literature shows that factors related to the individual’s history, patterns and decisions about residential movement are influential in predicting attachment. In particular, length of residence is considered to be a significant predictor of attachment to a community (Goudy 1982; Sampson 1988; Theodori 2001; Young et al 1996). The relationship between community attachment and residential movement is considered in section 6.

5. Indicators and Measures of Community Attachment

Researchers have identified a wide range of indicators and measures of community attachment. For the purposes of this paper:

- An **indicator** describes a key dimension of community attachment, and is used to point to the presence or absence of community attachment.
- A **measure** provides descriptive information on a particular aspect or behaviour relating to community attachment, and how that may change over time.

Three types of indicators and measures of community attachment are discernable in the literature reviewed; these are:

- Indicators and measures related to the attitudes of individuals concerning their views and feelings about where they live.
- Indicators and measures related to the behaviour of individuals; i.e. the interactions and ties they have with others where they live.
- Exogenous indicators and measures of attachment based on aggregate measures. However, most indicators and measures relate to individual attitudes and behaviour, rather than macro-level factors.

Each of those categories of indicators and measures are outlined in this section. Appendix 2 summarises the references relating to indicators and measures.

5.1 Individual indicators and measures

Individual indicators and measures can be divided into two groups. The first group concerns attitudes and focuses on sentiment and perception:

- Place identity
- Satisfaction

The second group of indicators and measures is about action and engagement:

- Participation – involvement in groups and civic participation
- Informal social interaction with friends, relatives, neighbours
- Locus of activity – where the individual carries out everyday activities and uses services and facilities.

This section considers attitudinal and behavioural indicators together, as much of the literature does not distinguish between the two in analysis. A clear exception is Bolan (1997).

This section also considers indicators and measures together, as indicators and measures are often used interchangeably. Furthermore, some measures are used for more than one indicator area. For example, Whorton and Moore (1984) use measures for satisfaction with community that are similar to measures other researchers use for place identity. Other similarities are noted in the measures used for satisfaction relating to services and amenities, and measures relating to locus of activity. Measures for participation and informal social interaction also overlap.

There is no one, accepted set of indicators and measures, although a number of the studies reviewed present comprehensive lists of indicators and measures. These include Bolan (1997); Buckner (1988); Cuba and Hummon (1993); Crew et al (nd); Filkins et al (nd); Goudy (1982); Groves et al (2003); Kang and Kwak (2003); Robinson and Wilkinson (1997); Ross et al (2000); Sense of Community Calgary (2002); Stedman (2002); Theodori (2001); and Whorton and Moore (1984).

In the research reviewed, measures have been constructed using a mix of close-ended questions, open-ended questions, scales and ranking. The areas of measurement, rather than the actual detailed measures, are listed below.

Place identity

Various studies of community attachment examine how locales intimately tie people to place through sentiment and meaning (e.g. Cuba and Hummon 1993; Settles 2001; Stedman 2002; Feldman 1990). Place identity is a bond with a physical place, and can be defined as “an interpretation of self that uses environmental meaning to symbolize or situate identity” (Cuba and Hummon 1993:112).

Identity with place is a fundamental part of understanding community attachment, yet it is not simple to analyse or measure. A feeling of belonging can be expressed in relation to the natural environment, built environment, social relationships in a locality or combination of several of those elements. Studies show that identity with place is shaped by a complex interplay between an individual's interpretations of place, experiences of place, associations with others in the same place, life stage and other personal characteristics.

The question of identity – ‘who am I’ – is answered by an expression of affiliation with place. For example:

- I am from here.
- I belong here.
- I am at home here.
- This place is part of me.

Sometimes identity with place is expressed as a functional attachment where specific activities occur in a place, such as employment, recreation, or access to needed services. Place dependence may also be related to attachment to others who live in the place, such as a partner or carer.

Jones (1999) comments that place identity is not just a matter of individual choice; particularly for incomers it is continually subject to negotiation and the acceptance of others.

There may be negative aspects of place that influence the strength of identity with and attachment to place. A few researchers have explored the idea of stigmatised place, e.g. in relation to public housing, poor neighbourhoods and single-industry towns (e.g. Cuba and Hummon 1993:114). Shumaker and Stokols (1982) refer to ‘negative place dependence’ experienced by people who, because of limited residential options, are forced to remain in a place – and suggest that this inhibits community bonding. However, social relationships within such areas may nevertheless be sustaining and support residents.

Attachment to type of place

Some studies have identified different degrees of attachment to different types of places. Young et al (1996) analysed community identification across different settlement types in English shires and concluded that large numbers of people have no sense of attachment to their neighbourhood, village, district or county. They also noted, that among those who have attachment, it is to the most local level, the neighbourhood or village.

Stovel and Bolan (2004) analysed attachment to nine place-types ranging from rural under 10,000 population to central city large metropolitan 250,000+ population. They found that residential movement is frequently organised in terms of place-types, rather than specific locations. Certain types of place offer specific educational, occupational or social opportunities, and these resources may attract or discourage migrants from other locations. Feldman (1990) also examined attachment to different types of settlements among a large survey of Denver residents, and found that the majority of respondents who identified with a particular type of settlement (e.g. city, suburb, small town, country/mountain) had lived in that location in the past, presently lived there, or planned to live in that type of settlement in the future.

Multiple and changing attachments to place

Identification with place is not necessarily fixed to one locale. More than one place of attachment can exist simultaneously, as a constellation of places connected by links forming a network (Pascual-de-Sans 2001). Cuba and Hummon (1993) suggest that ties to a dwelling play a significant role in establishing a sense of place identity at a broader geographic level such as a region. Individuals can retain meaningful attachments to childhood residences, and places of origin while living elsewhere (Gustafson 2001). Moser et al (2002) suggest that weekend escapes from a metropolis such as Paris to meet friends appears to be necessary for individuals to maintain long-standing and rooted relationships, particularly for those who move relatively frequently within the metropolis. Being on the move has become a way of life for many, and there is a proliferation of global diaspora linked by particular places, labour migration and telecommunications (Urry nd).

Identification with place is not static over time. Woolever (1992) suggests that attachment factors relevant to initial residential choice may change over time, and Cuba and Hummon (1993) also examine how attachment differs over the life course. Walters (2002b) suggests that the need or desire to live with or near adult children (often for informal care and support) is an important catalyst for later-life migration, particularly among older seniors (76 years and older).

Seasonal migration (the experience for some occupations and older people seeking a milder climate), is the subject of some studies. Groups of seasonal migrants are found to differ in terms of the nature and extent of their attachment to locations (Walters 2002b).

Return migration – the return to places of birth or previous places of residence – implies multiple attachments to place. A few studies observe that return migration is especially common among recent retirees seeking former places of residence where they have networks, kin or desired amenities (Walters 2002b; Longino et al 2002). Scott and Kearns (2000), in considering the reasons for Maori return migration, note that bonds to land and whanau precipitate a return, but comment that other key factors affecting attachment, such as employment, the availability of housing and other services may make attachment uncertain.

Place identity measures

Measures related to place identity include:

- Attraction to living in the neighbourhood (Buckner 1988; Robinson and Wilkinson 1997).
- Whether the individual feels at home (Goudy 1982; Cuba and Hummon 1993).

- Whether the individual would be happy or sorry to leave the area (Sampson 1988; Theodori 2001; Bolan 1997; Kavanaugh and Patterson 2001; Goudy 1982; Liao 2004).
- Sense of belonging (Woolever 1992; Williams et al 1995; Buckner 1988; Robinson and Wilkinson 1997; Stedman 2002).
- Identification with a specific settlement type (Feldman 1990).
- Sense of community spirit (Crew et al nd; Buckner 1998; Robinson and Wilkinson 1997).
- Perception of similarity of residents to oneself (Feldman 1990).
- Pride in area (Woolever 1992).
- Loyalty to people in neighbourhood (Buckner 1988; Robinson and Wilkinson 1997).
- Level of commitment to the neighbourhood (Woolever 1992).
- Identification with the welfare of the total community (Woolever 1992).
- Importance of the area to the individual (Stedman 2002).
- Sense of shared values (Crew et al nd).
- Sacrifice for a place (Williams et al 1995).
- Place reflects the type of person the individual is (Stedman 2002).
- Intention to stay in neighbourhood (Buckner 1988; Robinson and Wilkinson 1997).
- Not having a sense of place (Williams et al 1995).
- Negative feelings for a place (Williams et al 1995; Stedman 2002).
- Desire to move out of neighbourhood (Buckner 1988; Robinson and Wilkinson 1997).

Satisfaction

A large body of community satisfaction research explores satisfaction with different levels of residence, ranging from one's dwelling, to neighbourhood, to the wider community. Part of that research throws light on the relationship between satisfaction with one's community and attachment to it.

Studies focusing on how satisfaction contributes to community attachment generally measure satisfaction with:

- Access to and quality of local facilities and services, e.g. health care, education, housing, recreation and leisure, social services, public services, shopping.
- Access to employment and job security.
- Local social ambience, e.g. community spirit, friendliness, quality of local leadership, safety.
- Local physical and environmental characteristics e.g. climate, natural environment, neighbourhood appearance, density of housing, incidence of crime.
- Proximity to friends, family.
- Dwelling.

Several studies suggest a connection between satisfaction with one's community of residence, movement decisions and community cohesion (Filkins et al nd; Miller 1999; Kearns and Parkes 2002; Parkes and Kearns 2002; McAuley et al 1985). However, Liao (2004) points to some studies that found satisfaction with place of residence affects thoughts about mobility, but only has an indirect effect on actual mobility.

The contribution of satisfaction to attachment is complex. Filkins et al (nd) who found that satisfaction with friends, family and religious/spiritual factors appeared to be important determinants of attachment, also commented that those findings may

reflect that people who are more satisfied with social/spiritual dimensions are also more satisfied with other aspects of their lives.

Fried (1982) notes many studies consistently show that people have positive views of their local areas, while at the same time, satisfaction is not unmitigated. People can become habituated to sources of dissatisfaction, accept their residential environment, modify immediate conditions, opt to spend less time where they live, and be selective in their local interactions. All these may help to maximise satisfaction and manage negative aspects of the environment.

Parkes et al (2002) caution that high satisfaction may not actually indicate attachment, but merely a lack of concern about the locality. Lack of concern may be due to individuals adapting to the area, or being able to readily draw on resources outside of the area. They also suggest that residents in different types of areas assess the impacts of neighbourhood factors in different ways that may affect their level of attachment. For example, they found that residents of inner city areas were less concerned about noise and having friendly neighbours than were residents in quieter areas. Other research has shown, that despite people's satisfaction with where they live, they are not necessarily committed to staying (Feldman 1990).

Satisfaction measures

There is no single measure of community satisfaction, nor a consistent set of measures used across different studies. Examples of the diversity of measures used include:

- Theodori (2001) – satisfaction with: the location as a place to raise a family, medical/health services' schools, opportunity to earn an adequate income, senior citizens' programmes, youth programmes, shops, recreation, and physical appearance of the community.
- Goudy (1982) – satisfaction with: residence (dwelling), neighbourhood, community.
- Wasserman (1982) – satisfaction with: roads, public schools, garbage collection, parks, police protection, police-community relations, climate, local taxes, neighbours, community, neighbourhood, liveability of dwelling.
- Kearns and Parkes (2002) – unhappiness with: house condition, disorder, environment, neighbours, access to facilities, closeness to family.
- Parkes and Kearns (2002) – satisfaction with dwelling (size, condition, heating). Satisfaction with neighbourhood. Open-ended question on neighbourhood problems. Perceived ease of access to: shops, doctor, hospital casualty, schools, libraries, public transport, children's play areas, swimming pools. Neighbourhood dislikes: amenity, disorder, noise.
- Parkes et al (2002) – satisfaction with dwelling. Perceived ease of access to: supermarket, post office, corner shop. Problems with: crime, neighbours. Perceived feeling of safety in dwelling. Perceived friendliness of area. Whether there is 'community spirit' in area.
- Whorton and Moore (1984) – concern for crime, availability of jobs, concern for health care, concern for housing, satisfaction with public education, satisfaction with community.
- Filkins et al (nd) – satisfaction with family, friends, religion/spirituality, job, job security, job opportunities, head start programmes, day care services, senior centres, nursing home services, transportation services, local government services, sewage disposal, water disposal, solid waste disposal, retail shopping, restaurants, entertainment.

- McAuley and Nutty (1982) – satisfaction with: job opportunities and security, availability of parks, recreation, entertainment, cultural activities; shopping convenience, neighbourhood character, child rearing amenities, housing appearance, quality of local schools, convenience of medical facilities, quality of local fire, police services, environment (climate, physical characteristics).
- Ross et al (2000) – perceived neighbourhood disorder: graffiti, noise, vandalism, alcohol use in neighbourhood, drug use in neighbourhood, crime in neighbourhood, trouble with neighbours, cleanliness of neighbourhood.
- Groves et al (2003) – satisfaction/problems with flat/house, satisfaction with landlord, satisfaction/problems with the area (including for teenagers, children, older people), worry about crime and feelings of insecurity
- Moser et al (2002) – perception of the population as 'pleasant'.

Participation

Formal membership of local groups and civic participation are explored as indicators of community attachment in some of the studies reviewed. Generally, active participation is seen as indicating attachment. Cuba and Hummon (1993) concluded that participation in the local community is essential for identifying with the community. Groves et al (2003) noted that a key factor in neighbourhoods that work is a positive involvement of residents in neighbourhood management.

Some researchers found that levels of participation and therefore attachment differ from group to group. Kang and Kwak (2003) concluded that the longer a person has lived in the community, the more likely they are to engage in civic activities. They also found that the neighbourhood's aggregate level of residential stability has a significant impact on civic participation, with residents in stable neighbourhoods being more likely to engage in civic activities. However, Crew et al (nd), who looked at leadership and participation in neighbourhood issues in a medium sized city in Michigan, found that shorter-term and younger residents were more interested in participating and taking on a neighbourhood leadership role.

Participation measures

Areas that participation measures focus on include:

- Interest in what happens in the community (Goudy 1982; Theodori 2001; Kang and Kwak 2003).
- Perceived ability to influence local events (Sense of Community Calgary 2002).
- Knowledge of local leadership/local government (Groves et al 2003; Kang and Kwak 2003)
- Use of local media to find out about local issues (Kang and Kwak 2003).
- Interest in taking a leadership position (Crew et al nd).
- Membership of local organisations (Goudy 1982, 1990; Wasserman 1982; Bolan 1997; Kavanaugh and Patterson 2001; Cuba and Hummon 1993; Stinner et al 1990; Groves et al 2003).
- Participation in local organisations or groups engaged in action about local issues (Woolever 1992; Kang and Kwak 2003; Crew et al nd; Sense of Community Calgary 2002; Buckner 1988; Robinson and Wilkinson 1997; McAuley and Nutty 1985).
- Volunteer activity (Cuba and Hummon 1993; Sense of Community Calgary 2002)

Social interaction

Social interaction indicators are concerned with the nature and extent of local contacts with friends, neighbours, relatives and other local social ties. Most of the articles reviewed included social interaction indicators and/or measures. In a few articles, social interaction was the only indicator of community attachment considered.

Social interaction in a local area has been found to be a strong indicator of attachment by a number of researchers including Parkes et al (2002), Theodori (2001), Woolever (1992) and Goudy (1982). Furthermore, some researchers consider social interaction to be associated with other community attachment indicators. For example, Crew et al (nd) commented that active socialising and a strong sense of community predicted organisational participation and leadership. Filkins et al (nd) suggested that friendly, trusting and supportive communities are also seen by residents to be the most satisfying.

In contrast, Leslie's (1992) research on informal support networks among Central American migrant families shows how local social interaction can both enhance and reduce attachment. The study suggests that for some migrant groups, attachment to kin networks can insulate and isolate them from the host society, thus lowering their attachment to the wider community. Those findings showed high levels of contact with kin networks were associated with a lower willingness to use and less knowledge of community services and resources. Fried (1982) argued that local social interaction plays a relatively minor part in explaining attachment to an area, and its effects are limited to those residents who value such relationships.

Another aspect of social interaction was identified by Stinner et al (1990), who commented that friendship networks are dependent on the individual's stage of the family life cycle and size of place they live in. But they also concluded that the extent of local friendship networks depends primarily on length of residence, regardless of size of community. McAuley and Nutty (1982) also note that interest in informal contacts differs across the lifecycle, with the loss of a spouse leading to increased emphasis on friends and relatives for social interaction and support.

Social interaction measures

A wide range of variables used to measure local social interaction are apparent in the literature. A selection of measures in the research reviewed include:

- Frequency of participation in leisure or social activities (Sampson 1988).
- Feelings of loneliness or isolation (Groves et al 2003; Feldman 1990).
- Number or proportion of friends resident locally (Sampson 1988; McAuley and Nutty 1985; Goudy 1982, 1990; Cuba and Hummon 1993; Stinner et al 1990).
- Number or proportion of relatives resident locally (McAuley and Nutty 1985; Goudy 1982).
- Knowing neighbours or residents (Matei and Ball-Rokeach 2001; Ball-Rokeach et al 2001; Bolan 1997; Goudy 1982; Sense of Community Calgary 2002)
- Interaction with neighbours (Woolever 1992; Ball-Rokeach et al 2001; Bolan 1997; Kang and Kwak 2003; Crew et al nd; Buckner 1988; Robinson and Wilkinson 1997; Moser et al 2002; Ross et al 2000).
- Seeking assistance from neighbours (Ball-Rokeach et al 2001; Sense of Community Calgary 2002; Buckner 1988; Robinson and Wilkinson 1997; Ross et al 2000).
- Trust of neighbours (Ross et al 2000).
- Church attendance (Kang and Kwak 2003; Kavanaugh and Patterson 2001; Cuba and Hummon 1993; Stinner et al 1990).

- Use of the internet to communicate with: local family, non-local family, local friends, co-workers, church members, formal social groups, informal social groups (Kavanaugh and Patterson 2001).

Locus of activity

Few of the articles reviewed have emphasised locus of activity as an indicator of attachment. Locus of activity refers to the place where individuals carry out their day-to-day activities, including work, recreation, and shopping. The assumption is that access to and use of local networks, facilities and services play an important role in enabling social interaction and thus indicate attachment to a locale. For example, Miller (1999) suggests a relationship between shopping locally, and consumers' high level of involvement with friends and participation in local organisations.

Locus of activity measures

Locus of activity measures include:

- Miller (1999) – shopping for petrol, groceries, clothing and appliances.
- Cuba and Hummon (1993) – where respondent is most likely to engage in 8 activities: cultural event, visit doctor, attend church, see dentist, buy major home appliance, see attorney, visit best friends, participate in leisure activities.
- Kang and Kwak (2003) – use of local newspapers and television.
- Filkins et al (nd) – rating of schools, health services, transport, environmental services, local government, shopping restaurants, entertainment.
- McAuley and Nutty (1982) – rating of cultural/recreational services and shopping convenience/availability; importance of convenience to medical facilities, convenience to church, convenience to shopping, public transportation, quality of schools, quality of local services.

Exogenous indicators and measures

Exogenous indicators and measures use aggregate data to provide community-level information on attachment. The most common ones used are:

- Residential stability – aggregate data about residents' frequency of movement (e.g. Ross et al 2000; Sampson 1988).
- Crime rates (e.g. Kang and Kwak 2003).
- Housing data such as proportion of public sector housing and home ownership rates (e.g. Groves et al 2003).

6. Community Attachment and Residential Movement

Both an individual's length of residence, and high aggregate levels of residential stability are considered to be significant predictors of attachment to a community. Conversely, lack of attachment is expected to be characteristic of those who move frequently, and communities with low levels of residential stability are expected to find it more difficult to engender attachment, to experience problems and to carry a negative connotation.

A basic assumption in the literature that associates length of residence with attachment, is that the individual's social and emotional ties to a place grow with time, as the place becomes imbued with the meanings of life experiences. In contrast, residential mobility is expected to undermine attachment and identity with place by eroding place-based distinctions and enabling relationships to be established and possibly maintained across a range of places. Individual residential mobility is assumed to be associated with lack of contact with others, lack of

knowledge of neighbours and reduction in civic participation. Sampson (1988) concluded that the largest predictor of an individual's local friendships and social activity is length of residence. Williams et al (1995) found length of residence to be most strongly correlated with community sentiment.

At the aggregate level, a high proportion of mobile residents in a community is expected to harm social capital, characterised by dense networks of social relations and high levels of trust in neighbours. Donovan et al (2002) commented that, in England, most social networks are local, and their existence may act as a brake on mobility. Often community-level residential stability is found to be positively related to locality-based friendships and participation in local social and leisure activities (Sampson 1988). Kang and Kwak (2003) suggested that neighbourhood-level residential stability may have a positive effect on civic participation. Sampson (1988) points out that areas experiencing high mobility may also experience organisational instability, which reduces the opportunities for individuals to participate in local networks.

Despite the strong assumed connection between length of residence and attachment, some research questions this association. Williams et al (1995) suggest that some people become rapidly attached to their communities, and that attachment is related to factors such as conscious choice of residence in a particular place and attachment to the physical environment, rather than solely to length of residence. Bolan (1997) found that new migrants and chronic movers were just as willing as other residents to establish ties to their new place. He suggests that chronic movers can adapt quickly to new environments. Cuba and Hummon (1993) found that frequent residential change may intensify a sense of attachment to one's dwelling, although lead to a lack of feelings of attachment to a wider area.

Examining in more detail an individual's history and patterns of movement show that attachment is not just a simple function of length of time living in an area. Bolan (1997) explores a range of variables associated with movement, and found that specific elements of mobility such as motivations for moving, the forced or voluntary nature of the move, the amount of time taken to find a home, and distance travelled in the move may all affect attachment. Longino et al (2002) noted that prior familiarity with the migration destination and presence of family or friends there increased attachment.

Residential mobility may actually denote attachment to places and people, rather than lack of attachment to a place (Urry nd). Settles (2001) comments that social networks contribute to building attachment to a place by assisting in migration decisions, helping the actual move and in supporting the newcomers in settling. Networks across places facilitate sharing of resources and information, and provide connections to the new area.

Other research shows that long term residents may show low levels of attachment to the places where they live (e.g. Shumaker and Stokols 1982). Jones (1999) found it was not a simple matter of the disaffected leaving and the attached staying. She found many 'stayers' were critical of their community, while many who moved away retained a fondness for the communities they thought of as home.

With regard to aggregate residential stability, Sun et al (2004), in their analysis of the effects of neighbourhood structural characteristics on crime, found that contrary to expectations, neighbourhoods with high population turnover tend to have stronger social ties. Groves et al (2003) noted that low population turnover and ageing of an area can be a problem, as well as an indicator of satisfaction. They found that the

mass movement of younger households into an area after the death of a cohort of older residents could result in tension and polarisation between existing and new tenants.

Ross et al (2000) found neighbourhood-level residential stability to be associated with psychological wellbeing only in economically advantaged neighbourhoods, and noted some evidence that neighbourhood stability in poor neighbourhoods makes individual psychological wellbeing worse. They concluded that residents in poor neighbourhoods experience poverty and distress that can not be alleviated by social ties among long term residents. In fact, social isolation among residents was evident, and some people felt powerless to leave a dangerous place.

7. Concluding Comments

This paper has discussed the wide range of determinants, indicators and measures of community attachment that are evident in this selection of literature.

The determinants of attachment can be broadly divided into those based on exogenous factors, and factors related to individual socio-demographic characteristics and behaviours. There is no clear agreement on what are the most significant determinants of attachment, although several commentators have concluded that community attachment should be viewed multi-dimensionally, with both exogenous and individual factors being important.

Three types of indicators and measures of community attachment are discernable in the literature. These relate to the attitudes and behaviour of individuals and aggregate measures. Most indicators and measures relate to individual attitudes and behaviour, rather than to macro-level factors. There is no one, accepted set of indicators and measures, although several studies present comprehensive indicator instruments.

The relationship between community attachment and residential movement has also been considered. Both individual length of residence and high aggregate levels of residential stability in an area are noted in a variety of studies to be significant predictors of attachment to a community. However, the research has also thrown up disparate and seemingly contradictory results about length of residence and residential stability as determining factors of attachment. This is because different studies have focused on different geographic levels of place, and there has been lack of attention to the possibility of multiple, varying attachments to a range of places.

References

- Ball-Rokeach, S.J., K. Yong-Chan, and S. Matei, (2001) Storytelling Neighborhood: Paths to belonging in Diverse Urban Environments. *Communication Research*, August 2001, 28(4): 392-428.
- Bartik, T.J., J.S. Butler, and J-T. Liu, (1990) Maximum Score Estimates of the Determinants of Residential Mobility: Implications for the Value of Residential Attachment and Neighborhood Amenities. *Upjohn Institute Staff Working Paper 90-01*. www.upjohninst.org/publications/wp/9001.html
- Bolan, M., (1997) The Mobility Experience and Neighborhood Attachment. *Demography*, May 1997, 34(2): 225-237.
- Buckner, J.C., (1988) The Development of an Instrument to Measure Neighbourhood Cohesion. *American Journal of Community Psychology*, 1988, 16(6): 771-791.
- Chalmers, A.I. and A.E. Joseph, (1998) Rural Change and the Elderly in Rural Places: Commentaries from New Zealand. *Journal of Rural Studies*, 1998, 14(2): 155-165.
- Crew, T.B., J.W. Kim and J.H. Schweitzer, (nd) Taking Care of our Neighbourhoods: Exploring the Leadership and Participation in Urban Communities in Lansing, Michigan. www.msu.edu/user/socomm/leader.html
- Cuba, L. and D.M. Hummon, (1993) A Place to Call Home: Identification with Dwelling, Community and Region *The Sociological Quarterly* 1993, 34(1): 111-131.
- Donovan, N., T. Pilch, T. Rubenstein, (2002) *Geographic Mobility*. Performance and Innovation Unit, Cabinet Office, London. July 2002. piu@cabinet-office.x.gsi.gov.uk
- Feldman, R., (1990) Settlement-identity: Psychological bonds with home places in a mobile society. *Environment and Behaviour*, 22(2): 183-229.
- Filkins, R., Allen, J.C., and J.Cordes. Predicting Community Satisfaction among Rural Residents: An Integrative Model. *Journal Series No. 12451, Agricultural Research Division, University of Nebraska, Lincoln*.
<http://cari.unl.edu/ruralpoll/commsat.pdf>
- Fortier, A.M., (1999) Re-Membering Places and the Performance of Belonging(s). *Theory, Culture and Society*, 1999, 16(2): 41-64.
- Fried, M., (1982) Residential Attachment: Sources of Residential and Community Satisfaction. *Journal of Social Issues*, 1982, 38(3): 107-119.
- Goudy, W.J., (1982) Further Consideration of Indicators of Community Attachment. *Social Indicators Research*, 1982, 11: 181-192.
- Goudy, W.J., (1990) Community Attachment in a Rural Region. *Rural Sociology*, 1990, 55(2): 178-198.
- Groves, R., A. Middleton, A. Murie and K. Broughton, (2003) *Neighbourhoods that Work: A Study of the Bournville Estate, Birmingham*. The Policy Press, Bristol.

Gustafson, P, (2001) Roots and Routes: Exploring the Relationship between Place Attachment and Mobility. *Environment and Behavior*, September 2001, 33(5): 667-686.

Jones, G., (1999) 'The Same People in the Same Places?': Socio-spatial identities and migration in youth. *Sociology*, February 1999, 33(1): 1-22.

Kahana, E., L. Lovegreen, B. Kahana and M. Kahana, (2003) Person, Environment and Person-Environment Fit as Influences on Residential Satisfaction of Elders. *Environment and Behavior*, May 2003, 35(3): 434-453.

Kang, N. and N. Kwak, (2003) A Multilevel Approach to Civic Participations: Individual Length of Residence, Neighborhood Residential Stability and their Interactive Effects with Media Use. *Communication Research*, February 2003, 30(1): 80-106.

Kavanaugh, A.L. and S.J. Patterson, (2001) The Impact of Community Computer Networks on Social Capital and Community Involvement. *American Behavioural Scientist*, November 2001, 45(3): 496-509.

Kearns, A. and A. Parkes, (2002) Living in and Leaving Poor Neighbourhood Conditions in England. *CNR Paper No. 8, ESRC Centre for Neighbourhood Research*.

Leslie, L.A., (1992) The Role of Informal Support Networks in the Adjustment of Central American Immigrant Families. *Journal of Community Psychology*, July 1992, 20: 243-256.

Liao, P, (2004) Emotional Attachment, Residential Satisfaction, and Mobility Propensity. *The Journal of Demography*, June: 49-79.

Longino, C.F., A. Perzynski, and E. Stoller, (2002) Pandora's Briefcase: Unpacking the Retirement Migration Decision. *Research on Aging*, January 2002, 34(1): 29-49.

Matei, S. and S.J. Ball-Rokeach, (2001) Real and Virtual Social Ties. *American Behavioral Scientist*, November 2001, 45(3): 530-564.

McAuley, W.J. and C.L. Nutty, (1982) Residential Preference and Moving Behaviour: A Family Life-cycle Analysis. *Journal of Marriage and the Family*, 1982, 44(2): 301-309.

McAuley, W.J. and C.L. Nutty, (1985) Residential Satisfaction, Community Integration and Risk Across the Family Life Cycle. *Journal of Marriage and the Family*, 1982, 47(1): 125-130.

Miller, N.J., (1999) Attracting Customer to Towns. *Reciprocity*, March 1999, No.4, Iowa State University, University Extension.

Moser, G., E. Ratiu, and G. Fleury-Bahi, (2002) Appropriation and Interpersonal Relationships: From Dwelling to City through the Neighborhood. *Environment and Behavior*, January 2002, 34(1): 122-136.

Parkes, A. and A. Kearns, (2002) Residential Perceptions and Housing Mobility in Scotland: an analysis of the longitudinal Scottish Housing Condition Survey 1991-

1996. *2002 CNR Working Paper No.3, ESRC Centre for Neighbourhood Research*.
www.neighbourhoodcentre.org.uk

Parkes, A., A. Kearns, and R. Atkinson, (2002) The Determinants of Neighbourhood Dissatisfaction. *CNR Paper No. 1 January 2002, ESRC Centre for Neighbourhood Research*. www.neighbourhoodcentre.org.uk

Pascual-de-Sans, A., (2001) Sense of Place and Migratory Histories: Idiotype and Idiotope. *Department of Geography, Universitat Autònoma de Barcelona, Spain*, June 2001.

Robinson, D. and D. Wilkinson, (1997) Community Attachment and Labour Market Events: Elliot Lake and the North Shore Communities. *Paper presented at Visions of the North, Voices of the North Conference, Nipissing University, North Bay, Ontario, Canada*. May 23-25, 1997.

Ross, C.E., J.R. Reynolds, and K.J. Geis, (2000) The Contingent meaning of neighbourhood stability for residents' psychological well-being. *American Sociological Review*, August 2000, 65(4): 581-597.

Sampson, R.J., (1988) Local Friendship Ties and Community Attachment in Mass Society: A Multilevel Systemic Model. *American Sociological Review*, October 1988, 53(5): 766-779.

Scott, K. and R. Kearns, (2000) Coming Home: Return Migration by Maori to the Mangakahia Valley, Northland. *New Zealand Population Review*, 2000, vol 26: 21-44.

Sense of Community Calgary. Spring 2002.

Settles, B.H., (2001) Being at Home in a Global Society: A Model for Families' Mobility and Immigration Decisions. *Journal of Comparative Family Studies*, Autumn 2001, 32(4): 627-645.

Shumaker, S.A. and D. Stokols, (1982) Residential Mobility as a Social Issue and Research Topic. *Journal of Social Issues*, 1982, 38(3): 1-19.

Stedman, R.C., (2002) Towards a Social Psychology of Place: Predicting Behaviour from Place-based Cognitions, Attitude and Identity. *Environmental Behaviour*, September 2002, 34(5): 561-581.

Stinner, W.F., M. Van Loon, S-W. Chung, and Y. Byun, (1990) Community Size, Individual Social Position and Community Attachment. *Rural Sociology*, 55(4): 494-521.

Stovel, K. and M. Bolan, (2004) Residential Trajectories: Using Optimal Alignment to Reveal the Structure of Residential Mobility. *Sociological Methods and Research*, May 2004, 32(4): 559-598.

Sun, I., R. Triplett, and R. Gainey, (2004) Neighborhood Characteristics and Crime: A Test of Sampson and Groves' Model of Social Disorganisation *Western Criminology Review*, 5:1, 1 – 16.

Theodori, G.L., (2001) Examining the effects of community satisfaction and attachment on individual well-being *Rural Sociology* December 2001, 66(4): 618-629.

Urry, T., Mobility and Proximity.

www.its.leeds.ac.uk/projects/mobilenetwork/downloads/URRY1stpaper.doc

Walters, W.H., (2002a) Place Characteristics and Later-Life Migration. *Research on Aging*, March 2002, 34(2): 243-277.

Walters, W.H., (2002b) Later-Life Migration in the United States: A Review of Recent Literature. *Journal of Planning Literature*, August 2002, 17(1): 37-66.

Wasserman, I.M., (1982) Size of place in relation to community attachment and satisfaction with community services. *Social Indicators Research*, 1982, 11: 421-436.

Williams, D.R., C.D. Riden, M. Corla and M. Uysal, Community Attachment Regional Identity and Resident Attitudes toward Tourism. *Proceedings of the 26th Annual Travel and Tourism Association Conference Proceedings*, pp.424-428.

Whorton, J.W. and A.B. Moore, (1984) Summative Scales for Measuring Community Satisfaction. *Social Indicators Research*, 1984, 15: 297-307.

Woolever, C., (1992) A Contextual Approach to Neighbourhood Attachment. *Urban Studies*, 1992, 29(1): 99-116.

Young, K., B. Gosschalk, and W. Hatter, (1996) In Search of Community Identity. *York Publishing Services and Joseph Foundation*, 1996.

Appendix 1: Determinants of Community Attachment

DETERMINANTS	REFERENCES
Exogenous Factors	
Population – size, density, degree of heterogeneity, rapidity of population change	Goudy (1982, 1990); Woolever (1992); Wasserman (1988)
Housing – density, type, tenure, condition, housing market, household crowding	Fried (1982); Woolever (1992); Parkers et al (2002); Parkes and Kearns (2002); Moser et al (2002); Ross et al (2000); Sampson (1988); Walters 2002a & b)
Crime, safety, social disorder	Sampson (1988); Bartik et al (1990); Parkes et al (2002); Parkes and Kearns (2002); Kearns et al (2002); Groves et al (2003); Walters (2002a & b)
Amenities, facilities and services	Filkins et al (nd); Parkes et al (2002); Theodori (2001); Bartik et al (1990); Walters (2002a & b)
Labour market	Young et al (1996); Jones (1999); Filkins et al (nd); Robinson and Wilkinson (1997)
Information technology, communications, media	Donovan et al (2002); Urry (nd); Gustafson (2001); Kavanaugh and Patterson (2001); Matei and Ball-Rokeach (2001); Ball-Rokeach et al (2001)
Natural environment	Walters (2002a); Longino et al (2002); Kahana et al (2003); Stedman (2002); Williams et al (1995); Fried (1982)
Tax regimes	Walters 2002b
Cultural and historic	Wasserman (1988); Fortier (1999); Scott and Kearns (2000)
Aggregate residential stability	Donovan et al (2002); Sampson (1988)
Individual Socio-demographic characteristics	
Age	Sampson (1988); Young et al (1996); Goudy (1982); Groves et al (2003); Woolever (1992); Kahana et al (2003)
Gender	Cuba and Hummon (1993); Kahana et al (2003)
Income	Goudy (1990); Kearns and Parkes (2002)
Employment status	Robinson and Wilkinson (1997)
Marital status	Liao (2004); Walters (2002b); Bartik et al (1990); Kahana et al (2003)
Education	Parkes et al (2002); Buckner (1988)
Religious status	Stinner et al (1990)
Life course/life cycle	Goudy (1982); Sampson (1988); McAuley and Nutty (1982, 1985); Liao (2004); Stovel and Bolan (2004); Walters (2002b); Jones (1999); Cuba and Hummon (1993); Chalmers and Joseph (1998); Bolan (1997); Shumaker and Stokols (1982)
Housing tenure	Woolever (1992); Kang and Kwak (2003); Ball-Rokeach et al (2001); Stinner et al (1990); Bartik et al (1990); Bolan (1997); Parkes et al (2002); Theodori (2001); Groves et al (2003); Shumaker and Stokols (1982)
Length of residence	Donovan et al (2002); Kang and Kwak (2003); Goudy (1982); Sampson (1988); Theodori (2001), Bolan (1997); Sun et al (2004); Cuba and Hummon (1993); Jones (1999); Longiono et al (2002); Urry (nd); Seltles (2001); Ross et al (2000); Woolever (1992); Williams et al (1995); Young et al (1996); Groves et al (2003)

Appendix 2: Indicators and Measures of Community Attachment

INDICATORS AND MEASURES	REFERENCES
Place identity	
Attachment to physical place, environment	Goudy (1982); Buckner (1988); Robinson and Wilkinson (1997); Cuba and Hummon (1993); Sampson (1988); Theodori (2001); Bolan (1997); Kavanaugh and Patterson (2001); Liao (2004); Woolever (1992); Williams et al (1995); Stedman (2002); Feldman (1990)
Satisfaction	
Satisfaction with home	Parkes & Kearns (2002); Goudy (1982); Wasserman (1982)
Satisfaction with neighbourhood	Parkes & Kearns (2002), Parkes et al (2002); Groves et al (2003)
Satisfaction with amenities and services	Filkins et al (nd); Theodori (2001); Wasserman (1982); Parkes and Kearns (2002); Parkes et al (2002); McAuley and Nutty (1982)
Satisfaction with job	Filkins et al (nd); Theodori (2001); McAuley and Nutty (1982)
Perceptions of crime and/or safety	Woolever, Sampson, Ross et al (2000); Groves et al (2003); Wasserman (1982); Parkes et al (2002); Whorton and Moore (1984)
Social Participation	
Participation/membership local organisations	Goudy (1982, 1990); Wasserman (1982); Bolan (1997); Kavanaugh and Patterson (2001); Cuba and Hummon (1993); Stinner et al (1990); Groves et al (2003)
Perceived ability to influence local events	Sense of Community Calgary (2002)
Interest in local happenings	Goudy (1982); Theodori (2001); Kang and Kwak (2003)
Participation/leadership in local action	Woolever (1992); Kang and Kwak (2003); Crew et al (nd); Sense of Community Calgary (2002); Buckner (1988); Robinson and Wilkinson (1997); McAuley and Nutty (1985)
Volunteering	Cuba and Hummon (1993); Sense of Community Calgary (2002)
Social interaction	
Interaction with friends, family, neighbours	Bolan (1997), Donovan et al (2002); (Woolever 1992); Ross et al (2000); McAuley & Nutty (1985); Settles; Sampson (1988); Goudy (1982); Cuba and Hummon (1983); Stinner et al (1990); Kang and Kwak (2003); Crew et al (nd); Ball-Rokeach et al (2001); Buckner (1988); Robinson and Wilkinson (1997); Moser et al (2002).
Feelings of loneliness or isolation	Groves et al (2003); Feldman (1990)
Knowing neighbours or residents	Matei and Ball-Rokeach (2001); Ball-Rokeach et al (2001); Bolan (1997); Goudy (1982); Sense of Community Calgary (2002)
Seeking assistance from neighbours	Ball-Rokeach et al (2001); Sense of Community Calgary (2002); Buckner (1988); Robinson and Wilkinson (1997); Ross et al (2000)
Church attendance	Kang and Kwak (2003); Kavanaugh and Patterson (2001); Cuba and Hummon (1993); Stinner et al (1990)
Internet use	Kavanaugh and Patterson (2001)
Locus of activity	
Access/use social/health services	Cuba and Hummon (1993); Filkins et al (nd); McAuley and Nutty (1982)
Access to transport	Filkins et al (nd)
Shopping locally	Miller (1999); Cuba and Hummon (1993); McAuley and Nutty (1982)
Recreation, leisure	Cuba and Hummon (1993); McAuley and Nutty (1982)
E-communication local media	Donovan et al (2002), Kavanaugh and Patterson (2001); Kang and Kwak (2003); Ball-Rokeach et al (2001)
Exogenous indicators and measures	
Residential stability	Ross et al (2000); Sampson (1988)
Crime rates	Kang and Kwak (2003)

