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Supporting encounters and casual social ties in large apartment complexes and their surroundings: The role of people, planning, design and management

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Supporting encounters and casual social ties in large apartment complexes and their surroundings:

The role of people, planning, design and management

Sian Thompson

A thesis in fulfilment of the requirements for the degree of Doctor of Philosophy

UNSW SYDNEY

Faculty of Built Environment

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Driven by policy, demographic and market factors, increasing numbers of people are living in apartment buildings. Especially where populations are heterogeneous and highly mobile, this presents major challenges for social connection, and consequently for social cohesion and individual well-being.

There is a need to better understand how positive social connection might be facilitated amongst apartment residents, and what role building design and management can play. This thesis presents case study research into social relationships in four large apartment complexes and their surroundings in Sydney, Australia, focusing on 'casual social ties' (CSTs). It uses assemblage thinking to consider human and environmental factors involved in CST development, as well as residents' perceived need for CSTs. It draws on in-depth interviews with 63 residents, seven management staff and six local government officers, as well as 202 resident surveys. Shared spaces' affordances and standing patterns of behaviour were analysed through photographic/fieldnote documentation and interviews.

Across all cases, only a third of survey respondents were satisfied with their local social connection. While interviewees often maintained acknowledgement relationships in circulation spaces, these encounters were unlikely to develop into the slightly deeper ties many desired. Notably, few wanted strong community ties, preferring looser CSTs with the potential for favour exchange, enjoyable interaction and a sense of security and belonging, balanced with respect for privacy.

The findings demonstrate that to enable these CSTs, developers, designers, managers and government actors should aim to reduce involuntary residential mobility and barriers to resident-led community-building, welcome children and pets, and carefully design and manage shared spaces. The latter entails providing nearby green spaces, small businesses and low-cost event/activity spaces, as well as flexible, visible, easily-accessible break-out and event space(s) within apartment building(s) or grounds. These should afford meaningful activities and support lingering through appropriate seating, weather protection, privacy and refreshment facilities. Creative management strategies enabling responsible, minimally-restricted use of apartment spaces are also needed. The research improves our understanding of CSTs and their development and points to various opportunities for positive social connection to be supported through both policy and practice.

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1. INTRODUCTION

Increasing numbers of people worldwide are living in apartments (Easthope & Randolph, 2009; Rosen & Walks, 2013; Solonsch & Aikman, 2013), however evidence on the social implications of this shift is mixed. While denser living is argued to be more environmentally and economically sustainable as well as creating accessible, vibrant places to live (Frumkin, Frank, & Jackson, 2004; Grant & Tsenkova, 2012; OECD, 2012), it has also been associated with social exclusion, isolation, reduced equity and low social cohesion (Neuman, 2005; Gifford, 2007; Easthope & Judd, 2010; Quastel, Moos, & Lynch, 2012). More investigation into how social sustainability[1] can be supported in high density, compact cities is warranted, especially in countries such as Australia, Canada, the USA and New Zealand where lower densities have historically been the norm (Dixon & Dupuis, 2003; Randolph, 2006; Rosen & Walks, 2013; Bunker, 2014).

This thesis investigates how we might facilitate the development of 'casual social ties' amongst apartment residents through shared space provision. It focuses specifically on the increasingly common building type of large apartment complexes, where fewer relationships are likely (Gifford, 2007) and consequently where social exclusion and lack of cohesion, community and emergency aid are risks. Casual social ties is my umbrella term for the non-committal, cordial relationships that have been identified by multiple researchers (e.g. Jacobs (1961), Reid (2015), Abu-Ghazzeh (1999)) as useful in high density contexts. Casual social ties (CSTs) do not demand a great investment of time (Granovetter, 1973), making them feasible for time-pressed urbanites, and they can also serve as the basis for stronger relationships, should people want them. They allow privacy, while providing a source of social interaction and aid when needed, as well as facilitating cultural exchange and a feeling of home (Henning & Lieberg, 1996; Thompson, 2015b). Shared spaces, defined in this research as communal areas within complexes and commercial and public spaces in their surroundings, are likely to host encounters between residents. This thesis appraises how CSTs are experienced, testing the proposition (based on the qualities detailed above) that they can positively contribute to social sustainability. Through generating knowledge on CST development in apartment complexes and their surroundings, we can better understand the factors that contribute to comfortable, sustainable social connection in

[1] While social sustainability is debated and construed in multiple ways (Easthope & Judd, 2010; Dempsey, Bramley, Power, & Brown, 2011; Vallance, Perkins, & Dixon, 2011), it is defined here as positive, equitable social relations between people and an associated high quality of life over the short and long term. See section 2.4.1.

apartment complexes, and leverage these to create more successful spaces for high density living.

In this introductory chapter, the increase in apartment living and its accompanying issues are briefly outlined, followed by the research questions and theoretical perspective and methods. It then turns to the contribution of the research to theory and practice and my personal positioning, and finishes with an outline of the thesis structure.

1.1. THE SHIFT TOWARDS APARTMENT LIVING

Compact city policies and increasing urbanisation are leading to swift growth in the number of people living in apartments internationally (OECD, 2012). In lower-density cities, including many in North America and Australia where urban form often developed around automobile use, many new apartment residents will be accustomed to larger, single family dwellings with backyards in suburban areas. For these people, the shift to apartment living involves learning how to live in close proximity to neighbours (Randolph, 2006), and work together to manage and maintain their apartment complex (Teys, 2015).

Australia, and specifically Sydney, the capital of the most populous state (New South Wales), are good examples of the move toward compact city living. Australian cities are traditionally lower density, with a standalone house and large lot/land holding remaining the most common dwelling type. However, apartment living is increasing (Australian Bureau of Statistics, 2017). Sydney is undergoing rapid growth, due in large part to immigration from countries where higher residential densities are more common (Australian Bureau of Statistics, 2015), and apartment-based development is perceived as a key strategy to support this growth in an environmentally sustainable manner (NSW Department of Planning and Environment, 2014).

Between the 2006 and 2016 Australian Censuses, the percentage of people living in apartments of four storeys or more in New South Wales (here defined as ‘large apartment complexes’) increased from 4.40% to 6.78%, with the numbers in Greater Sydney increasing from 6.69% to 10.10% (Australian Bureau of Statistics, 2006, 2016). Three main reasons for this shift can be identified. Firstly, following decades of predominantly low density city expansion at the urban periphery, since the 1980s government planning authorities have increasingly pursued urban consolidation policies and densification, for reasons including assumed improved environmental sustainability, accessibility and efficient infrastructure expenditure in the context of high population growth (Randolph, 2006; Bunker, 2014; Greater Sydney Commission, 2018). Secondly, lifestyle shifts have led to people choosing to live closer to work and leisure options (Fullagar, Pavlidis, Reid, & Lloyd, 2013; Webb & Webber, 2017). Thirdly, the number of smaller households perceived as well-suited to apartment living has increased (Reynolds, Wulff, & Healy,

2004).

The assumptions behind compact city policy have been contested, however, and densification is often met with local opposition (Ruming, 2014; Raynor, Mayere, & Matthews, 2017). The relationship between density, efficiency and sustainability is far from clear (Neuman, 2005) with many other factors involved (Lo, 2016), and Westerink et al. (2013) note there are trade-offs between environmental gains and social sustainability (especially equity). Additionally, developer profits are likely significant drivers, with developers' willingness to invest a key influence on the success of compact city policies in Australia, shaping policy and implementation (Woodcock, Dovey, Wollan, & Robertson, 2011; Bunker, 2014). While lifestyle shifts do play some role in increasing demand for apartment living (Florida, 2002; Howden-Chapman, Hamer-Adams, Randal, Chapman, & Salmon, 2015), the effect of this may not be as significant as expected, with familiarity with dwelling type also influencing residential decisions (Ærø, 2006; Randolph, 2006). Similarly, small households do not always agree with the idea they should live in small dwellings (Reynolds et al., 2004; Randolph, 2006). Large apartment complex development therefore takes place in a particularly contentious policy and development landscape, and it is important to understand how, on the one hand, these complexes can best support individual and societal well-being, and on the other, be desirable places to live (Buys, Vine, & Miller, 2013).

Within this wider goal, this research focuses on social connection (relationships and interaction between people), given that this is commonly poor or superficial in large apartment complexes (Gifford, 2007). To appreciate the challenges involved in creating social connection in this context, it is useful to understand the characteristics of apartment residents in Sydney. In the 2016 Australian Census, over a quarter (27%) of people living in large apartment complexes in Sydney[2] had lived in their current residence for less than one year, compared to 14% in Sydney as a whole. Over half the residents were between 20 and 39 years of age (54%), with fewer children (15% of residents under 20) than in Sydney overall (25%). Additionally, less than a third of Sydney apartment residents were born in Australia (32%), with the majority hailing from overseas including North East Asia (20%), Southern and Central Asia (10%), Europe (9%) and South East Asia (8%). Over half of apartment residents (55%) rented their home, as opposed to 30% in Sydney overall (Australian Bureau of Statistics, 2016).

Taken together, these demographic characteristics suggest that it is likely to be more difficult for

[2] Including private flats, units or apartments in a four or more storey block in any Greater Sydney statistical area (the closest approximation of 'large apartment complex' available with Census data). Issues around defining 'high density' will be discussed in Section 2.1.

apartment residents to form relationships with neighbours. A greater number of years living at a residence is consistently linked to having relationships with neighbours or a sense of community (Buckner, 1988; Skjaeveland, Gärling, & Maeland, 1996; Forrest, La Grange, & Yip, 2002; Farrell, Aubry, & Coulombe, 2004), as has time spent in the neighbourhood, whether due to leisure or walking for transport (French et al., 2014) or being outside the workforce (Henning & Lieberg, 1996; Guest & Wierzbicki, 1999). Residents between 20 and 39 years of age are likely to be in the workforce, and working people are likely to be connected to non-local contacts through mobility and technology (Guest & Wierzbicki, 1999; Gwyther, 2011), as well as challenged for time (or motivation) to connect with neighbours (Reid, 2015).

Children are extremely good catalysts for neighbour relationships (Guest & Wierzbicki, 1999; Grannis, 2009; Williams & Pocock, 2010), but they form a small minority of apartment residents. Perceived homogeneity has a great facilitative effect on social interaction and the formation of relationships (McPherson, Smith-Lovin, & Cook, 2001; Reid, 2015), and high levels of cultural diversity might act against this (although cultural diversity in Sydney is a 'patchwork' across the city, with ethnic communities clustering as well as some areas being highly culturally-diverse (Johnston, Forrest, Manley, & Jones, 2017)). While some residents may be familiar with high density living, many (including Australian-born and overseas-born residents) will be unaccustomed to it, making norms unclear (Teys, 2015).

Renting, as opposed to owning one's home, is also associated with decreased likelihood of knowing one's neighbours (Henning & Lieberg, 1996; Forrest et al., 2002; Farrell et al., 2004), as well as fewer rights around involvement in building decisions with present Australian property title structures (Reid, 2015). Renters may therefore be perceived as being less committed to the neighbourhood and its community, with renting having "a substantial impact on the meaning and perceived stability and quality of a home and its occupants" (Ronald, 2008, p. 51). Apartments have also historically been considered as a temporary housing option before attaining the 'dream' of the house in the suburbs (Randolph, 2006), and this, combined with the attraction of low-maintenance apartments to investors, means apartments in Australia have a high proportion of renting households, as well as potentially high transience and "community instability" (Reid, 2015, p. 438). This is borne out in the Census statistics presented above.

However, given the ease of maintaining connections with a set of friends and family outside the neighbourhood, residents of high-density neighbourhoods may not need or desire local relationships.[3] This theory needs further exploration; while recent research gives it some support

[3] The 'community liberated' argument (Wellman, 1979) or communities of 'taste' rather than 'place' (Snow, Leahy, & Schwab, 1981).

in relation to residents' desires (Reid, 2015; Scanlon, White, & Blanc, 2018), the implications of this for individual and societal well-being should be considered. In 2016, 14% of Sydney's private apartment residents lived alone, and a further 31% lived with only one other person (Australian Bureau of Statistics, 2016). The possibilities for immediate aid and local social interaction are therefore much reduced for these people. Relationships can improve well-being through reducing stress and providing social interaction (Kawachi & Berkman, 2001), and can make resources available to individuals that they would otherwise be unable to access (Granovetter, 1983). They may also be seen as the building blocks of wider communities (Kuo, Sullivan, Coley, & Brunson, 1998), facilitating social cohesion and social sustainability.

Furthermore, a number of academic commentators have argued for the facilitation of cooperation and understanding between groups (Forrest & Kearns, 2001; Sandercock, 2003; Sennett, 2012), and socially-integrated neighbourhoods are likely to better negotiate diversity (Laurence, 2017). Local governments in Australia's largest cities also have policies encouraging local social networks; for example, the City of Sydney Local Government Area Social Sustainability Policy states that "Sydney is a welcoming, socially connected city that embraces diversity. […] People know their neighbours and support each other in times of need" (City of Sydney, 2016a, p. 3).

The building of apartments continues apace, with apartment approvals making up a third of total Australian residential approvals in 2016, and Sydney contributing to over a third of this national total (Rosewall & Shoory, 2017). This situation is mirrored in many other cities in the western world, including Melbourne, London, Vienna, Auckland, Vancouver and Toronto (Dixon & Dupuis, 2003; Lehrer, Keil, & Kipfer, 2010; Giles-Corti, Ryan, & Foster, 2012; Quastel et al., 2012; Forster & Menking, 2016; Scanlon et al., 2018). It is vital we develop these new residential areas with social connection and wider social sustainability in mind; the built and natural environment is an important influence on relationship development (Festinger, Back, & Schachter, 1950; Kuo et al., 1998), and design has long-term effects given the built environment's relative permanence (Barker, 1968; Lofland, 1998). With so many apartments being built, and their residents facing the many potential barriers to social connection outlined, more evidence is urgently needed on how buildings and environments can better support local social connection.

1.2. Aim & Research Questions

The aim of this research is to **generate knowledge about how we might facilitate the development of casual social ties amongst apartment residents through shared space provision.** To address this aim, the thesis investigates the following questions:

In large apartment complexes and their surroundings:

1. How do casual social ties influence the experiences of apartment residents?
2. Where are casual social ties developed and maintained?
3. How do human and built/natural environment factors interact to produce casual social ties?

Question 1 investigates reasons for facilitating casual social ties (CSTs) in high density areas, asking how CSTs positively or negatively influence the experience of living in a large apartment complex. Question 2 focuses on the types of spaces in which CSTs are developed and maintained and analyses the role played by space provision in supporting these processes. Question 3 considers how CSTs are produced by human and environment factors, drawing on theories of assemblage, behaviour settings and affordances to determine how the built environment might facilitate CSTs.

1.3. Theoretical Perspective: Assemblage, Behaviour Settings and Affordances

I use assemblage thinking (Deleuze & Guattari, 1980/1987; McFarlane, 2011a; DeLanda, 2016a; Dovey, 2016) as a framing device for the research. Assemblage thinking considers the world to be made up of nested assemblages of heterogeneous parts, for example a public park that consists (non-exhaustively) of plants and trees, play equipment, written and unwritten rules, children and adults, each of which is an assemblage itself. The park has 'emergent capacities' for play, enjoying nature, socialising and following or breaking rules that are possible due to the interaction of the parts.

The concept of emergent capacities shares similarities with Gibson's (1977) more commonly-used concept of 'affordances' (Maier & Fadel, 2009; Dovey, 2016), which provides a way to consider the level of guidance or constraint provided by the environment. Is behaviour tightly restricted, or are multiple patterns of behaviour possible and accepted? The theory of behaviour settings (Barker, 1968) is useful here, specifically its concept of standing patterns of behaviour. These are patterns of behaviour that are considered 'normal' in a space, for instance saying 'hi' in a residential lift, or not engaging with strangers on a bus.

Bringing these concepts together and applying them to large apartment complexes, a residential complex and its residents may be seen as an assemblage, with the relationships and interactions amongst the residents drawing the assemblage together and making possible 'emergent qualities' such as CSTs, feelings of home, sense of community, social capital and cohesion. Relationships are produced largely through interactions in shared spaces (Kuo et al., 1998; Gehl, 2001; Zhang & Lawson, 2009), so the standing patterns of behaviour in these spaces will have an impact on

the relationships produced. The spaces' affordances will impact on the standing patterns of behaviour.

1.4. Research Approach

This research uses a mixed methods case study approach, with four large apartment complexes and their surroundings ('local area' within ten minutes' walk) examined in the Sydney metropolitan area. Cases were chosen based on their perceived friendliness (despite conditions that make it theoretically more difficult to develop ties: large size; recent development; resident heterogeneity; many renters), as well as their range of shared spaces, in consultation with experts and residents. The following research methods were used:

- A survey targeting all residents of the case study complexes
- Interviews with residents of each complex
- Interviews with managers of each complex
- Documentation of spaces through 360° photos and fieldnotes in order to analyse their affordances and standing patterns of behaviour
- Interviews with local government staff to understand how findings might usefully be applied.

The methods aimed to illuminate preferences and experiences around social interaction and casual social ties in these four apartment complexes (RQ1), the specific role of the built environment (RQ2), and the process through which ties are formed (RQ3). Due to the focus on present experience, the research scope is limited to the complex's period of occupancy, subsequent to developer and designer involvement. It is intended to act in the spirit of post-occupancy evaluation (Zimmerman & Martin, 2001), examining how spaces are used and their influence on CST, rather than how spaces were intended to be used.

1.5. Contribution

Social exclusion and lack of community and cohesion are common concerns in high density environments (Sandercock, 2003; Gifford, 2007; Bramley & Power, 2009; Easthope & Judd, 2010; Lette, 2011; Skaburskis & Nelson, 2014), and research into ways to alleviate these problems is valuable. This research expands theory on relationship development in this context through assemblage thinking, considering the interaction of many different factors and thus increasing understanding of useful interventions. It also scrutinises social connection in a high-density context, increasing understanding of comfortable, sustainable social connection in large apartment complexes and their surroundings, and developing an improved understanding of the value of casual social ties to residents.

Further, the research tests the application of assemblage thinking in conjunction with affordances and standing patterns of behaviour in an empirical study. It also develops methods for engaging with residents of large apartment complexes, which is often challenging (Lette, 2011; Reid, 2015).

Finally, it presents practical insights for the planning, design and management of large apartment complexes and their surroundings, aiming to have an impact on densifying cities through informing regulations and professional practice. New apartment complexes and their surroundings may be developed with these planning, design and management factors in mind, and existing complexes improved.

1.6. Personal Positioning

When conducting qualitative research, it is important to be aware of one's own positioning with regard to the research (Berger, 2015). As Berger (2015) and Walter (2010) advise, I kept a log of my fieldwork activities and analysis decisions, including reflection on how my positioning might influence participants and my own thinking.

I identify as a *Pākehā*/New Zealand European woman, and come from a country known for its friendliness, which may give me a particularly friendly idea of 'appropriate' neighbourly interactions. Like many who participated in this research, I am an immigrant to Australia, however Australian and New Zealand cultures are very similar and I am rarely perceived as 'foreign' on first impression. I grew up in a city with an overseas-born population of 39% (including people born in the UK, China, India and the Pacific Islands), and spent two years living in London, and a further five in Sydney, both highly culturally-diverse cities. In London, I worked as a draughtsperson on apartment buildings, at the same time as settling into a new country and dealing with unexpected cultural differences, which helped to shape some of the impetus for this research.

In the later stages of the project, including analysis and write-up, I rented an apartment with a flatmate on the second floor of a tall apartment building within a larger, transport-oriented mixed-use development. This incorporated ground floor retail (largely restaurants and beauty) and resident-accessible spaces including a pool, gym, community room and rooftop barbecue area, though the carpark, lobby, lifts and corridors were the only shared spaces specific to my building. All these factors gave me both an inside and outside perspective when talking to participants and considering findings.

1.7. Thesis Structure

To provide necessary context for the research, Chapter 2 begins with an overview of historical perspectives on relationships and community in cities, and considers current policies encouraging

apartment living, focusing particularly on Australia. It then discusses the concept of 'casual social ties' before considering the value of social relationships, first in general terms and then in the context of large apartment complexes, before arguing for the importance of studying CSTs. Chapter 3 then considers how relationships are developed, covering the process of relationship formation and the factors that may facilitate relationships or act as catalysts for them. This discussion centres around findings in large apartment complexes, with support from wider literature on relationship development, and is followed by a consideration of current design guidelines for apartment buildings in Australia as well as notable international examples.

Chapter 4 discusses the theories of behaviour settings (Barker, 1968), affordances (Gibson, 1977) and assemblage thinking (Deleuze & Guattari, 1980/1987; McFarlane, 2011a; DeLanda, 2016a; Dovey, 2016), reflecting upon how these may aid in investigating social behaviour in large apartment complexes. The use of these to frame the research is explained and the conceptual framework is presented. Chapter 5 then details and justifies the methods used to investigate the research questions, and gives an account of the research process.

Chapters 6, 7, 8 and 9 present findings from each of my case study apartment complexes, while Chapter 10 presents statistical findings from the survey. Chapter 11 synthesises the findings, presenting a model of an apartment complex socio-material assemblage and considering human and environment factors contributing to CST development in light of relevant literature. Chapter 12 discusses key concepts arising in the findings, while Chapter 13 succinctly answers the research questions, considers practical and theoretical implications, and concludes the thesis.

2. Social Relationships in Contemporary Cities

The challenge of supporting social sustainability for people living at high density is complex. What does social sustainability look like, and what goals may we aim for in seeking to attain it? Related positively-viewed concepts such as social cohesion, sense of community and social capital may not be purely positive for the people involved, especially when associated with divisions between groups (Young, 1990; Forrest & Kearns, 2001). People may also be concerned with privacy regulation, given the number of people they come into contact with every day (Jacobs, 1961; Westin, 1967; Abu-Ghazzeh, 1999), rather than developing a sense of community or social cohesion.

This chapter discusses the history of thought around relationships in cities, followed by a consideration of present trends towards apartment living. It then presents the concept of casual social ties (CSTs) and reviews research and commentary on the benefits and drawbacks of social relationships more widely to assess what goals might be beneficial and feasible to support social sustainability.

2.1. Cities and Community

From the later years of the nineteenth century, commentators noted that relationships in industrialised cities were more impersonal than those in rural areas. Durkheim (1897/1952) believed that the greater number of encounters with strangers reduced community solidarity, while Tönnies (1887) characterised urban life as a *Gesellschaft* society, with few intimate connections and more contractual relations between people. Wirth (1938) and others of the Chicago school were influential in disseminating this view, and recently Putnam (1995) in the USA, and Leigh (2010) and Mackay (2014) in Australia have illustrated and examined apparent declines in social capital and community solidarity in urban areas. However, the extent to which these have declined in cities is debatable.

Schiefloe (1990, p. 93) argues that ideas around community decline in the early years of the twentieth century were “more rooted in rural romanticism and nostalgia than in empirical facts”. Similarly, Forrest and Kearns (2001, p. 2126) observe that most generations of commentators believe “the social cement of a previous era is crumbling”. Despite claims of declining social capital (Putnam, 1995; Leigh, 2010), Arneil (2006) demonstrates that some social outcomes have improved, such as respect for difference and greater empowerment for minorities and women. A number of studies have found that high population density is associated with reduced psychological sense of community (Wilson & Baldassare, 1996; Pendola & Gen, 2008; French et al., 2014), however ‘high density’ can be experienced very differently depending on built form

(low-rise, high land coverage or high-rise, low land coverage) and household size (Dovey, 2016). This wide range of differences in definitions and forms of urban 'density', make arguments about density's effects unclear (Westerink et al., 2013; Dovey, 2016). Traditional forms of dense development such as Beijing hutongs, Persian baraha or Gans's (1962) 'urban villages' often have high levels of social cohesion (Yang, 2013; Alahmed, Alaghbari, Ibrahim, & Salim, 2014), and in some contexts high rise, 'radiant city' development (following Le Corbusier) has proven successful (Ginsberg & Churchman, 1985; Forster & Menking, 2016) while in others it has failed (Bristol, 1991; Gifford, 2007).

The situation is therefore likely to be much more complex than a simple decrease in community in dense urban areas, with "culture, life cycle and social group" each having an effect on whether an individual is embedded within a community, and the strength of the community itself (Forrest & Kearns, 2001, p. 2125). The search for urban community has also tended to focus on strong social relations within a neighbourhood, and when few were found, researchers concluded that community did not exist in an urban context (Schiefloe, 1990). Even later theories around 'lost', 'saved' and 'liberated' community (Wellman, 1979) focused on strong social ties (Schiefloe, 1990; Wellman, 1996). In actuality, the far greater number of people in urban neighbourhoods, combined with time pressures from work and commuting, mean that most relationships need to be of this more impersonal, *Gesellschaft* type in order to protect privacy and time. Once scope is widened to include these relationships, many relationships are found in urbanites' local areas (Henning & Lieberg, 1996; Wellman, 1996; Grannis, 2009). Close relationships still exist for the great majority of people, however they are often maintained across longer distances due to telecommunications and efficient mobility (Podobnik, 2002; Kusenbach, 2008).

More socialising with a chosen group means that less time is available to socialise with people in one's neighbourhood (Glaeser & Sacerdote, 2000; Grannis, 2009). Several studies have found that contemporary urbanites socialise more often outside the neighbourhood than within it (Putnam, 1995; Guest & Wierzbicki, 1999; Forrest et al., 2002; Easthope, McNamara, & Thompson, 2014; van den Berg, Kemperman, & Timmermans, 2014), and Putnam (1995, p. 76), while arguing that social capital is declining, also asks if social capital might in fact be "neither created nor destroyed, merely redistributed".

2.2. Compact City and Social Sustainability Policies

The question of social connection in dense cities is particularly worthy of attention in the light of current urban policy and development trends. Over the past few decades, cities around the world have increasingly adopted densification policies promoting "dense and proximate development patterns, built-up areas linked by public transport systems, and accessibility to local services and

jobs" (OECD, 2012, p. 19). These policies are variously termed 'compact city', 'urban consolidation' or 'smart growth', and the argued benefits include a reduced environmental footprint, greater economic productivity, reversed inner city decline, more vibrant, walkable neighbourhoods, more affordable housing and healthier communities (Katz, Scully, & Bressi, 1994; Dieleman & Wegener, 2004; Frumkin et al., 2004; Grant & Tsenkova, 2012; OECD, 2012).

However, debate about the actual impacts of compact city policies has been ever-present (Troy, 1996; Burton, 2000; Neuman, 2005; Quastel et al., 2012; Westerink et al., 2013), with social aspects a particular concern (Burton, 2003; Randolph, 2006; Westerink et al., 2013). Raman (2010) notes that advocates of compact city policy assume this urban form will lead to better quality of life, however dense living can mean reduced privacy, social problems and associated stress, as well as reduced neighbourhood social integration (Mitrany, 2005; Gifford, 2007; Foord, 2010; Raman, 2010; Giles-Corti et al., 2012). Densification has also been associated with increasing housing prices and gentrification (Lehrer & Wieditz, 2009; Woodcock et al., 2011; Quastel et al., 2012), leading to increasing inequality (Bunker et al., 2017). Furthermore, apartments are often perceived as only transitional accommodation, and consequently apartment residents may lack attachment to the area (Randolph, 2006).

Lack of recognition of social impacts by planners and developers may contribute to poor outcomes, resulting in poor perceptions of high density areas; Randolph (2006, p. 475) argues that the implementation of compact city policies has included "little explicit recognition or understanding by planners of both the social context in which this form of housing is delivered, or of its likely social outcomes." Ziller (2004) notes that 'community' is often treated in a mechanistic way by planners, who assume that the provision of lively main streets will automatically produce community – a key assumption behind the argued social benefits of the compact city. As Chapter 3 will show, the relationship between social connection and the built environment is more complex. A focus on profit and minimisation of government expenditure may also contribute to poor social outcomes, with exchange value becoming more important than use value (Burton, 2000; Quastel et al., 2012; Bunker et al., 2017). As Bunker et al. (2017, p. 396) note, "little of what is currently produced through high density urban renewal is affordable for local populations", driving them to less-well serviced or connected areas and increasing concentrations of disadvantage. Local retail and services may also be geared towards a gentrified, affluent market, with everyday necessities lacking or unaffordable, while public infrastructure such as public transport may be insufficient for the number of residents (Crommelin, Easthope, & Troy, 2017).

More recently, there has been greater practitioner and policy-maker engagement with social sustainability alongside densification goals (e.g. Woodcraft, Bacon, Caistor-Arendar, & Hackett,

2012; Mirvac Group, 2015; City of Melbourne, 2016; City of Sydney, 2016a; Property Council of Australia, 2018; The Happy City, n.d.). Governments in Australia's two largest cities have developed specific social sustainability and resilience strategies reflecting this. The Resilient Melbourne strategy for Greater Melbourne (City of Melbourne, 2016, p. 39) states an objective of "empower[ing] communities to take active responsibility for their own and each other's wellbeing, safety and health" and the City of Sydney Local Government Area[4] Social Sustainability Policy states that "people know their neighbours and support each other in times of need" (City of Sydney, 2016a, p. 3).

Translating these aims into reality in high density areas is challenging, however. In a Melbourne-based community survey covering apartment residents, other community members and industry stakeholders, more than a quarter of survey respondents pinpointed lack of a strong sense of community as something they disliked about apartment living (DELWP Victoria, 2015), and many studies have noted little social connection in apartment complexes (Foth & Hearn, 2007; Zhang & Lawson, 2009; Buys et al., 2013; Reid, 2015). Social connection is not necessarily precluded in apartment complexes (Ginsberg & Churchman, 1985), and Howley (2009) and Buys et al. (2013) argue that liveable, socially sustainable forms of compact city living are possible with the right conditions. However, more understanding is needed around how to support social sustainability in these areas (Ziller, 2004; Vallance, Perkins, & Moore, 2005; Reid, 2015).

2.3. Types of Relationships

As noted in Chapter 1, relationships are the building blocks of community, social cohesion and social sustainability (Kuo et al., 1998). There are many different types of relationship, however, and this section first considers the definition of a relationship, before turning to a discussion of CSTs.

2.3.1. What are Relationships?

A relationship is a connection between two people based on social interaction of some kind. There is an enormous variety of possible connections, however. Can two strangers passing in the street be said to have a relationship, because they have cooperated to avoid a collision (Lofland's (1998) 'cooperative motility'), or is this solely an interaction? Is a warm exchange between a shopkeeper and a customer a relationship, even if this is the only interaction they will share in their lives?

A common basic division of relationships in sociology is between the primary ties of family and

[4] City of Sydney has the highest population density in Australia (8380 people/km^2) (Australian Bureau of Statistics, 2016)

friends, and secondary ties of wider associates and acquaintances. There have been many iterations of this idea, including the concepts of *Gemeinschaft* and *Gesellschaft* that may be characterised as personal relationships and instrumental relationships (Tönnies, 1887), Cooley's (1909) primary and secondary relationships, and Mackay's (2014) herds and tribes.

Lofland (1998) argues that the overarching classification of relationships as primary and secondary, with accompanying associations of warmth and cool civility, masks the full range of relationships that occur in everyday life. People may have short-term, emotionally-infused "quasi-primary" relationships such as that described above between the shopkeeper and customer (term coined by Stone (1954)), or long-term "intimate-secondary" relationships where people share little personal information but enjoy feelings of belonging (term coined by Wireman (1984)). Similarly, Spencer and Pahl (2006) found a wide variety of relationship types in their study of 'friends' regarded as 'important' by sixty participants, dividing relationships into different groups based upon the types of connection and support the participants gained. These relationships might include one or more of socialising, exchanging help or information, sharing a common activity, providing emotional support or sharing personal information, with stronger relationships providing more types of connection and support. Milgram (1977) spoke of 'familiar strangers' known only by sight, or by their membership in a known group.

Whatever the terms used, it is clear that two people may be socially connected in diverse ways, and that many different larger groups are formed through these connections. I adopt a broad view of relationships in this thesis, including fleeting interactions with a shop assistant or passer-by, given that these can contribute to a feeling of home (see subsection 2.3.5), secondary relationships as well as primary relationships with family or friends.

2.3.2. Casual Social Ties

This research focuses specifically on 'casual social ties' (CSTs), which is used as an umbrella term to denote non-primary relationships including Granovetter's (1973) 'weak ties' and Lofland's (1998) intimate-secondary relationships. Apartment residents likely maintain strong relationships outside their local area (Forrest et al., 2002; Easthope et al., 2014), leaving little time to form strong relationships within the area. CSTs may therefore be more practical than stronger ties in large apartment complexes and their surroundings, and a number of authors have argued that these types of relationships are suitable in high-density residential areas (Jacobs, 1961; Ozaki & Schram, 2011; Reid, 2015).

A neologism ('casual social ties') has been used for several reasons. First, it avoids emphasising any particular conceptualisation of these secondary-type relationships, given the wide range of

authors who have dealt with these relationships under a variety of names (or, sometimes, without labelling them at all). Second, 'casual social ties' has fewer connotations than 'secondary ties' or (especially) 'weak ties' (Granovetter, 1973), making it more suitable for direct use with participants who may be uncomfortable with implying these relationships are unimportant. Third, the words 'casual' and 'tie' suggest the looseness and potential transience of the relationship, while (it is hoped) avoiding negative connotations.

This section examines the history of investigation into CSTs, relating Granovetter's (1973) conceptualisation of 'weak ties' to other examples where researchers have noted the importance of weak relationships. Where a specific author's conceptualisation is discussed, that author's term is used, while 'CSTs' is used in other cases.

Until the 1970s, research on relationships tended to focus on close relationships at the small group level or widely-held values and norms at the societal level, with little attention paid to how these values and norms were passed from one small group to another (Granovetter, 1973). Granovetter (1973) proposed the concept of 'weak ties' to connect the two, reasoning that groups were likely to be connected by previously overlooked weak ties, and values, norms and ideas were disseminated through these ties to generate a more cohesive society.

Granovetter argues that "the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (Granovetter, 1973, p. 1361). Weak ties, therefore, are relationships with little time and emotional commitment, and low levels of favour exchange (Granovetter, 1973; Henning & Lieberg, 1996). Their value, according to Granovetter, lies in their ability to connect heterogeneous people, and so different groups, as strong ties are more likely to be formed between people who believe they are similar (Granovetter, 1973; McPherson et al., 2001). This ability to connect groups facilitates information exchange between the groups ('bridging ties'), which can aid in such activities as finding jobs, as well as the promotion of cooperation, trust and understanding in wider society (Granovetter, 1973). Weak ties are "indispensable to individuals' opportunities and to their integration into communities" (Granovetter, 1973, p. 1378).

CSTs have often been overlooked, however. Several authors have noted that the sociological division between primary and secondary relationships is accompanied by a greater focus and moral value placed upon close primary ties (Granovetter, 1973; Lofland, 1998; Sennett, 2012). The concern in the first half of the twentieth century over the loss of *Gemeinschaft* and its replacement by *Gesellschaft* can be understood as the result of under-estimating the importance of CSTs, as well as focusing too closely on geographical community while overlooking the potential of cities to enable ties across distances. This "primacy of the primary relationship"

(Lofland, 1998, p. 60) is argued to have consequences for integration into society (Sennett, 2012), with people unwilling to maintain relationships outside the bounds of primary ties, and increasing unfamiliarity and fearfulness of interactions with strangers (Lofland, 1998).

Despite this tendency, a number of researchers have recognised the utility of CSTs in neighbourhoods and other contexts. Jacobs (1961) spoke of the loose networks of relationships between residents and workers in her study of neighbourhood in Greenwich Village, stressing the importance of maintaining privacy as well as a convivial, helpful atmosphere. CSTs at their best strike a balance between having help and everyday interaction available, without intruding too much on peoples' lives (Jacobs, 1961; Abu-Ghazzeh, 1999). They allow residents to maintain relationships with a wide range of people who might provide help (Granovetter, 1983; Adler & Kwon, 2002; Grannis, 2009), and facilitate a moderate level of social cohesion (Granovetter, 1973; Forrest & Kearns, 2001). CSTs are also particularly relevant in high density urban areas because the local area relationships in modern cities may often be relatively weak (Henning & Lieberg, 1996), with strong ties maintained over greater distances (Schiefloe, 1990; Guest & Wierzbicki, 1999). CSTs can also form the basis for stronger ties, if people feel they have a sufficient number of things in common with each other, and time enough to develop the relationship (McPherson et al., 2001; Cattell, Dines, Gesler, & Curtis, 2008; Grannis, 2009; Thompson, 2015b). Table 2.1 provides an overview of authors who have studied CSTs, with descriptions of the relationship.

Table 2.1: Examples of Casual Social Ties identified by various authors

Author	Name of Relationship	Description
Jacobs (1961)	Limited relationships or relationships on familiar public terms	Knowing people "without unwelcome entanglements, without boredom, necessity for excuses, explanations, fears of giving offense, embarrassments respecting impositions or commitments, and all such paraphernalia of obligations which can accompany less limited relationships" (Jacobs, 1961, p. 62)
Granovetter (1973) and (1983)	Weak ties	Low emotional intensity and confiding, few favours exchanged and little time spent on relationship
	Absent ties	Relationships with only recognition and acknowledgement, or no interaction/relationship
Henning and Lieberg (1996)	Helping ties	Favours exchanged
	Greeting ties	Relationships where people have extended conversations about e.g. work or children

Author	Name of Relationship	Description
	Acknowledge ties	Recognition and acknowledgement e.g. hello, nodding
Lofland (1998)	Quasi-primary relationships	Emotion-infused exchanges between biographical strangers (term from Stone, 1954)
	Intimate-secondary relationships	Long-term, friendly relationships with regularly-seen people, but with little exchange of personal information or arranged socialising (term from Wireman, 1984)
Gehl (2001)	Low-intensity contacts	Incidental contact covering passive contact (seeing/hearing others), greetings and growing into stronger forms of contact
Spencer and Pahl (2006)	Fun friends	Purely for socialising
	Useful contacts	Exchanging help or information
	Associates	Sharing a common activity, no further association
	Favour friends	May be called upon for favours
Abu-Ghazzeh (1999)	Non-committal contacts	Neighbouring relations that do not demand much commitment from their participants
Grannis (2009)	Stage 4 neighbouring relations	People believe they share values and norms and trust each other to e.g. take each other's children to school
	Stage 3 neighbouring relations	People initiate interaction with each other
	Stage 2 neighbouring relations	People recognise each other and may choose to interact or not ('passive contact')
	Stage 1 neighbouring relations	People live in the same area and cross paths ('geographic availability'), though these are here regarded as precursors to CSTs, rather than full-fledged ties
Hawkins and Ryan (2013)	Place friends	"a person that you only know within a specific location who creates a stronger bond with you the more time you spend interacting with them within that location" (Hawkins & Ryan, 2013, p. 199), but with whom you do not interact extensively outside the location
Blokland and Nast (2014)	Public familiarity/ absent ties	Social space constructed through greeting known others and engaging in conversations with strangers

Author	Name of Relationship	Description
Reid (2015)	Civil, casual relationships/ surface-level social interactions	Privacy respected, but assistance provided when necessary, "social courtesy and brief acknowledgement" (Reid, 2015, p. 442)
Wood et al. (2015)	Acquaintances	Weak neighbourhood relationships

2.4. The Value of Relationships

While CSTs have been understudied, much has been written on the value of relationships in general. This section details evidence on the benefits and disadvantages of relationships, with specific reference to CSTs where work has been undertaken. It begins by considering value from a group and societal perspective, covering 'community', social sustainability, social capital and social cohesion, outcomes that are commonly used as policy goals (Forrest & Kearns, 2001; Bramley & Power, 2009; UN Environment Management Group, 2012). It then turns to the value of relationships from the perspective of individuals (well-being, loneliness, psychological sense of community, identity, home and place, and privacy).

2.4.1. Group and Societal Perspectives

'Community': A Group of People and a Buzzword

'Community' may refer to a particular network of people based around specific interests and goals, a common history, ethnicity or cultural background, or attachment to a particular place (Ziller, 2004). While in the past the formation of a community implied face-to-face interaction (Young, 1990), the definition of a community has expanded to recognise that modern communities can exist across the internet, linked by virtual interaction (Foth & Sanders, 2005; Jeffres, Bracken, Jian, & Casey, 2009). 'Community' can also be used to imply a psychological sense of community both at an individual level (discussed in section 2.4.2) and at a group level (Sarason, 1974).

The idea of community is often invoked in policy documentation (NSW Department of Planning and Environment, 2015; City of Sydney, 2016b; Lloyd, Fullagar, & Reid, 2016), developers' sales literature (Maller & Nicholls, 2014) and in the term applied to density-opposing 'community interest/action groups' (Ruming, Houston, & Amati, 2012). While place-based conceptions of community are prevalent in these quarters, as covered in section 2.1 much contemporary community is based around shared interests rather than place (Wellman, 1979; Ziller, 2004). Motivations behind the pursuit of 'community' may be complicated, with competing interests

between the state, local government, developers, local interest groups and individuals. Even without considering motivations behind the use of 'community', the term is complex; Talen (2000, p. 172) notes that it may be "easily misinterpreted and misapplied". Sorting through these motivations is necessary to fully understand the reasoning and possible consequences (intended or unintended) of pursuing 'community'.

Sennett (2012) discusses the different perspectives on community and cooperation among political traditions. Tracing these back to the origins of the Left in the nineteenth century, he notes that the political left stressed community as conformity, displaying a united front to achieve political ends, while the social left focused on a bottom-up approach, trying to achieve micro-level change through local solidarity. The political Left denied individuality for the sake of the larger cause, while the social Left had difficulty with large-scale application of its ideas, relying as it did on smaller, grass-roots organisations. More recently, modern conservatism (in the UK) and new conservatism (in the US) approach the concept of community from the social Right, a tradition drawing from de Tocqueville's observations of life in nineteenth century small-town America, with its high rates of volunteering and civic association. Modern/new conservatives believe in "the virtues of local life, the poor in communities being supported by volunteers rather than by welfare-state bureaucrats" (Sennett p.250), what Forrest and Kearns (2001) link to the 'Third Way' ideology of the United Kingdom's Blair government. The assumption of this focus on community is that people are better able to provide for themselves than governments, and that we should aim to create successful, self-sufficient local communities rather than having the state control resource use at a higher level. Lack of trust in traditional institutions also becomes less of a problem, if support is provided by grass-roots groups where people may interact with leaders, and so build trust through these personal relationships.

However Sennett (2012) warns that, in the context of a more globalised world, governments stepping back and assuming people are best able to help themselves could lead to greater gaps between rich and poor at both a local and global scale. Forrest and Kearns (2001) argue that the political agenda in the UK has contributed to a focus on strengthening community networks, as a way to shift responsibility for the everyday welfare of people away from the government and reduce expenditure, a position more recently confirmed by the Localism Act 2011 (Bentley & Pugalis, 2013). In Australia, a similar trend is apparent in the campaign for social capital (see subsection 2.2.3), with state and federal governments seeking to increase social capital in communities in order for them to help themselves (Hugman & Sotiri, 2001). This can compound inequalities, with poorer communities having fewer resources to support and develop themselves. Relying on 'community' or 'social capital' to replace state involvement may therefore exacerbate

deprivation for communities with limited local resources.[5]

The political motivations behind community may also extend to assimilation and negation of difference, and at the same time an exclusion of those who do not assimilate (Sandercock, 2003). Young (1990) warns against placing too much emphasis on the concept of community, stressing that any construction of a community implies an othering of those outside the defined community. It also downplays and negates differences, preferring to see "unity over difference, immediacy over mediation, sympathy over recognition of the limits of one's understanding of others from their point of view" (Young, 1990, p. 300) which does not hold up well in the face of everyday negotiations of difference. It can also be used (arguably disingenuously) as a way to sell residential developments, though the promised sense of community may not eventuate (Talen, 1999; Buys, Godber, Summerville, & Barnett, 2007; Reid, 2015).

In summary, though it is normally viewed as positive, there are a wide range of associations and motivations behind the idea of community, and it is important to carefully consider what outcomes are desired. 'Community' is an amorphous concept, however, and the related more specific concepts of social cohesion and social capital are often used alongside or in place of it, as well as the more equity-oriented social sustainability. The following sections discuss these concepts.

Social Sustainability

The 1987 *Our Common Future* report by the UN World Commission on Environment and Development identified 'sustainable development' as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p. 41). The report underlined the connections between economic, environmental and social sustainability (and their associated trade-offs), leading to much discussion around how sustainability can be conceptualised and increased, though here environmental (and economic) sustainability are most often the focus (Dempsey et al., 2011; Vallance et al., 2011).

Recently, social sustainability has become a popular topic in business and policy agendas (e.g. UN Environment Management Group, 2012; Mirvac Group, 2015; City of Sydney, 2016a) with the 'triple bottom line' (TBL) approach bringing attention to environmental and social contributions in business. However, Norman and MacDonald (2004, p. 256) remark that the TBL is better seen as "Good Old-fashioned Single Bottom Line plus Vague Commitments to Social

[5] It is interesting to note that apartment complexes are often multi-owned properties, with the resident committee of a complex acting as an additional tier of (hyper-local) government (Reid, Lloyd, O'Brien, & Guilding, 2017).

and Environmental Concerns".

Clarification of exactly what is meant by 'social sustainability' is therefore needed, but the definition is debated (Easthope & Judd, 2010; Dempsey et al., 2011; Vallance et al., 2011). Research and practice often focus on aspects specific to a particular context rather than a broader conceptual framework (Cuthill, 2010), and several authors have aimed to rectify this. Dempsey et al. (2011) identify social equity and sustainability of community ("the continued viability, health and functioning of 'society' itself as a collective entity" (2011, p. 297)) as two dimensions of social sustainability, noting that overlapping concepts include "social cohesion, social inclusion and social exclusion" (Dempsey et al., 2011, p. 290). Cuthill (2010) advances four dimensions: social justice and equity, social infrastructure, engaged governance and social capital. In a review of sustainable development literature, Vallance et al. (2011) note authors may link social sustainability to behaviour change to support environmental sustainability, to protecting and preserving particular ways of life,[6] and to the provision of basic needs plus the "'higher-order' needs" equity, justice and social capital (Vallance et al., 2011, p. 343).

Understood as equity and sustainability of community, social sustainability has been associated with quality of life, social justice, safety, lower residential turnover, sense of community and belonging, environmental quality and accessibility (Bramley & Power, 2009; Dempsey et al., 2011). Supporting social sustainability may be seen as contributing to the "current and future livability and health of communities" (Barron & Gauntlet, 2002), where social sustainability implies continued equitable, positive relations between people and a high quality of life, while allowing for change.

This thesis focuses on sustainability of community, as defined by Dempsey et al. (2011, p. 297): "viability, health and functioning" of society over the long term, including the well-being of its individual members. Yiftachel and Hedgcock's early (1993) definition of urban social sustainability as "the continuing ability of a city to function as a long-term, viable setting for human interaction, communication and cultural development" is also useful here, with its emphasis on communication, process and change. If we are to pursue compact city policy, how do we make high density residential environments that are socially viable (and desirable) to live in, now and in the future?

Social Capital

Social capital makes a regular appearance as a policy goal in government documents (for example,

[6] This can be especially problematic, at once encompassing support for the survival of cultures and conservative resistance to potentially-positive change (Godschalk, 2004; Vallance et al., 2011).

City of Sydney (2016a), Department of Environment (2014)), which Hugman and Sotiri (2001) suggest may be due to its enabling of discussion of social ties' benefits alongside economic concerns. The concept can be seen as both a group-level, networked-resources phenomenon, as conceptualised by European commentators such as Bourdieu (1986), and as an individual-level phenomenon of trust and shared values, as conceptualised by American commentators including Putnam (1995), Coleman (1988) and Arneil (2006). For ease of discussion, I have included it here under group-level concepts, noting the common emphasis on wider societal benefits that is associated with its use.

Social capital has been variously conceptualised as "the aggregate of the actual or potential resources which are linked to […] membership in a group" (Bourdieu, 1986, p. 21), trust, information flow and norms (Coleman, 1988), "the sum of relationships and networks that make for a flourishing society" (Hugman & Sotiri, 2001, p. 7), a dimension of social sustainability (Cuthill, 2010), and "generalised reciprocity … shared interests, a common identity, and a commitment to the common good" (Adler & Kwon, 2002, p. 25).

The origins of the concept can be traced to Alexis de Tocqueville who noted the importance of civic association to American democracy, an early conceptualisation of social capital that focuses on its role in the functioning of wider society (Putnam, 1995). Jacobs (1961) described the networks of relationships in a thriving city neighbourhood as the neighbourhood's social capital, linking social capital not just to more structured institutional associations but to the everyday relationships maintained in a neighbourhood.

Putnam's (1995) assertion of the decline of social capital, based on declining civic association, was influential in focusing academic interest on social capital. An Australian study by social scientist and politician Leigh (2010), following Putnam's lead, found decreases in social capital in some domains, including informal socialising, and argues that we should be "bringing back some of the sense of community and camaraderie of the past" (Leigh, 2010, p. 9). As previously noted, trusting in social capital without regard for resources possessed by people in a group can lead to misguided policies, however (DeFilippis, 2001; Forrest & Kearns, 2001). DeFilippis (2001) observes a contradiction between advocating for increased social capital in poor areas to address social issues, and people in affluent areas being in many cases disconnected from their local area.

Adler and Kwon (2002) suggest that an individual's social capital is based upon three components – opportunity, motivation and ability – any one of which will result in a lack of social capital if absent. People must have ties to call on (opportunity), their contacts must be willing to offer help (motivation, which increases with the strength of the relationship), and contacts must be able to

offer the required help or resources (ability).[7] This model has particular relevance to CSTs in that, while associated with reduced motivation, they can be maintained in much greater numbers (Granovetter, 1973), explaining their effectiveness at providing access to many resources compared to strong ties, which have high motivation but are likely to be few in number.

Social Cohesion

Social cohesion is closely intertwined with social capital (Buys et al., 2007) and may be seen as a source or a consequence of social capital. It is founded on regular social interaction and relationships between people in wider society (Forrest & Kearns, 2001; Easthope & McNamara, 2013), with highly cohesive groups having close relationships between their members and members having positive attitudes and behaviour towards the group (Friedkin, 2004). Granovetter (1973, p. 1376) argues that the more ties between people in different groups, "the more cohesive the community and the more capable of acting in concert" to achieve common goals. Buys et al. (2007, p. 288) characterise social cohesion as "social glue" generated by the trust and reciprocity inherent in neighbourhood social networks, while Eicher and Kawachi (2011) associate social cohesion with feelings of safety. Highly cohesive groups tend to have lower turnover of members, and greater influence over each other's behaviour and attitudes (Friedkin, 2004; Eicher & Kawachi, 2011) as well as better quality of life (Kavanaugh, Reese, Carroll, & Rosson, 2005).

Investment in the group promotes cohesion, as do shared hardships such as disasters or shared successes (Chang, 2010; Fominaya, 2010). Potential threats to social cohesion are differences in wealth or social status, as inequalities can increase resentment amongst different groups (Kawachi & Kennedy, 1997). Even relatively small differences when both groups are disadvantaged can lead to tensions; Valentine (2008), interviewing people in deprived areas of the UK, found that people perceived "economic and social injustices" in favour of minority groups (2008, p. 327) and often held strong prejudices, which reduces the likelihood of different groups perceiving a common purpose. DeLanda (2016a) notes that, under conditions of stress, cultural or religious groups are likely to more heavily police their members' behaviour, leading to greater divisions between groups while cohesion within the group increases.

Much like 'community', social cohesion is therefore not always positive, with highly cohesive groups likely to maintain an 'us and them' mentality, constructing their identity through their differences to others (Young, 1990; Forrest & Kearns, 2001; Podobnik, 2002; Grannis, 2009) and

[7] Granovetter (1973) argues that lack of ties to influential people prevented Gans's (1962) close-knit, working class Boston community from saving their 'slum' neighbourhood. In comparison, the more mixed-class community in Jacobs' (1961) Greenwich Village successfully resisted a large motorway project, a success that Jacobs attributes in part to the weak connections residents had with people of influence.

potentially distancing from wider society (Sherif & Sherif, 1964; Cialdini & Goldstein, 2004). A strongly cohesive community by definition implies an out-group, with members increasing the salience of their inter-group differences while downplaying inter-group similarities to maintain the group's identity. It is important, then, to look not just at social cohesion at the smaller group scale, but at the wider societal scale, and take advantage of relationships that bridge different groups and allow for flows of norms and values.

Strong ties tend to result in network closure, as people are more likely to make strong relationships with those they perceive as similar to themselves (McPherson et al., 2001). Granovetter (1983) argues that weak ties facilitate societal cohesion through connecting different groups and exposing people to different tastes and traditions. Values and norms can be passed from one group to another, creating a set of society-wide tenets that smooths interaction between people.

2.4.2. Individuals' Perspective

Now I turn to the more direct benefits (and costs) a person might experience as a result of their relationships. The section first covers physical and psychological well-being, before considering loneliness, psychological sense of community, the effect of relationships on identity, the part played by relationships in forming a sense of home and place attachment, and privacy considerations.

WELL-BEING

Connection to others a fundamental human need (Maslow, 1943), whether through one-on-one interaction or wider identification with a group (Lin, Ye, & Ensel, 1999; Sennett, 2012). Relationships are generally accepted to have an overall positive effect on psychological and physical well-being (Kawachi & Berkman, 2001), reducing stress by providing potential help (the stress-buffering model) or more directly through social influence or positive feelings generated by social interaction (the main effect model) (Cohen & Wills, 1985; Kawachi & Berkman, 2001). Social influence can encourage people to engage in physically-healthier behaviours through example or pressure, though it can also encourage unhealthy behaviours, depending on the habits of the people in an individual's network (Kawachi & Berkman, 2001).

Relationships with the wider community provide a sense of belonging, purpose, security and self-worth (Granovetter, 1983; Kawachi & Berkman, 2001), while having relationships with neighbours and believing they are trustworthy is positively related to better physical health (Eicher & Kawachi, 2011). Having a wide variety of relationships of different strengths and with different associated purposes can aid in integrating a person into wider society, as well as provide them with a diversity of avenues of social and material support (Oldenburg, 1999; Cohen, 2004;

Spencer & Pahl, 2006). Lesser social participation and lack of social networks predict cognitive decline in the elderly, and have also been associated with increased mortality during heat waves (Klinenberg, 1999; Vandentorren et al., 2006; Bouchama et al., 2007). CSTs in a neighbourhood enable easy access to help, which decreases anxiety (Kawachi & Berkman, 2001; Thompson, 2015b). They are also useful for gathering information (Farrell et al., 2004; Wood et al., 2015). While this help is generally positive, Völker and Flap (2001) discuss the role of CSTs in access to the black market in Soviet East Germany, where these ties enabled people to get needed food and goods, but increased stress due to being unsure if your contact might betray you to the authorities.

Relationships may be costly to maintain (Kawachi & Berkman, 2001; Adler & Kwon, 2002), and if the benefits do not outweigh the costs of maintenance (for example, time and increased obligations), the relationship can have a negative effect on overall well-being. For groups, resources may be disproportionately depleted if some members access resources but do not contribute their share, leading to a 'tragedy of the commons' (Hardin, 1968). Identification with the ideologies and expressed morality of the group can be key in preventing this (Turner, 2014).

Importantly, low reported social support does not mean an individual needs or wants a greater level of support (Kawachi & Berkman, 2001; Foth & Sanders, 2005). Some people may be relatively self-sufficient and prefer a low level of social interaction, while others desire a greater amount. Similarly, effective regulation of privacy is an important precursor to satisfying social relationships (Farrell et al., 2004; Williams, 2005; Raman, 2010), a subject that will be discussed later in this section.

Loneliness

The effect of social relationships on well-being can also be understood in terms of how a *lack* of relationships affects individuals. Loneliness, defined by Hawkley and Cacioppo (2010, p. 218) as "a distressing feeling that accompanies the perception that one's social needs are not being met by the quantity or especially the quality of one's social relationships", has been linked to a wide range of health problems, and may contribute to mortality risk on par with, or exceeding, smoking and obesity (Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015). Loneliness is primarily related to quality of relationships, rather than quantity; people can perceive themselves as isolated yet have an objectively high number of primary and secondary relationships (Hawkley & Cacioppo, 2010; Franklin, 2012). To make matters more complicated, extreme loneliness can also lead to avoidance of social contact and increased anxiety in social situations (Hawkley & Cacioppo, 2010), in which case the remedy involves interacting with others more than is comfortable.

Living alone can increase the chances of feeling lonely (Franklin & Tranter, 2011; Baker, 2012). In one Australian study, 40% of single-person households considered loneliness to be a serious problem, and 37.5% of these households experienced loneliness at least once a week, far higher than those living with between one and three other people (14.2%-15.8%) (Franklin & Tranter, 2011). Tenure also has an impact, with renters reporting higher rates of loneliness than those who own their dwellings (Franklin & Tranter, 2011; Baker, 2012).

The availability of noncommittal interaction is essential to many people (Abu-Ghazzeh, 1999; Oldenburg, 1999), and Abu-Ghazzeh (1999, p. 44) notes CSTs provide an "easily-available source of companionship". It is unclear how far CSTs can go in assuaging loneliness, however, given the link between loneliness and relationship quality. Bauman (2000) criticises similar kinds of non-binding, flexible relationships, linking them to increased loneliness and a reluctance to form binding relationships in modern individualist societies. However, he is largely critiquing their replacement of primary relationships, and the question of how much CSTs can address loneliness remains.

Psychological Sense of Community

Relationships also support psychological sense of community, described by Sarason (1974, p. 1) as "the sense that one [is] part of a readily supportive network of relationships upon which one [can] depend". Psychological sense of community, or simply 'sense of community', may be seen as the feeling produced by belonging to a 'community', and can be compared to the "stress-buffering model" related above (Cohen & Wills, 1985). Sense of community is also closely aligned with social cohesion. Buckner (1988), in relation to his oft-used Neighbourhood Cohesion Index, argues that sense of community is an individual's experience of social cohesion.

Sense of community is related to interactions one has with other residents (Talen, 1999), which can be linked to the amount of time spent out walking in a neighbourhood (Wood, Frank, & Giles-Corti, 2010; French et al., 2014; Reid, 2015). Time living in a neighbourhood is also a factor in facilitating sense of community and transience is likely to inhibit its formation, with sense of community found to be positively related to years spent in the neighbourhood in several studies (Buckner, 1988; Robinson & Wilkinson, 1995; Skjaeveland et al., 1996; French et al., 2014). Density has also been implicated, with residents of high density neighbourhoods often reporting low sense of community, even when factors such as years of residence and presence of children are controlled for (Wilson & Baldassare, 1996; Pendola & Gen, 2008; French et al., 2014). However, several authors including Jacobs (1961), Gans (1962), Cho and Lee (2011), Forrest et al. (2002) and proponents of the New Urbanist movement (Katz et al., 1994; Duany, Plater-Zyberk, & Speck, 2000) argue that residents living at high density can have a strong sense of

community if the fabric and programming of the built environment support it.

Sense of community is a commonly-used goal in government policy, which Pretty, Bishop, Fisher, and Sonn (2007, p. 13) attribute to its association with volunteering, communal efficacy, "responsibility and concern for social justice". While noting that a way to increase sense of community in neighbourhoods "remains an elusive goal" (Farrell et al., 2004, p. 22), Farrell and colleagues find that neighbouring behaviour (exchanging different forms of support including borrowing items and asking advice) between residents was significantly related to sense of community, while Prezza, Pacilli, Barbaranelli, and Zampatti (2009) found neighbouring behaviour to be the strongest predictor of sense of community.

Identity

Relationships also play an important role in identity construction, through guiding our affiliations to larger groups and our associated self-categorisation, as well as the way we are viewed by others (Hornsey, 2008). Forrest and Kearns (2001, p. 2130) note that local neighbourhoods are "important as a source of social identity", while relationships with the wider community provide people with a sense of belonging and identity (Granovetter, 1983; Kawachi & Berkman, 2001; Hornsey, 2008). It is unclear, however, how true this is for residents of high density neighbourhoods (Scanlon et al., 2018). Social interaction also provides a way for people to enact group ideologies, solidifying their identification with the group (Turner, 2014).

Perceived identity of oneself and others can greatly impact one's interactions with people. Even arbitrary, experimentally-assigned membership in a group can have an effect on preferential or discriminatory treatment of others based on group membership (Hornsey, 2008). Adler and Kwon (2002) note the relationship between a common identity and generalised reciprocity – we are more likely to help those we regard as belonging to our own group and sharing our social identity. In an apartment complex, residents may perceive themselves as having a common identity, encouraging reciprocity. Conversely, where there are diverse residents groups (tenure, ethnicity, language, age), a common identity may be less recognised. More generally, people asserting and validating their identity as members of minorities can lead to divisions along identity lines, reducing social capital and social cohesion (Young, 1990; Arneil, 2006).

Home and Place

Several studies have observed the importance of a friendly, 'homey' atmosphere where people greet each other in a neighbourhood (Henning & Lieberg, 1996; Abu-Ghazzeh, 1999; Thompson, 2015b). Even simple recognition can contribute to this; Cattell et al. (2008) found that familiar faces and a "continuity of casual encounters over time" support well-being, particularly when

people are time-pressed, while participants in Kennedy and Buys' (2010) study valued seeing familiar faces and knowing shopkeepers.

But what is home, exactly? Easthope (2004, p. 135135) notes that homes "can be understood as 'places' that hold considerable social, psychological and emotive meaning for individuals and for groups". While home can mean a place of safety and withdrawal from the world (Tuan, 1971; Després, 1991), it can also be about "processes of establishing connections with others and creating a sense of order and belonging as *part of* rather than *separate from* society" (Blunt & Dowling, 2006, p. 14, emphasis in original).

Home in the sense of belonging is related to the concept of neighbourhood place attachment, where people feel a meaningful connection to the neighbourhood. Neighbourhood place attachment is related to the strength and number of relationships maintained there, as well as feelings of security and residential satisfaction (Lewicka, 2011). Abu-Ghazzeh (1999) associates psychological comfort and belonging with neighbourhood relationships and research by Howley (2009) indicates that people who speak to their neighbours are less likely to plan to move away.[8] Rosenbaum (2006) and Oldenburg (1999) develop this idea of home at the neighbourhood level by characterising neighbourhood spaces where people regularly gather for a relaxed chat as homes away from home ('third places').

Privacy

Neighbours who live in close proximity "are in a continuing position of potential violation", due to the possibility of encroaching on each other's space intentionally or unintentionally (Abu-Ghazzeh, 1999, p. 44). Henning and Lieberg (1996) suggest that CSTs, rather than stronger ties, arise in these contexts as a way to regulate privacy. Similarly, Jacobs (1961, p. 58) believed that "privacy is precious in cities", and that simple 'fixes' such as pulling blinds do not constitute privacy – additionally, there must be a mutual respect between neighbours around letting each live their own lives. In my previous research a participant explained this eloquently when they remarked about a CST, "it was a good relationship, because we kept our distance" (Thompson, 2015b, p. 130).

Schiefloe (1990) notes that one reason for guarding privacy and maintaining only CSTs in a neighbourhood is to protect one's other obligations and ensure enough time is spent on these. Different people will of course have different desired levels of privacy, and for some even very weak ties may be unwelcome. Kennedy and Buys (2010, p. 6) found some apartment residents

[8] Though this is a correlation and each factor likely influences the other.

"avoided social contact completely if possible", while others desired "simple 'hello' relationship with their neighbours yet did not want to feel pressure or obligation to talk". They noted that for some (but not all) people, living closely together increased the need for privacy. There were similar findings in a study of five neighbourhoods in Norway, where 61% of respondents desired "relatively weak, but friendly neighbourhood relations", 23% thought one should only say hello to neighbours and 3% did not want any contact (Schiefloe (1982), reported in Schiefloe (1990, p. 98)). The ability to regulate one's own level of privacy according to one's needs at a specific time is therefore important (Farrell et al., 2004).

2.4.3. Summary

Social relationships are associated with social sustainability, social capital, social cohesion and community at a group level, all of which are contested concepts due to their wide, varied use or potential negative effects. Care must be taken, therefore, when using these concepts, and the meaning and implications behind associated aims should be considered. At an individual level, social relationships can be linked to increased well-being, reduced loneliness, sense of identity, home and place and a psychological sense of community, however they can also be associated with stress and reduced privacy. CSTs, being relationships that theoretically balance the positive aspects of relationships with privacy, may overcome some of these difficulties. In the following section, the value of local CSTs for residents of large apartment complexes will be discussed in light of this.

2.5. Casual Social Ties in Large Apartment Complexes: Why Local CSTs?

In modern well-serviced cities, it is easier than ever before to sustain relationships across large geographical areas. Technology allows us to communicate with our contacts at relatively little cost, while transport enables in-person meetings (Podobnik, 2002; Kusenbach, 2008; Gwyther, 2011). It is possible to have a great number of social relationships without knowing anyone in your local residential area, meaning that Schiefloe (1990) may be right in saying that, while few strong relationships are apparent at a local level in urban areas, "only a small minority [of people] are isolated and lonely" (Schiefloe, 1990, p. 96). What reasons, then, are there to focus on relationships in a local area?

2.5.1. The Easy-Access Argument

Even if people maintain relationships across wide distances, the benefits provided by social interaction, including positive feelings around social integration and a sense of belonging

(Kawachi & Berkman, 2001), are more easily accessed if social interaction is facilitated in one's local neighbourhood. Regular social interaction, whether to talk over problems, hear novel perspectives or exchange information, can help one integrate into society and reduce stress (Oldenburg, 1999), and regular interaction is easiest to maintain if contacts are seen in the course of one's routine. Cattell et al. (2008) found that both "fleeting and more meaningful encounters" were beneficial in a regenerating neighbourhood, because they could provide "relief from daily routines, sustenance for people's sense of community, and alleviate tensions at home or in a neighbourhood." Similarly, Abu-Ghazzeh (1999, p. 62) speaks of a "peoplescape" aspect to neighbourhoods, from which people can derive psychological comfort and "informal peer-group reinforcement", and argues that involvement in your local community means you feel you are surrounded by people you can trust. Furthermore, communications technology and mobility are not equally available to all (Forrest & Kearns, 2001; Gwyther, 2011). People who are less mobile, through age, ability or financial resources, may rely more heavily on their local communities (Forrest & Kearns, 2001; Grannis, 2009; Gwyther, 2009; Williams & Pocock, 2010).

Even if help is available from people outside the neighbourhood, the neighbourhood itself may not be resilient in times of stress (Buys et al., 2007). There may be times when a neighbourhood is cut off from external help (Godschalk, 2003), or the type of help is so small it is not worth the effort to gain help from someone outside the area (Grannis, 2009). For those more vulnerable, such as the elderly, relationships with neighbours can reduce the possibility of being overlooked in emergency events (Klinenberg, 1999; Bouchama et al., 2007).

In a more general sense, local areas may also be important for "processes which supposedly shape social identity and life-chances" (Forrest & Kearns, 2001, p. 2125) through providing social capital, as well as comfort and security (Forrest & Kearns, 2001, p. 2129). Local areas provide the space in which children are likely to spend the majority of their time, and accordingly form the most relationships, many of which will survive into adulthood and have an effect on norms and values (Grannis, 2009).

2.5.2. The Cosmopolitan and Cooperation Argument

The greater difficulty of forming relationships between heterogeneous people is well-documented (Snow et al., 1981; McPherson et al., 2001; Farida, 2013), and it follows that more diverse populations such as those in many of Australia's high density areas (Solonsch & Aikman, 2013) will experience greater difficulties in developing community and social cohesion. At its worst, this could mean intergroup tensions and violence (Forrest & Kearns, 2001), or more mildly, a reduced ability to work together (Adler & Kwon, 2002), which is important for maintaining and managing apartment complexes (Borisova, Polishchuk, & Peresetsky, 2014; Teys, 2015; Liu,

Easthope, Ho, & Buckle, 2018). How, then, can we encourage positive connections across diverse social and cultural groups in high density areas?

Cosmopolitanism and civility arise from negotiation and recognition of difference as meaningful and accepted (Lofland, 1998; Sandercock, 2003; Sennett, 2012; Mackay, 2014; Sennett, 2018). Mackay (2014, p. 33) believes that people should interact with those different from themselves, asking "if we were only to connect with people we like or who share our interests, that might be comfortable for us, but how healthy is it for the continuing development of the noblest human values, like tolerance, patience, compassion, kindness and respect?"

Similarly, Sennett (2012) speaks of dialectic conversation, where one truth must be reached, and dialogic conversation, where the goal is to better understand oneself and one's conversation partner. Sennett stresses that dialogic conversation, "taking an interest in others, on their own terms" (Sennett, 2012, p. 278), is key to working effectively with varied others and growing from the interaction, enabling us to see many sides and interpretations of one issue. This is particularly pertinent to cities with many migrants; Sandercock (2003) argues that a functioning multicultural society must emerge not from an espousal of the values and practices of a host culture and a requirement for 'guests' to adapt to these, but from a continuing equitable dialogue between multiple cultures about the values and practices that are helpful (or not). It is only through dialogue and continual reflection, along with a commitment to creating the political community of the country, that different cultures can negotiate a common living space.

These insights are not restricted solely to culture-as-ethnicity, but apply more generally to differences between genders, sexualities, political ideologies, socio-economic statuses and others. Approaches to social capital rooted in trust and shared values, such as those espoused by Putnam (1995) and Coleman (1988), imply that one set of values must be adopted, with the accompanying disavowal of cultural values that do not match (Arneil, 2006). Grappling with differing cultural values is an important part of cosmopolitan living, however, especially in a context of increasingly divided virtual communities (Park, Jang, Lee, & Yang, 2018). Lofland (1998, p. 235) argues that public spaces must occasionally generate mild fear, in order to be effective in "citizenship schooling" and create tolerant, cosmopolitan people through "living civilly with such a reality" of difference (p. 242). This fear is associated with the Otherness of strangers (Said, 1979), and Sandercock (2003, p. 124) considers it to be an understandable reaction to potential disruption to one's "homely spaces", *habitus* (Bourdieu, 1980/1990) and identity.

The literature on encounter has a more positive take on the necessity of such confrontation, arguing that everyday encounters between strangers work to acclimatise people to difference (Wilson, 2011), with positive encounters contributing to a positive society (Fincher & Iveson,

2008; Bannister & Kearns, 2013).[9] Taking these arguments into account, the point of public spaces is to acclimatise one to (sometimes mildly fear-inducing) strangers and learn civility, cooperation and respect for difference in dealings with them (Lofland, 1998; Sandercock, 2003; Sennett, 2012). More comfortable, familiar interactions are those found in the 'parochial realm', where people tend to know each other (Lofland, 1998, further discussed in section 3.3.2). However, a parochial realm may be difficult to find in high-density, socially and culturally diverse areas. Can social isolation and exclusion in apartment complexes be understood as a reaction to the public realm intruding on spaces that are better experienced as (or expected to be) parochial spaces, or uncertainty around what might be expected from interaction in these spaces? If so, can a parochial realm with CSTs be developed even under these conditions, and can the benefits normally associated with the public realm (increased cosmopolitanism, cooperation despite differences) be achieved here?

2.6. SUMMARY

Arguments that dense urban living is associated with declining community often over-simplify the issue, with more research needed to understand how social ties develop in high-density environments. This need is especially pertinent given the focus on compact cities in policy across many different countries (OECD, 2012) and the consequently higher number of people living at higher densities.

To provide a basis for the research, this chapter has considered the definition of a 'relationship', settling upon a wide definition on a continuum including connections based on fleeting social exchanges at one end to strong, primary relationships with family or friends at the other. The concept of 'casual social ties' was presented, being loose relationships such as acquaintances and ties of simple acknowledgement, and associated concepts were considered. These include community, social cohesion, social capital and social sustainability at a group level, and well-being, loneliness, psychological sense of community, identity and home and place at an individual level.

Much of the research to date that has considered local relationships has focused on stronger ties between close friends and family (Granovetter, 1973; Henning & Lieberg, 1996; Lofland, 1998), however the utility of weaker ties in a local area should not be underestimated (Schiefloe, 1990).

[9] Though this is also contested; Valentine (2008) argues that prejudiced people may maintain convivial relations with individuals whose groups they are prejudiced against, without changing their views or feeling that they should do so. A friendly atmosphere created by CSTs may not extend past common courtesy and may not be effective in increasing understanding and acceptance between different groups (Valentine, 2008; Kennedy & Buys, 2010).

Casual social ties are important because they provide a balance between privacy and sociability (Jacobs, 1961; Abu-Ghazzeh, 1999), allow residents to maintain relationships with a wide range of people who might provide help in times of lesser or greater need (Granovetter, 1983; Adler & Kwon, 2002; Grannis, 2009), and facilitate a moderate level of social cohesion (Granovetter, 1973; Forrest & Kearns, 2001). They are particularly important in large apartment complexes and their local areas because of the need to maintain privacy while facilitating a friendly, cooperative atmosphere, access to social interaction and aid, and supporting cosmopolitanism. However, they may be more difficult to obtain in these complexes due to greater resident diversity (Wilson & Baldassare, 1996; McPherson et al., 2001; Solonsch & Aikman, 2013), fewer children (Grannis, 2009; Solonsch & Aikman, 2013) and increased reliance on non-local networks at the expense of local networks (Putnam, 1995; Guest & Wierzbicki, 1999; Forrest et al., 2002; Easthope et al., 2014; van den Berg et al., 2014). To gain a deeper understanding of the processes involved in supporting and facilitating CSTs, the next chapter reviews literature on how social relationships are developed.

3. THE DEVELOPMENT OF SOCIAL RELATIONSHIPS

Now the focus of the research on CSTs has been established, the thesis turns to consider how they may be supported and facilitated, focusing on the development of relationships. Section 3.1 covers factors generally found to be involved across contexts, discussing time and repeated interactions, personality, homogeneity, norms and catalysts. The second section turns to relationship development in the specific context of apartment complexes and their surroundings/local areas. It focuses on four considerations for CST development in this context: use of shared space; territory; visual permeability; and control over contact. Section 3.3 then discusses current apartment design guidelines, considering the state of practice in Australia in addition to some notable international examples.

3.1. BASIC FACTORS IN RELATIONSHIP DEVELOPMENT

3.1.1. Time and Repeated Interactions

At the most basic level, relationships develop from repeated interactions (Festinger et al., 1950; Forrest & Kearns, 2001; Painter, 2012) in physical or virtual spaces (Baum & Palmer, 2002; Soukup, 2006; Reid, 2015). Several authors note the importance of chance meetings and crossed paths in the beginning stages of relationships (Festinger et al., 1950; Kuo et al., 1998; Grannis, 2009), which set the basis for the continued strengthening of the relationship. This effect of repeated interactions (or even simply repeated encounters) is related to the 'mere exposure effect', where people tend to like things they see more often (Zajonc, 2001).

Time spent living in a neighbourhood has a clear association with the number of relationships maintained there, due to people having more time to develop relationships through repeated interactions (Buckner, 1988; Farrell et al., 2004; French et al., 2014). Future time can also have an impact; an expected shared future can encourage people to get to know one another (Völker & Flap, 2001).

In addition, daily schedules and use of time play a role in the repetition of encounters. People who spend more time out walking in a local area (French et al., 2014) or using spaces such as verandas or front gardens visible from the street (Gehl, 1986; Davison & Rowden, 2012) are likely to have greater numbers of local relationships. Having a dog can contribute to this, with dog owners spending more time out and about (Wood et al., 2015). Time spent commuting to and from work means less time spent in a local area, and is associated with reduced social capital (Williams & Pocock, 2010), while those who work full-time tend to have fewer local relationships (Abu-Ghazzeh, 1999; Guest & Wierzbicki, 1999).

Demographics also play a role, with children and elderly residents likely to spend more time in the local area (Williams, 2005; Grannis, 2009; Williams & Pocock, 2010). Grannis (2009) stresses the role of children in forming community, with a study reporting that 85% of the relationships in a neighbourhood were between households with children, while only 6% were between households with no children present. This has implications for high density environments in Australia, where families and children are less likely to live in apartment buildings (Solonsch & Aikman, 2013). If there are fewer children present, there are likely to be fewer relationships between people overall.

3.1.2. Personality and Social Adaptation Level

Personality is likely to influence whether people initiate interactions with others, with factors including extraversion/introversion, agreeableness and conscientiousness having an impact (Asendorpf & Wilpers, 1998). For some people, having relationships in the local area might "feel like a blizzard of social expectations from which they would want to run a mile" (Mackay, 2014, p. 173), while others seek relationships with as many people as possible. There is a difference, however, between 'basic tendencies' in personality and 'characteristic adaptations' to particular situations, where people may act more according to norms or adopt characteristics (such as outgoing behaviour) to achieve goals (Costa Jr & McCrae, 1994).

Wohlwill's (1974) Adaptation Level Theory explains the effect of personality and other personal variables on a choice to interact. Wohlwill argues that everyone has a preferred level of a particular stimulus, in this case social activity, and will seek to attain their preferred level through, for example, choosing to interact with a stranger or not. Control over interaction is key; perceived lack of privacy has been associated with less social interaction (Raman, 2010) and social withdrawal (Evans, Palsane, Lepore, & Martin, 1989). Lack of social contact can also change behaviour preferences however; extreme loneliness can increase anxiety about social encounters, meaning that a lonely person may wish to avoid social interaction completely, exacerbating their loneliness (Hawkley & Cacioppo, 2010).

3.1.3. Homogeneity and Similarities/Commonalities

People also tend to form relationships with those they perceive as similar to themselves, or those they feel they have something in common with (Snow et al., 1981; Forrest et al., 2002). This is partly because this can "smooth the coordination of activity and communication" (McPherson et al., 2001), and they are more likely to agree on opinions which can positively affect self-image (Friedkin, 2004). Similarities can range from having pets (Wood et al., 2015), to having children attending the same school (Feld, 1981; Thompson, 2015b), a common cultural background

(McPherson et al., 2001; Thompson, 2015b), perceived shared values (Grannis, 2009) or a commonality such as an expected shared future (Völker & Flap, 2001). Gauging similarities and commonalities rests on repeated interaction, which, when relationships are 'given' rather than 'chosen' (Spencer & Pahl, 2006), is likely to rely on the repeated chance meetings discussed above (Festinger et al., 1950; Painter, 2012).

Shared interests can also act as a catalyst for relationships (Ziller, 2004). Relationships around shared interests do not have to use face-to-face interaction, with the internet easily allowing people to find others with shared interests (Ziller, 2004). These communities may be entirely maintained online, or enable people to organise face-to-face meetings (Soukup, 2006; Plöger & Kubiak, 2018).

These shared interests are often linked to the environment. Some spaces act as 'foci' (Feld, 1981), where relationships are formed around shared interests and a common use of a space. A focus is defined as "a social, psychological, legal, or physical entity around which joint activities are organized" (Feld, 1981, p. 1016), and people who engage in joint activities will tend to form relationships. Common examples of foci include workplaces, gyms or schools. These spaces tend to have more salient shared goals associated with them which may reduce attention to differences (Amir, 1969; Paluck & Green, 2008) and aid in community formation through enabling ties across cultural and social groups (Grannis, 2009). This can increase access to different resources and opinions as well as increasing the possibility of understanding between groups (Granovetter, 1973). It may also work divisively, however, in that people may interact only with those with similar shared interests (Holland, Clark, Katz, & Peace, 2007).

While homogeneity is an important factor in developing relationships, Williams (2005) found that some resident diversity facilitated interaction through increasing the diversity of activities and resources in the community, providing interest and topics of conversation. This will be further discussed in section 3.1.5.

3.1.4. Norms

Norms are also involved in relationship development, being "expectations for behaviors" shared by members of a social group (Turner, 2014, p. 185). They are related to the values and motivations of the group, and are modelled and performed through behaviour. This gives them a close connection to social cohesion, as people demonstrate and reinforce their membership in the group by following the group norms (Friedkin, 2004). Violation of group norms can lead to censure or punishment by other members of the group, and can also arouse feelings of shame, fear or guilt (Cialdini & Goldstein, 2004; Power, 2015). People tend to follow the group norms

because this can help maintain one's positive self-concept and obtain group approval (Cialdini & Goldstein, 2004).

Norms can differ widely between groups due to their close relationship with group values and motivations, as well as the ongoing process of negotiating norms through everyday behaviour (Molinsky, 2007; Turner, 2014; Rimal & Lapinski, 2015). This can pose difficulties when people from social groups with conflicting norms interact. People may perceive others to have violated moral codes, be uncomfortable adopting foreign norms, or simply be unsure about how to interact with others without causing offence (Molinsky, 2007; Valentine, 2008; Thompson, 2015b).

Norms around social interaction also play a role in whether people interact, for example the norm of 'civil inattention' or politely ignoring people in lifts and busy public spaces (Goffman, 1971; Hirschauer, 2005), as compared to the norm allowing interaction with 'open persons' such as police officers, or with almost anyone in 'open regions' such as street carnivals (Lofland, 1998, following Goffman). Cattell et al. (2008, p. 552) note that racism is much reduced in open regions, with the "demarcations between 'insiders' and 'outsiders' appear[ing] less rigid", breaking social norms and contributing to cosmopolitanism (Sennett, 2012).

An example of open regions are Oldenburg's (1989) 'third places', social places away from home or work where interaction with a wide range of others is the norm (Oldenburg, 1989; Thompson, 2018), with little note of social position or occupation. Successful third places are accessible, on neutral ground, encourage regular, extended use, support sociability and imply users have something in common (Thompson, 2018). Third places can include such spaces as the local pub (Oldenburg, 1989), a library (Lawson, 2004) or a café (Mehta & Bosson, 2010). The majority of ties maintained within these spaces are likely to be CSTs, with conversation rarely turning to serious topics (corresponding to Granovetter's (1973) specification that weak ties should have low emotional intensity) and people, both strangers and regulars, able to arrive and leave as they choose (Oldenburg, 1989).

3.1.5. Interaction Catalysts and Triangulation

Some factors increase the chances of interaction, breaking social norms and barriers and sparking conversation. As well as events such as street carnivals, children and pets are prime examples of these. Children and pets tend to be dynamic and variable in their behaviour, providing something to talk about as well as signalling similar interests to other parents, caregivers and pet owners (Hirschauer, 2005; Williams & Pocock, 2010; Wood et al., 2015). Pets and children are also generally seen as 'open persons' (or animals) who one can talk to due to their subordinate status (Lofland, 1998), though this of course depends on the person (Cattell et al., 2008). Diversity of

activities and people can also promote interaction through providing novel topics of conversation (Williams, 2005).

The opening of doors is an extremely common interaction catalyst (Laurier & Philo, 2006; Thompson, 2015a). Whyte (1980, p. 81) in fact, while advising that public entrance doors should be left open to imply welcome, suggests that swinging doors might also be provided "for people who like to open doors". Lifts also provide opportunities to offer help in terms of pressing buttons (Hirschauer, 2005), while moveable seating can encourage conviviality, with users asking others if they can take or move a chair (Laurier & Philo, 2006; Cho, Heng, & Trivic, 2015). While this is only a small interaction, it does contribute to the norms of the space, and repeated encounters over time might lead to CSTs.

Other aspects of the environment can spark conversation, an effect Whyte (1980) terms 'triangulation' – something novel or variable that provides an opening for discussion such as buskers or food stands. Some forms of triangulation can also signify similarity. If someone is watching a busker and enjoying it as you are, they are likely to have similar taste in entertainment. The built environment can afford triangulation in other ways, both through providing a dynamic, variable feature, or allowing views of some dynamic feature through windows. These can include community gardens (Kingsley & Townsend, 2006), water features or sculptures (Huang, 2006) and interesting street-edge windows (Whyte, 1980; Mehta, 2013).

3.2. Environment Factors: Large Apartment Complexes & their Surroundings

Environmental context also has an influence on relationship development, guiding and restricting behaviour (Gibson, 1977; Dovey, 2016). To best understand how apartment residents' local relationships develop, we must draw on research examining relationships in this context. This section considers five influences of built/natural environment factors on relationship development, based on a literature review of research conducted with apartment complexes of four or more storeys (following the Australian Bureau of Statistics' definition of 'high-rise'(Australian Bureau of Statistics, 2004)).[10] These influences are density, use of shared space, hierarchical spaces/territory, visual permeability and control over contact.

[10] Several studies of smaller apartment complexes (Festinger et al., 1950; Snow et al., 1981; Williams, 2005) and wider neighbourhoods (Gehl, 2001; Cattell et al., 2008; Williams & Pocock, 2010; Cho et al., 2015) are included where particularly relevant.

3.2.1. Density and Superficial Social Connection

High rise housing has been associated with poor residential satisfaction, feelings of crowding, lower mental health and crime (Gifford, 2007), however there are likely a number of complex factors at play in addition to built form. For example, while Newman (1972) contends that social problems in St Louis's Pruitt-Igoe public housing were due to its shared spaces lacking a clear public-private hierarchy and not being 'defensible', Bristol (1991) argues that Pruitt-Igoe's failure was largely due to neglect by authorities and structural discrimination. Individual attitudes to social interaction can also have an overriding effect, as Williams (2005) found in her study of many factors influencing interaction, while Lette (2011) notes that a 'good' environment will not support interaction on its own. Care should therefore be taken to avoid a physically-determinist perspective.

Despite this caveat, many studies have found that relationships in large apartment complexes do tend to be more superficial (e.g. Gifford, 2007; Reid, 2015; Scanlon et al., 2018). Some participants in Forrest and colleagues' (2002) interview research in Hong Kong maintained ties with local shopkeepers but not their neighbours, while others knew most neighbours on their floor by sight or to exchange small talk. This superficiality may also be due to privacy concerns (Buys et al., 2013; Reid, 2015) or heterogeneity (Forrest et al., 2002; Reid, 2015). The 'community liberated' discourse (Wellman, 1979) may also be at play; in their extensive survey/interview study of mixed tenure apartment complexes in London, Scanlon et al. (2018) note that local community had little importance for some residents due to their membership of non-place-based communities.

While these studies suggest apartment residents desire minimal social involvement, the situation may be more complex. In a large survey of a Sydney urban renewal area, Easthope, Liu, Buckle, and Thompson (2017) found that 69% of their 989 resident survey respondents wanted more social involvement in their local area, and with lack of time preventing respondents from socialising, as well as a lack of knowledge of local events and activities. Similarly, more than a quarter of respondents in survey in Victoria, Australia felt a lack of a strong sense of community was a drawback of apartment living (DELWP Victoria, 2015).

Though superficial relationships appear to be common, a number of studies have found extensive interaction in large apartment complexes. In an Israeli interview and observation study of female residents' relationships in 8-20 storey apartment complexes, Ginsberg and Churchman (1985) argue that high rise dwellings are "not a cause of isolation" (p.483) where residents are accustomed to this housing type (as in Israel). In this study, two thirds of respondents knew every resident on their floor, and the vast majority (95%) maintained CSTs or friendships in their

buildings. Research in Vietnam and Indonesia has also found a high level of interaction between neighbours in apartments, and in these cases the residents' affluence and need to share resources potentially plays a role, as well as traditions of street socialising (Bunawardi, Suzuki, & Yuasa, 2016; Nguyen, 2017).

3.2.2. Use of Shared Space & Propinquity

A key early investigation into relationship development in apartment complexes was Festinger, Back and Schachter's (1950) study of graduate student housing. They found that residents tended to develop relationships with those they regularly crossed paths with – in other words, incidental interaction supported relationship development. This was influenced by the placement of stairways, units and mailboxes – a quality they called 'propinquity'.

The opportunities for these crossed paths and incidental interactions are different in different built forms. Randolph (2006) considers opportunities in apartments as opposed to standalone houses, noting they occur in shared spaces, rather than over garden fences. These shared spaces are therefore vitally important in supporting social connection; the more time residents spend in shared spaces, the more likely they are to encounter people and interact (Gehl, 2001; Zhang & Lawson, 2009).

Circulation spaces such as lifts, lobbies and residential corridors are the most common spaces for residents to interact due to their regular use (Snow et al., 1981; Forrest et al., 2002; Lette, 2011), and residents may feel an obligation to develop CSTs with neighbours on their floor (Forrest et al., 2002; Cho & Lee, 2011). Interactions tend to be brief in these spaces (Snow et al., 1981; Huang, 2006; Lette, 2011; Reid, 2015), though they may form the basis for stronger relationships (Abu-Ghazzeh, 1999) . Regular meetings associated with carparks have been noted by a number of authors (Foth & Sanders, 2005; Lette, 2011; Reid, 2015), but the purely-functional, sometimes poorly-lit, environment of these spaces does not encourage residents to pause to interact, with social interaction "often awkward, limited and grudgingly accepted" (Reid, 2015, p. 444). If these spaces are made more inviting through improved lighting, or if transit spaces provide pleasant spaces to stop such as alcoves or other break points (Huang, 2006; Lette, 2011; Mehta, 2014; Cho et al., 2015), people may be more likely to pause and chat.

In an observation study of outdoor courtyards in three Taipei high-rise complexes, Huang (2006) found that encounters in activity spaces and 'scenic' spaces with water features and vegetation were more likely to result in interaction than encounters on paths – though paths were used far more heavily (76% of observed residents). This suggests a negative relationship between busy-ness and interaction. Cultural context is likely significant, however; similar research in Vietnam

found differing results, with most residents observed in seating spaces (45%), followed by circulation spaces (43%), and much interaction occurring here (Nguyen, 2017).

Low connectivity between different parts of an apartment complex can be detrimental to social relations. Foth and Sanders (2005, p. 8) found that the few pedestrian paths in one of their Brisbane case complexes, with focus instead on vehicle access, meant that it was "difficult for residents to casually visit each other by foot". The complex vertical cul-de-sac nature of most apartment building layouts (Raman, 2010; Dovey, 2016), combined with electronic access control (Reid, 2015; Scanlon et al., 2018), means that opportunities for crossing paths or visiting neighbours are reduced (although reducing outsider access to a space makes it a more parochial-realm territory open to a select few, see 3.3.2). In cases such as these, shared facilities such as gardens, party rooms or swimming pools are disproportionately under pressure to provide opportunities for encounters (Raman, 2010; Reid, 2015). Where there are no shared facilities "where residents can get together without making effort", deeper interaction is less likely (Ozaki & Schram, 2011, p. 203).

Facilities may not be well-used, however (Lette, 2011; Bunawardi et al., 2016; Scanlon et al., 2018), even though residents might consider them necessities (for instance, meeting, study and party rooms in Cho & Lee's (2011) Seoul study). It is therefore important to understand what increases use.

Much has been said in academic and practice literature about the reasons people may linger in a space, generally advising the presence of seating, shelter from weather conditions, refreshments and toilets, as well as other factors that may increase enjoyment including aesthetics and natural elements (Whyte, 1980; Cooper Marcus & Francis, 1998; Gehl, 2001, 2010; Cho & Lee, 2011). Safety and maintenance are also important, increasing the likelihood of use and interaction and signalling territoriality (Wilson & Kelling, 1982; Skjaeveland & Garling, 1997; Cozens, Saville, & Hillier, 2005). Lingering might also be due to a need to wait for children, for lifts, or for friends or colleagues (Cooper Marcus & Francis, 1998; Williams & Pocock, 2010). However, most research has been conducted in public spaces, and these principals may not hold for large apartment complexes and their surroundings; Zhang and Lawson (2009) found little lingering in spaces outside apartment complexes, despite the provision of seating, natural elements and food. They suggest that "the behavioural pattern in residential communities is different from urban public spaces" (Zhang & Lawson, 2009, p. 213) due to residents commonly passing through spaces rather than choosing to use them, identifying a need to better understand behavioural patterns in these contexts.

Some principals do appear to carry through, including the influence of aesthetics and

maintenance. In a study of public housing blocks in Chicago, Kuo et al. (1998) found an association between the level of vegetation in (sometimes 'barren') communal spaces and the number of relationships residents developed, mediated by use of the spaces – more-pleasant spaces encouraged more use.

Spaces that have a distinct purpose or afford a variety of meaningful activities for a variety of users are also likely to be more heavily used, providing an explicit reason for people to visit (Cooper Marcus & Francis, 1998; Abu-Ghazzeh, 1999; Lette, 2011). Nguyen (2017) notes the importance of shops and other commercial establishments for drawing activity and promoting incidental interaction, especially when these establishments spill onto the street, while Cho et al. (2015, p. 102) argue that "overlapping and interweaving activities" promote vitality in a space. Activities might include car washing, gardening, laundry or markets, and these shared activities and interests can bring people together (Williams & Pocock, 2010; Lette, 2011; Nguyen, 2017). While activities could help to activate a space, they should not be seen as the primary feature encouraging use; Foth and Sanders (2005) found that a games room with ping-pong and pool tables was not well-used in one of their case study complexes, attributing this to the large, clinical aesthetics of the room. Attention should also be paid to the number of people who might comfortably use a space, keeping in mind that a few people might dominate a space and discourage others from using it (Kennedy & Buys, 2010).

Finally, distance is particularly associated with use of a space (Whyte, 1980; Huang, 2006); the further a resident must travel to a space, the less likely they are to use it. Abu-Ghazzeh (1999) found that people on the ground floors of apartment buildings had double the number of local friends than those on upper floors and associated this with their increased use of the adjacent shared space. Ground floor residents had "no need […] to make many decisions and preparations to go out" (Abu-Ghazzeh, 1999, p. 63), and were able to easily carry deck chairs, toys or books into the space, increasing the possible range of activities.

3.2.3. Hierarchical Spaces and Territory

Abu-Ghazzeh's (1999) findings also relate particularly to territory. Residents of housing around small courtyards ('clusters') had better feelings of security and belonging than residents of other housing forms, and a clear hierarchy of spaces from private to public contributed to use of semi-public spaces. These residents tended to "linger on their own turf and to perceive the cluster in which they live as their own territory" (Abu-Ghazzeh, 1999, p. 66), and many interactions between neighbours occurred in these spaces, especially between parents supervising children. From the opposite perspective, a lack of buffer zones between public/shared and private space encourages social withdrawal (Williams, 2005; Raman, 2010).

A continuum of private to public spaces is advised by CPTED guidelines for safety and the promotion of territorial control (Newman, 1972; Cozens et al., 2005), but it can also influence interaction (Williams, 2005; Cho & Lee, 2011). Where the built environment implies common ground, users can more easily perceive commonalities and similarities between each other including a shared future, providing a more certain basis for a potential relationship (McPherson et al., 2001; Völker & Flap, 2001). As a participant in Cattell and colleagues' (2008) research in a regeneration area of East London explained, people were more likely to acknowledge others in routinely-used spaces because "you're doing the same thing and you've got a space in common" (Cattell et al., 2008, p. 553). The number of people who regularly use the space is also likely to have an impact on whether users acknowledge strangers. Drawing on his focus group study of four private apartment complexes in Sydney, Lette (2011) suggests that too many households sharing the same spaces might reduce sense of community, and advises dividing large complexes into smaller clusters around lobbies and lifts. Similarly, a complex by C.F. Moller Architects and Brut Architecture and Urban Design in Belgium provides shared gardens or balconies for clusters of units to increase interaction (Kohlstedt, 2014). Electronic or keyed access control can also indicate territory, however while this increased sense of territory and safety may be valued, the potential for reducing crossed paths between residents should also be kept in mind (Reid, 2015; Scanlon et al., 2018).

One particularly relevant concept is Gehl's (1986) 'soft edges'. Soft edges are areas between private and public space such as porches, door steps and front gardens that allow people to linger in their own territory while viewing adjacent public/shared space, giving them the option to engage with users of the space (Gehl, 1986; Skjaeveland & Garling, 1997; Abu-Ghazzeh, 1999). In apartment complexes, balconies can serve this purpose (Abu-Ghazzeh, 1999; Gang, 2016) provided they are close enough to shared space, in other words within four or five storeys of it (Alexander, Ishikawa, & Silverstein, 1977; Gehl, 2010). These spaces can also provide 'buffer zones', easing the transition from shared space to private space and reducing residents' desire to withdraw through, for instance, closing window blinds (Williams, 2005). Residential corridors play this role in some contexts: in research in Indonesia by Bunawardi et al. (2016), residents used external corridors as extensions of their units (recalling 'streets in the sky'), with children's play, trade, chatting and relaxing on residents' own seating all occurring. In many contexts, however, possibilities for soft edges are reduced in an apartment building (Randolph, 2006), especially where corridors are internal and ground-floor apartments have gardens with high fences.

Acknowledging this, and drawing on the idea of surveillance and 'eyes on the street' (Jacobs, 1961), design guidelines for residential towers in Vancouver mandate street-level townhouses with transitional zones. MacDonald (2005) investigated street activity in this context, finding that townhouse frontages had more lengthy activities and social interaction than tower entrances, despite the tower entrances having a greater number of in-out trips. Soft edges can also be created at height, as in the long, sloping paths and front yards of BIG's 8 House in Copenhagen (see Figure 3.1). These paths allow many residents to walk or cycle to their front doors in the open air, passing other residents' yards and spending less time in internal stairs or corridors, so being more visible (Minner, 2010).

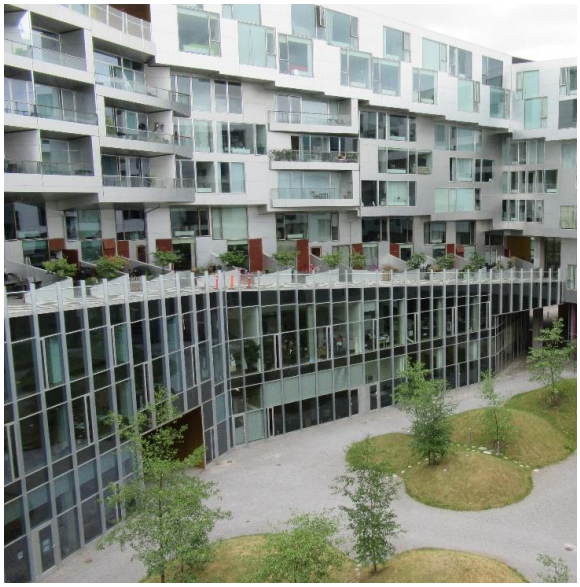


Figure 3.1: 8 House by BIG, Copenhagen, with external pedestrian/cycle path (own photo)

Another relevant concept is Lofland's (1998) 'realms', previously mentioned in section 2.5.2. Lofland (1998) divides space into realms according to the types of people one meets in these spaces, with the private realm the domain of close kin and friends, the parochial realm the domain of acquaintances and community, and the public realm the domain of strangers or those known only categorically (e.g. 'bus driver'). Generally, an individual has a high degree of control over who they interact with in the private realm, and a much lower degree of control in the public realm. 'Public' spaces in terms of official ownership are not automatically spaces of the public realm; realms are determined by the relationships between the actors in a space, and their behaviour. A group of friends can create their own private realm in technically-public space, while a public space devoid of people has no realm.

The boundaries between public and parochial realms are blurred, however, and vary from place to place, as well as between people (Lofland, 1998). Shared spaces within a large apartment complex might be parochial realm due to the chances of seeing neighbour acquaintances, however they might also be public realm, where only strangers are encountered and people feel less territoriality. Given the points above on a hierarchy of spaces, it seems best to seek to support a parochial realm in these spaces, allowing residents to transition from public to private realm through the parochial realm.

3.2.4. Visual Permeability

Visual integration of shared spaces is crucial in facilitating contact between residents, with these spaces most well-used when central and visible (Abu-Ghazzeh, 1999; Williams, 2005; Raman, 2010; Reid, 2015). This may be because residents are more often reminded of the space's existence (Reid, 2015). While seeing others does not mean a person will interact (Holland et al., 2007; Valentine, 2008), increasing visual access to shared spaces, whether from dwellings or other shared spaces, allows people to be aware of what is happening in those spaces, recognise others and make a decision about whether to interact (Snow et al., 1981; Abu-Ghazzeh, 1999; Williams, 2005; Ognibene, 2016). It also allows people-watching, which can contribute to feelings of community (Ozaki & Schram, 2011).

In an extensive interview, survey and observation study of six UK neighbourhoods of varying densities, Raman (2010) found that people living in corner dwellings with good views of shared spaces had the most relationships with others in the area, while van Eijk and Engbersen (2011) found that the visibility and variety of activity in a Dutch local park, supported by a major through-route, helped to draw people out of their units. Abu-Ghazzeh (1999) lists the opportunities associated with simply being able to see outdoor activity, including not just the potential for social interaction but also "of information about the social world outside; and a source of inspiration, an offer of stimulating experience" (p. 66). This relates to the common enjoyment of people-watching reported by several authors (Whyte, 1980; Lofland, 1998; Cattell et al., 2008; Ozaki & Schram, 2011). Studio Gang's Aqua Tower project in Chicago (Figure 3.2) takes advantage of this by using offset balconies to "offer oblique visual connections between neighbouring units, allowing for informal ties to form" (Gang, 2016, p. 118).

Figure 3.2: Aqua Tower by Studio Gang (photo: Steve Hall © Hall + Merrick. Retrieved from https://www.hallmerrick.com/aqua-tower/daiw27h6be9ypr504gonh20wdqw16r)

Even the placement of apartment doors to maximise crossed sightlines can increase interaction between neighbours; Abu-Ghazzeh (1999) found that residents with apartment entrances at right angles were more likely to visit each other than those where the entrances were parallel. The space may also be made safer through the possibility of passive surveillance by users and onlookers (Cozens et al., 2005).

3.2.5. Control over Contact

This visual permeability must be balanced by environmental features that allow people to regulate their contact with others and reduce sense of exposure (Ozaki & Schram, 2011). Jacobs (1961) argued that living in close proximity to many people necessitates careful regulation of contact, while Abu-Ghazzeh (1999, p. 44) notes that neighbours in a large apartment complex are "in a continuing position of potential violation."

If people have more control over contact with others, they are likely to be more satisfied with their social interaction, are less likely to withdraw, and may even report more interaction (Williams, 2005; Raman, 2010). This may be because they feel more comfortable initiating interaction, as they can better control its demands on their time. It can also be linked to adaptation level theory (Wohlwill, 1974), in that over-exposure to social stimuli such as noise may reduce the likelihood of residents seeking out social contact.

People might use particular behaviours to maintain their privacy, for instance engaging in civil inattention in crowded situations (Goffman, 1971; Hirschauer, 2005), or keeping a distance from others' residential buildings "to preserve privacy in the neighbourhood" (Farida, 2013, p. 465). Design can also play a large part, however; the built environment can afford greater control over contact through muffling unwanted noise (Power, 2015), as well as managing visual privacy. Raman (2010) found that the most highly-visible spaces were not the ones with the most interaction; spaces popular for interaction tended to be moderately visible, but located adjacent to highly-visible spaces (c.f. Whyte, 1980). Spaces such as these afford users more privacy, while still allowing visual permeability. Similarly, Zhang and Lawson (2009) noted a difference in use between shared spaces outside three Brisbane apartment complexes with differing levels of visual exposure. A lesser-used space was overlooked by apartment windows, while a more well-used space afforded more privacy and shelter through placement of umbrellas and shrubs, as well as a defined edge that "anchors" people (Cooper Marcus & Francis, 1998, p. 26) and reduces feelings of exposure. This highlights the importance of a human scale, which can be provided through trees, canopies and greater sense of enclosure (Mehta, 2014), helping to create a sense of territory. It is also important to note that this shelter does not have to completely protect a user from surveillance – and indeed, it should not, for reasons of safety both perceived and actual (Cozens et al., 2005).

Cattell et al. (2008) argue that people need lingering, transit and escape spaces, as well as social spaces, and that some people are happy to just observe, or, as Lofland (1998, p. 89) describes, enjoy "the comfort of being surrounded by a hum of conversation". By catering to several of these audiences comfortably, a space encourages greater use and potentially increases the chance of

recognition of other regular users, and the number of incidental interactions.

These multiple audiences or groups can be supported through creating subspaces within larger areas (Foth & Sanders, 2005), though these spaces should still be large enough that a new entrant to the subspace does not feel they are intruding on others using it (Cooper Marcus & Francis, 1998). Lette (2011) suggests that apartment facilities should provide flexibility, with subspaces capable of being amalgamated to form spaces for large groups when needed, through moving space dividers.

3.2.6. Conclusion: Apartment Complexes & Relationship Development

While the literature on social connection in apartment complexes is growing, it often focuses on supportive contexts (for instance, owner-occupied apartments (MacDonald, 2005), cohousing (Williams, 2005), cultures particularly open to interaction (Bunawardi et al., 2016; Nguyen, 2017)), has minimal focus on resident experience (e.g. Huang (2006)), has few participants or investigates a relatively narrow set of factors, at times in isolation from their context; Williams (2005) is one of the few authors that explicitly seeks to understand the influence of many different demographic, environment and management factors on social interaction. More research is needed to ascertain how a range of different factors influence the development of ties, especially in highly diverse, highly mobile contexts such as those found in Sydney, and how the design and provision of spaces might facilitate CST development in such contexts.

3.3. WHAT DO CURRENT DESIGN GUIDELINES ADVISE?

There has been much work on design guidelines to support more-social public spaces (for example, Whyte, 1980; Cooper Marcus & Francis, 1998; Carmona, Tiesdell, Heath, & Oc, 2010; Gehl, 2010; Project for Public Spaces, nd), however guidelines specific to apartment complexes are less common. As Zhang and Lawson (2009) note, it is unclear how transferrable public space guidelines are to apartment complex shared spaces.

Various guidelines and policies deal with apartment design in Australia. In New South Wales, new apartment complexes must follow the State Environment and Planning Policy No. 65 on Design Quality of Residential Apartment Development and its associated Design Guide, which includes sections on the design of shared space to "provide opportunities for casual social interaction among residents and [to] assist with social recognition" (NSW Department of Planning and Environment, 2015, p. 96). The Design Guide advises the provision of open spaces for group activities and gatherings to suit all ages, proposing barbecue areas, play areas, pools, gyms, tennis courts and common rooms as well as seating (p.57). It suggests these spaces should be "readily visible from habitable rooms and private open space areas while maintaining visual privacy" (p.

57), though mentions only the safety and privacy, rather than social, advantages of this. Seating in circulation spaces, community gardens and natural daylighting are suggested to increase social interaction. The number of units on each floor is restricted to eight, and primary living spaces must not have windows directly onto circulation spaces to support privacy. However, only certain criteria in the Design Guide are enforceable, and even these are often open to negotiation (following a discretionary performance-based approach to development approval, rather than strict regulations (Woodcock et al., 2011)).

The NSW Department of Health Healthy Urban Development Checklist for reviewing development applications (including masterplans) advises the provision of mixed-use hubs, community centres and venues for cultural events, attractive spaces, walkable areas, distinctive character, and apartment communal areas, among others (NSW Department of Health, 2009). Victoria's recently-introduced apartment design guidelines state that communal open space "helps establish a sense of community" and advises these spaces should be "accessible, practical, attractive, easily maintained and integrated with the layout of the development" as well as usable year-round (DELWP Victoria, 2017, p. 20). Interior common areas are not required, however they are advised to be integrated with communal open space if provided. Well-designed circulation spaces are argued to encourage social interaction, though little explicit guidance is given around this. As in NSW, privacy and noise reduction are stressed.

Western Australia has guidelines coming into effect in May 2019 (WA Department of Planning Lands and Heritage, 2019a), based on the NSW guidelines. These appear to have improved upon NSW's advice by focusing more particularly on the potential of shared spaces to provide "opportunities to recreate and socialise beyond their private living areas" (WA Department of Planning Lands and Heritage, 2019b, p. 40) and providing more illustrative examples of spaces. The guidelines suggest these shared spaces should be "accessible, useable and attractive, allowing a range of activities for all residents" including shared food preparation, gardening, interest groups and resident meetings (WA Department of Planning Lands and Heritage, 2019b, pp. 42, 78). Good design of circulation spaces is argued to be "essential to facilitate the casual interactions between residents that foster a sense of community" (2019b, p. 6). However, as in all these Australian examples, the emphasis is on safety, noise, privacy and environmental considerations such as sunlight and wind (especially where minimum standards are concerned), with only passing reference to features that specifically support social interaction. While these are important, they may not be sufficient to encourage use of spaces, given findings that communal spaces can be little used (Lette, 2011; Bunawardi et al., 2016; Scanlon et al., 2018).

There are several good examples of design guidelines and regulations around the world that do focus more particularly on social interaction. Vancouver's Happy Homes toolkit (The Happy

City, n.d.) advises that complexes should provide flexible spaces for meaningful activities such as community gardens, co-locate facilities for a range of necessary activities (bike repair, dog washing), and support resident activities. It also notes the importance of giving residents control over their exposure to others through a hierarchy of spaces, visual connection to the street and resident-only amenity spaces, as well as minimising the number of households sharing semi-private spaces. A range of tenures and apartment sizes is suggested to help decrease residential mobility. Vienna's competition system for social housing development has a 'social sustainability pillar' requiring complexes to have well-located, safe multi-use shared spaces with good facilities for general use and meeting others. Outdoor spaces must be accessible to all, and potential noise and maintenance issues must be minimised, though again emphasis is largely on aspects relating to privacy and environmental comfort rather than social interaction (Wohnfonds Wien, 2015).

While these guidelines and accompanying design review panels help to increase the quality of apartment complexes in general (Moore, Alves, Horne, & Martel, 2015; Davison, Freestone, Hu, & Baker, 2018), there is little explicit guidance on exactly *how* shared spaces might support social connection.[11] Similarly to Ziller's (2004) observations in relation to planning lively main streets, there is often an assumption that simply providing spaces will produce 'community', which may not hold true in practice. There is therefore a need to develop a better understanding of how the built/natural environment supports CST development, and how this may be translated into design guidance.

3.4. SUMMARY

Based on this review of literature, relationships can be seen to develop out of repeated interactions between people in real or virtual space, and to be contingent on time available to interact, personality, perceived similarity, expected common future and norms, with catalysts facilitating interaction. In apartment complexes, use of shared space, territory, visual permeability and control over contact appear to be important factors, but few studies to date have empirically tested the ways in which these factors relate and contribute to relationship development.

[11] The Happy Homes toolkit (The Happy City, n.d.) being one notable but non-regulatory exception: a practice guide based on academic research.

4. THEORETICAL FRAMEWORK

Now that questions of the what, why (Chapter 2) and how (Chapter 3) of CST development have been explored, this chapter discusses the research's theoretical framework. This draws on theories of assemblage (Deleuze & Guattari, 1980/1987; DeLanda, 2016a) as the overarching ontology and conceptual approach, behaviour setting theory (Barker, 1968) for its use in conceptualising expected behaviour within an environment, and affordance theory (Gibson, 1977) to aid in considering the specifics of how the environment guides or constrains behaviour. Section 4.1 provides an overview and background on each of these theories and considers their specific utility to this research. Section 4.2 draws the theories together, considering how assemblages are conceptualised and focused upon in this research, and presents a conceptual model of an apartment complex and its local area. It then considers environmental determinism and agency and clarifies the terminology used throughout the remainder of the thesis.

4.1. THEORETICAL BACKGROUND

4.1.1. Assemblage Theory and Assemblage Thinking

Assemblage theory is part of the 'post-social turn', sharing ground with the new materialist turn (Pels, Hetherington, & Vandenberghe, 2002; Whatmore, 2006), the post-humanist turn (Amin, 2008) and more-than-human concerns (Panelli, 2010) in several disciplines including cultural geography and housing studies. In these approaches the previous Enlightenment-derived focus on human reason and agency shifts to a wider consideration of non-human agents and factors, decentring the human from analyses and considering interconnections rather than separating the social and natural worlds (Gabriel & Jacobs, 2008).

The concept of assemblage (or '*agencement*' in the original French) was originally developed in Deleuze and Guattari's (1980/1987) treatise "A Thousand Plateaus: Capitalism and Schizophrenia" as a philosophical underpinning to complexity theory and dynamic systems theory (Holland, 2013). In this, it sought to replace more traditional Kantian metaphysics where the universe is "mechanistic, calculable" (Holland, 2013, p. 17). It provides a way of conceptualising reality where simple Newtonian cause and effect are no longer sufficient to explain the world, and focuses on how a particular state of being has been 'actualised' among all possibilities, and the range of these possibilities ('virtual potential') in the past, present and future (Deleuze & Guattari, 1980/1987; Holland, 2013; DeLanda, 2016a). From these beginnings, the concept of assemblage theory (or increasingly in the social sciences, 'assemblage thinking' (Baker & McGuirk, 2017)) has been drawn on in multiple ways. The following sections outline several of these formulations.

Assemblage as Noun and Ethos

'Assemblages' (noun) are considered to be entities[12] consisting of many heterogeneous, ontologically diverse parts that, when interacting, are more than the sum of the parts – they have emergent qualities that are immanent, with no special 'essence' in addition to the parts (Deleuze & Guattari, 1980/1987; Dovey, 2010; DeLanda, 2016a). Parts can be, non-exhaustively, people, concepts, buildings, feelings or vegetation, and can exist at different spatial or temporal scales. Assemblage theory considers relationships between the parts not constitutive of the parts' basic identity[13] ('exteriority'), allowing parts autonomy and the ability to move from one assemblage to another. These concepts mean that assemblage theory avoids both macro-reductionism, where events are explained through structure and societal forces, and micro-reductionism, where events are explained through the agency of significant actors. Instead, events are explained by considering how the interactions between the parts constitute the assemblage, and how the assemblage provides opportunities and limitations for the parts and vice versa. A community can for example increase conformity through gossip, but only if there is interaction between individuals (DeLanda, 2016a).

Assemblage theory assumes materialist and realist ontologies (Whatmore, 2006; Anderson, Kearnes, McFarlane, & Swanton, 2012a; DeLanda, 2016a), in that it considers both human and non-human contributions and 'affects' in an assemblage, emphasising not just human experience or ideas as in a phenomenological or discourse approach, but also the material environment and its reality (Di Masso & Dixon, 2015). It also focuses on change, following the history of how an assemblage has come to be in its present state, and how it might develop in the future; the original French term *agencement* implies both the finished product and the process of fitting together the pieces. Assemblage theory encourages "an ethos of engagement that attends to the messiness and complexity of phenomena; an ethos that is committed to process-based ontologies that challenge conventional explanations by focusing on materially diverse configurations; and an ethos that emphasizes the open-ended, unfinished nature of social formations" (Anderson, Kearnes, McFarlane, & Swanton, 2012b, p. 175).

Assemblage Thinking in the Social Sciences

Over the last decade, the concept of assemblages has been increasingly drawn on in many fields dealing with urban issues, including human and cultural geography (Whatmore, 2006; Anderson

[12] Contested by Buchanan (2017, p. 463), who argues that "assemblages […] explain the existence of things" rather than being entities in themselves.

[13] The identity of a whole assemblage, however, is an emergent quality of its parts.

et al., 2012b; Power, 2015), critical urban theory (Brenner, Madden, & Wachsmuth, 2011; Dovey, 2011; McGuirk, Mee, & Ruming, 2016) and urban design (Sendra, 2015; Dovey, 2016). Its approach to complexity and process makes it eminently suitable to understanding cities where "the past, present, and future […] are constantly being brought into being, contested, and rethought" (McFarlane, 2011b, p. 652). Various authors focus, for instance, on the role of power and desire in structuring urban assemblages (for example McFarlane (2011b), Anderson et al. (2012b) and Dovey (2016)), on how materiality affects perceptions of neighbours (as in Power's (2015) analysis of nuisance noise in apartment buildings), and the utility of assemblage thinking for considering diversity and public space (Dovey, 2011; McFarlane, 2011a; Sendra, 2016). Sendra (2015, p. 822) argues the value of "understanding the relationships and interactions that produce tolerant sociability as a sociomaterial symbiosis—an assemblage of both people and material elements including urban infrastructure, spatial configurations, vegetation and other physical features of the built environment" when designing interventions in public spaces used by diverse populations.

The use of assemblage theory in the social sciences (or 'assemblage thinking') increasingly departs from its Deleuzian/Guattarian roots, a shift criticised by Buchanan (2017). While several authors (Dovey (2010) in particular) do follow Deleuze and Guattari's (1980/1987) concepts closely, Buchanan (2017, p. 458) argues that there is often "undue emphasis on the idea of 'assembling'", where parts are coming together or apart, rather than attending to the structuring nature of assemblage and the forces that shape available possibilities. Similarly, 'assemblage' is also commonly reduced to a simple noun, implying only a grouping of parts rather than a wider ethos or orientation, a use criticised by DeLanda (2016a) and Anderson et al. (2012b).

In this thesis I use "assemblage" as a noun, and in addition engage in assemblage thinking as an overarching orientation to the catalytic process in which particular assemblages *come to be* at a particular moment in time, and what they may become in the future based on their particular properties and structure (in contrast to related Actor-Network Theory, which focuses more on fluid change and subsequent stability of form (McFarlane, 2011b; Müller & Schurr, 2016)). A concept that is helpful in this regard is DeLanda's (2016a) reconceptualization of Deleuze and Guattari's (1980/1987) 'territorialisation' and 'coding'.

Territorialisation and Coding: Parametric Assemblages

In the original text (Deleuze & Guattari, 1980/1987), territorialisation (and deterritorialisation and reterritorialisation) are processes that increase or decrease the delineation and permeability of physical boundaries, and the degree to which parts are homogeneous, either through selection or a homogenising process. Coding denotes how extensively the behaviour and relationships in the

assemblage are coded through language (legislation, sacred texts, marketing, rules) and how strictly these codes are followed.

DeLanda (2016a) argues that territorialisation and coding may be seen as parameters,[14] with some assemblages highly territorialised and coded (entities Deleuze and Guattari (1980/1987) would describe as 'strata'), and some with very low territorialisation and coding. More highly territorialised assemblages have a more defined identity, while highly deterritorialised assemblages have a less defined identity.

Assemblages become territorialised and coded through two processes. Territorialisation is associated with the first process of sorting (homogenisation), while coding is associated with the second process, consolidation. Assemblages are subject to continual coding, de-coding, territorialisation and deterritorialisation processes. For example, increasing social cohesion would be a territorialisation process and policing apartment complex rules a coding process, while increasing cosmopolitanism might have a deterritorialising effect and religious secularisation a decoding effect on an assemblage (Mackay, 2014). Considering social networks in terms of territorialisation and coding can lead to valuable insights; DeLanda (2016a, p. 30) notes that "deterritorialised networks require their members to be more active in the maintenance of links and to invent new forms of communal participation, given that connections will tend to be wider and weaker and that ready-made rituals for the expression of solidarity may not be available".

The Utility of Assemblage Thinking in this Research

There are three ways in which assemblage thinking can contribute to the investigation of CSTs in shared spaces. First, through its consideration of multiple heterogeneous parts and complex causality, it recognises the complexity of the real world. Second, with its focus on dynamism and historicity, it supports a focus on how networks of CSTs in an apartment complex may be produced through interactions over time. As Anderson et al. (2012b, p. 172) state, "an assemblage approach demands an empirical focus on how […] spatial forms and processes are themselves assembled, are held in place, and work in different ways to open up or close down possibilities." Third, the idea of coding and territorialisation enables consideration of the possibilities and guidance available to residents; at what levels are coding and territorialisation apparent in a given apartment complex, how are these levels constituted, and by whom/what?

Parametric territorialisation/coding is helpful for my thesis in that it focuses attention on the level of homogeneity and boundary delineation (territorialisation), and guidance (coding) inherent in

[14] These parameters are different from those presented in an earlier work, DeLanda (2006), where 'material—expressive' was used as the parameter accompanying (de)territorialisation, rather than coding.

the assemblage. Residents of an apartment complex with multiple stages of security (for instance, swipe access at complex entrance, lift, and the door to a shared space) can be reasonably certain that other people met in the shared space will be residents – the space is highly territorialised – and theoretically are more likely to interact because they are aware of their common point of homogeneity. In turn, this interaction may increase the territorialisation of the apartment complex assemblage through greater social cohesion (if the interaction goes well). The coding of the space (the complex's rules and bylaws, signs in the space as well as cultural norms) will restrict and guide behaviour, affecting whether people are likely to talk or use the space.

Assemblage theory by nature is very open, avoiding "a priori claims about the form of relational configurations or formations" (Anderson et al., 2012b, p. 176). This enables it to be applied to phenomena as diverse as cities, atoms, languages and animals, but it also means that much of the analytical work is done with only a sparse structure. There are advantages to this, as the research will be open to new possibilities, however it is also useful to draw in previous work on possible forces and relationships, as advised by Brenner et al. (2011). The following sections therefore consider behaviour setting theory (Barker, 1968) and affordance theory (Gibson, 1977).

4.1.2. Behaviour Setting Theory

Behaviour setting theory is a foundational theory in ecological (or environmental) psychology, developed by Barker (1968) and colleagues over a decades-long field study of the US town of 'Midwest'. They noticed that behaviour varied widely between settings for a single individual, often showing greater variation than the behaviour between individuals in the same setting. From this observation, they built up a detailed theory of how forces in the environment (including social forces) might combine to produce the more standardised behaviour observed between individuals. The theory has been hailed as a "powerful theory in psychology […] strong empirically because settings have been repeatedly shown to have very strong influences on behavior" (Scott, 2005, p. 321). It is widely used in environmental psychology and environment-behaviour fields, as well as other disciplines including economics and criminology (Scott, 2005). Specific examples include the evaluation of residential environments (Bechtel, 1982), cross-cultural management research (Molinsky, 2007), and the examination of housing paths (Coolen, 2014).

Behaviour settings consist of time-and-space bounded locations (milieus) in which particular types of behaviours are performed and generally expected (programs of 'standing patterns of behaviour' (SPB), which can be compared to programs of norms). These 'standing patterns of behaviour' are 'synomorphic' with the milieu, that is, they match with the milieu and occur within its temporal and geographic boundaries. The combined social and material forces of the behaviour setting work to perpetuate the standing patterns of behaviour through guiding (or demanding)

particular behaviours, as well as ensuring non-conformists are ejected or made to feel unwelcome. Different standing patterns of behaviour may be assigned to people fulfilling different roles in the environment, and multiple standing patterns of behaviour can operate in the same space.

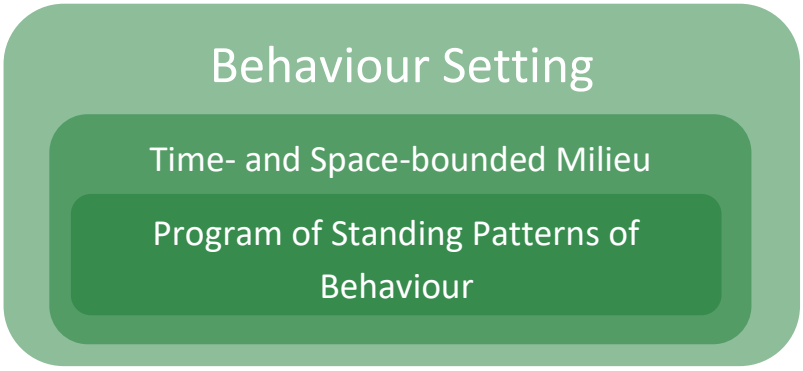


Figure 4.1: Diagram of a Behaviour Setting

The time scale at which behaviour settings are conceptualised is relatively large. For example, in the behaviour setting of a school maths lesson (Barker, 1968), individual behaviours such as passing notes or staring out the window may not be congruent with the specified behaviour setting. Over the longer timescale of a week, however, it is likely that the goals of the behaviour setting (learning maths) will be carried out by participants in the setting. The teacher, having power over the program due to their role, will engage in measures to bring the pupils back in line with the setting's standing patterns of behaviour.

Criticisms and Additions

The theory of behaviour settings has not been widely adopted outside the fields of environmental psychology and environment-behaviour. In a discussion of why this may be so, Scott (2005) argues that the individualistic perspective and laboratory experimental paradigm common in the western world in the past half century has made a theory that focuses on the wider environment difficult to understand and adopt. The labour- and time-intensiveness of the methods may also be factors, as well as difficulties with dissemination of the theory through Barker and colleagues' relatively few students, as well as uncertainty around how it relates to other fields, including psychology (Scott, 2005).

Behaviour settings have been criticised for oversimplifying the real world, as well as ignoring individual motives and psychology (Scott, 2005). The theory is evidently based in a positivist view of the world (Popov & Compalov, 2012), with terms such as 'input', 'circuit', 'S-MECH' and 'program' reminiscent of computing terminology. Lefebvre (1991, pp. 20-21), while not commenting specifically on Barker's work, condemns "technical positivity" and argues that "such reflexive and technocratic thinking emphasizes the explicit and avowed […] rejected too, on the same basis, is the kind of thinking that uncovers what is thus concealed." By reducing the world

to cause and effect and providing a strict quantitative framework for research, much can be overlooked, including meanings and unexpected catalysts or associations.

Behaviour setting theory also shares philosophical ground with the contemporaneous behaviourist paradigm in psychology, where the focus was on what could be observed and the mind was seen as a 'black box' (Polkinghorne, 2005). Barker (1968, p. 29) is careful to disassociate behaviour settings from the psychological states and motivations of their inhabitants, noting that "the content and structure of a person's own psychological world, his life-space, are by no means determined by the behavior setting". Behaviour settings, in this formulation, can predict general patterns of behaviour, but cannot predict psychological effects on inhabitants.[15] In this, Barker avoids the difficulty of determining small-scale effects of the environment on individuals, but misses an opportunity to examine and critique aspects of the behaviour setting in ways that might contribute to our understanding of psychological states (Wicker, 1987).

While the non-relatedness of the behaviour setting and psychological experiences and motivations may be true in some cases in the examples he gives (failing or succeeding in an examination behaviour setting, attending church for spiritual or social reasons), some schools of critical thought developed since the 1960s would argue that aspects of the behaviour setting (accepted standing patterns of behaviour, structures of power, language) structure reality for their inhabitants (Foucault, 1977; Giddens, 1984; Bourdieu, 1994; Roberts, 2006), and understanding the setting can shed light on psychological states, as well as the values associated with the setting (Fuhrer, 1990).

Wicker (1987) argues that Barker's (1968) theory treats behaviour settings as relatively inert and does not touch upon how settings may come into existence or evolve. He advances a more temporally-aware formulation of the theory, advising attention to "the creation, growth, differentiation, decline, and termination of settings, as well as conditions that existed before they were created" (Wicker, 1987). Additionally, Wicker (1987) criticises the treatment of people as interchangeable, emphasising the importance of personal attributes such as the drive and communication skills of entrepreneurs, as well as noting that motives and cognitions are likely to play at least some part in the performance of standing patterns of behaviour.

The behaviour setting also perpetuates the status quo, partly through inculcating particular roles in people and partly through overtly countering perceived deviance. Fuhrer (1990) links behaviour

[15] 'Understaffing', where a person is likely to perform several roles due to a shortage of people in the setting, is an exception to this. Barker (1968) predicted that people in this situation were likely to feel more empowered than those in optimally staffed settings, however was dissatisfied with the non-deterministic nature of this prediction.

settings to social control; if one can change a setting's standing patterns of behaviour, one can control the people inhabiting it. Social movements, protests and riots could be seen as people reacting to the effect of behaviour settings and associated control on their psychological states (not to mention their physical and economic well-being). From these, behaviour settings might evolve in response to wider social forces.

Additionally, the theory of behaviour settings assumes a relatively homogeneous, western standpoint, with one culture that agrees upon a program and carries it out. While the researchers also studied behaviour settings in a small English town and noted differences in both number of behaviour settings and programs carried out within them, both English and American locations were relatively small (around 1,000 people) and homogeneous. How do behaviour settings work where groups with different ideas of the appropriate program use the same milieu?

The Utility of Behaviour Settings in this Research

Of the various concepts that comprise behaviour setting theory, standing patterns of behaviour are most useful for this research. They make explicit the connection between the environment and behavioural norms, and when viewed through the lens of assemblage thinking they can be seen as 'plateaus' of behaviour in a particular space (further discussed in 4.2).

In combination with an awareness of cultural differences, the concept of standing patterns of behaviour is useful to consider how these differences might play out in a particular space. Understandings of 'correct' or 'polite' behaviours are likely to differ between people from rural, suburban and urban areas, as well as between people from different countries. Given the great diversity of residents living in large apartment complexes in Sydney, residents are likely to follow a number of different standing patterns of behaviour in a particular space, and the acceptance or evolution of these behaviours will relate to cosmopolitanism (Sennett, 2008).

Barker's (1968) ontology is positivist, assuming that the world is quantifiable through scientific knowledge. This does not align with the recognition of complexity and catalytic causality in assemblage theory (Anderson et al., 2012b), and in this research I adopt assemblage's assumption of complex, non-linear catalytic causality, and its realist and materialist ontologies (Anderson et al., 2012b). The more encompassing concept of an assemblage has therefore been used in place of milieu/behaviour setting, which allows for a greater variety of influences on standing patterns of behaviour. It better allows for change and seeks to understand complexity, rather than oversimplifying it.

4.1.3. Affordance Theory

Behaviour setting theory describes how particular behaviours occur in particular environments, but does not go into detail on the particular aspects of the built environment that constrain or guide behaviour. The theory of affordances (Gibson, 1977) is helpful here. Affordances are combinations of properties of objects (or environments or animals) that allow an animal to carry out particular behaviours (Gibson, 1977). Examples include windows in a tall building that afford watching sunsets or activity below and chairs that afford sitting on. Gibson (1977) developed the concept of affordances through his work studying perception, arguing that we directly perceive actions that may be carried out with an object. Affordances exist with reference to a perceiver, such that an object will have a different (but likely overlapping) set of affordances for a dog as opposed to a human, and a child as opposed to a tall adult.[16] Gibson (1977, p. 75) links affordances to the way in which we navigate and make sense of the world, noting that affordances are "what we normally pay attention to" when encountering an object.

The engineering and industrial design field views affordances in more restricted terms than Gibson, concentrating on the behaviours that are *invited* by the object (Norman, 2002; Maier & Fadel, 2009). Norman (2002) names these 'perceived affordances', and discusses the failures and successes of everyday objects in terms of how their perceived affordances are appropriate to their actual affordances. For example, a highly-transparent glass window may have a perceived affordance of passing through it, but does not in fact afford this behaviour. Affordances in these cases are often learned and, because of this, may be culturally specific. Norman's (2002) affordances are useful for focusing on the likely uses of objects, rather than all possible uses, and especially on how a design might invite particular behaviours by drawing on cultural and physical cues.

Affordances also afford behaviours to a greater or lesser extent (Maier & Fadel, 2009). A narrow bench at a bus stop affords sitting on, but not comfortably, and so is likely to discourage a person from sitting too long. Maier and Fadel (2009) use the term 'quality' to describe the extent to which an affordance matches a particular behaviour, and advocate for designing objects and environments with high quality affordances that allow smooth attainment of goals.

The Utility of Affordances in this Research

Affordance theory (in addition to behaviour setting theory) provides a way to examine

[16] Gibson (1977) was unsteady on this relational nature of affordances, also arguing that they exist separately in the real world ready to be perceived, and so implying a realist ontology (Costall, 1995).

assemblages at a more detailed level. Coolen (2014) points out that particular affordances are associated with particular behaviour settings, such that people who seek to, for instance, meet other people, may attend a behaviour setting that is likely to afford this behaviour, such as a networking function or party for newcomers. These settings have standing patterns of behaviour that include striking up conversations with strangers, supporting the development of relationships, and these patterns are better afforded by, for instance, a lack of seating and a room sized such that people are obliged to stand at close quarters. Focusing on affordances in this thesis allows analysis of what might constrain or facilitate social interaction in shared spaces.

The concept of affordances also better enables a consideration of design in assemblage thinking, focusing on the salience and quality of actions that an object or space affords (Norman, 2002; Maier & Fadel, 2009) while assemblage thinking puts more emphasis on the structure around the perceiver that leads them to put particular affordances to use. DeLanda (2016b) stresses written and spoken language (coding) as a way to entrench behaviour. The strength of language, especially in written form, is its relative permanence and its ability to be transferred from assemblage to assemblage (as seen in work on policy mobilities (Pow, 2014; Baker & McGuirk, 2017)). It is unclear, however, what role is played by non-linguistic permanent, transferrable/imitable objects such as architecture and design 'language', which embody and restrict meaning and actions arguably just as much as linguistic language (for example, Lofland's (1998) argument that built form has a greater impact on behaviour than rules). Affordances in Norman's (2002) sense, with a stress on the affordances salient to a perceiver, may be seen as this missing physical counterpart to coding, balancing DeLanda's (2016b) focus on linguistic coding.

4.2. Drawing Theories Together

This section draws together the concepts discussed in the previous section, considering the definition and scope of an assemblage in this research, presenting the conceptual model, and considering questions of determinism and agency, before defining the terminology used in the remainder of the thesis.

4.2.1. Assemblages Focused Upon in this Thesis

DeLanda (2016a) argues for a recognition of nested assemblages, and an extension of the term to cover both highly coded and highly territorialised stable groupings as well as the more traditional use connoting open, dynamic groupings. Following this, almost anything may be considered an assemblage, and it is therefore important to pinpoint assemblages that are most useful to examine my research questions.

An apartment complex may be seen as a socio-material assemblage of residents, built/natural

environment, standing patterns of behaviour, affordances, management, design intentions, marketing and location (though this list is not exhaustive). Each of these is also made up of assemblages: residents are assemblages of their past experiences, learnt behaviours, ideas, appearance, culture, present pressures and genetically-coded personality, amongst others. Shared spaces are seen as assemblages of (non-exhaustively) the built/natural environment, standing patterns of behaviour, coding and affordances. The assemblage also relates to the wider neighbourhood assemblage, and also the city assemblage. Even individual CSTs may themselves be considered as assemblages of past interactions and their associated environments, the homogeneity of the people involved (McPherson et al., 2001) and their motivations.

Analysing assemblages at multitudinous levels quickly becomes unwieldy, however, so in this thesis I focus upon the level at which the "interconnectivity and flows" (Dovey, 2016, p. 263) between people are mediated and performed by CSTs (and other stronger relationships), that of the apartment complex. Each case complex and its residents are regarded as a focal assemblage, and by association the assemblage includes the spaces residents use within ten minutes' walking distance of the complex, as well as everything encountered both within the complex and within ten minutes' walking distance. Ten minutes' walk is chosen to focus on each resident's functional 'home area' (based on Kearns & Parkinson, 2001), recognising that some residents will walk further than others in this time. While I focus on these assemblages in analysis, it is important to remember that "analysis at a single scale can be inherently blind" (Dovey & Wood, 2015, p. 4), and the assemblages under investigation will interact with assemblages elsewhere and at different scales.

Attention will be paid to resident/local resident/staff relationships as central to the thesis, considering how coding, perceived affordances of spaces and individual residents' territorialisation affect these. While the assemblage is affected by many historical factors at both macro and micro scales (for instance, compact city policy implementation, developer and designer decisions), the research focuses on factors arising in the post-occupancy period of the complex. This is due to the concentration on resident experience rather than policy/developer/design intentions in the spirit of post-occupancy evaluation (Zimmerman & Martin, 2001), the difficulty of following the pre-occupancy history due to access to informants (e.g. developer receivership), as well as a practical need to restrict the scope of the research.

4.2.2. Conceptual Model

Figure 4.2 presents a conceptual model for the research, integrating the different aspects of assemblage thinking, behaviour settings and affordances used. The diagram applies the conceptual model to a case apartment complex (seen as the focal assemblage and made up of three

nested assemblages).

The three nested assemblages in the diagram have been simplified from what might occur in reality. The first is composed of the built/natural environment and people (environment, human factors). Over time and with interactions between these factors, standing patterns of behaviour are established as an emergent quality, which then forms the *environment-people-standing patterns of behaviour* assemblage (Assemblage 2). Over time and with interactions, CSTs form and are included in a third assemblage, which has emergent qualities relating to the experience of living in an apartment building. Note that a real-life case is likely to be far messier than this, and unlikely to follow clean, chronological paths from Assemblage 1 to 3. The focus on CSTs has also necessarily highlighted their role, though other factors unrelated to CSTs will come into the experience of living in a large apartment complex.

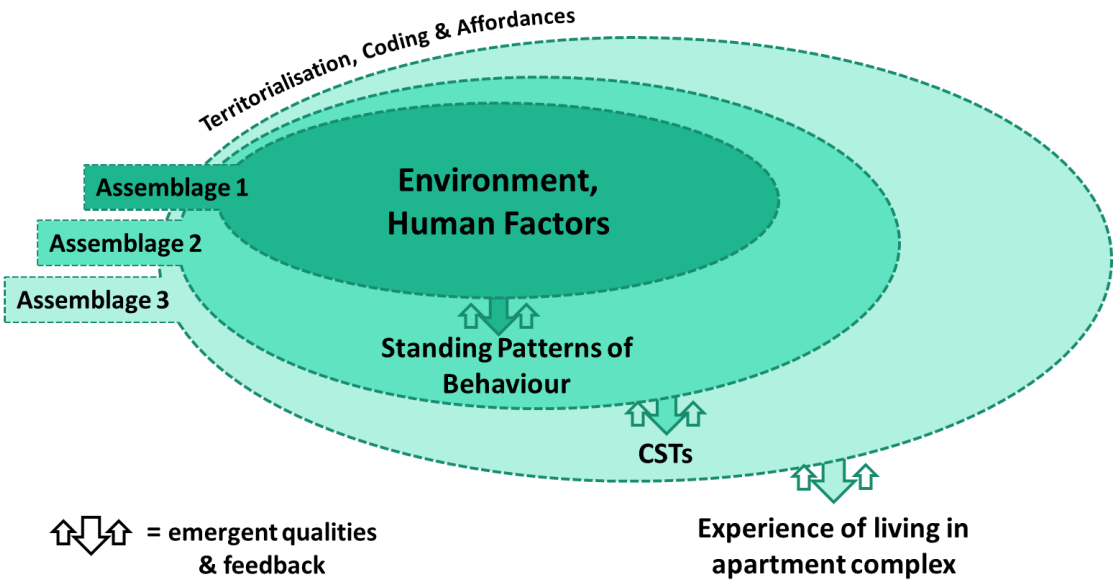


Figure 4.2: Diagram of an Apartment Complex Socio-material Assemblage

The assemblages' outlines are dotted to represent territorialisation, coding and affordances, which relate to how distinct the focal assemblage is from its context.

Territorialisation (physical boundaries, group homogeneity), coding (linguistic rules) and affordances (environmental guides or restrictions) affect how rigidly standing patterns of behaviour are followed, and potentially how socially cohesive the residents are. The parts of the assemblage may have high levels of territorialisation/coding or few affordances (meaning there are only a few acceptable SPB) or be deterritorialised/decoded with many affordances (providing little guidance on acceptable SPB). DeLanda (2016a) argues that territorialisation increases within physical boundaries as well as when homogeneity increases, which is useful to keep in mind when considering secure-access apartment complexes with residents from diverse backgrounds.

4.2.3. Considerations

Having outlined and discussed the theories used, it is now necessary to consider several contested subjects. First, the impact of the environment on behaviour has been much debated, and this discussion is important to support any findings on the role of the built/natural environment in supporting CSTs. Secondly, some realist/materialist theorists attribute agency to inanimate things, while others refute this. Taking a position on this enables clearer consideration of how different factors affect one another. Lastly, using a combination of theories necessitates stating the particular terminology chosen for this research.

Environmental Determinism and Predicting the Future

This thesis is oriented towards making a contribution to practical theory, and producing knowledge that can be used to design apartment complexes that better support CSTs. In order to produce this knowledge, it is necessary to be able to predict the outcome of particular environment interventions to some extent.

Opinion varies on the extent to which outcomes may be determined by the environment. Environmentally deterministic theories assume that behaviour can be controlled by the environment. While these theories are generally considered false and out of date (Dovey, 2016), their influence may still be seen in certain examples of practice where there is too great a reliance on design factors, while ignoring other less tangible factors (Talen, 1999; Franklin, 2001; Ziller, 2004). On the other hand, environmental possibilism states that the environment offers opportunities for action and sets limits on behaviour, but what actions are taken are entirely up to the choice of the individual (Bell, Greene, Fisher, & Baum, 1996). This approach has been criticised for minimising the importance of the environment (Lofland, 1998), as well as its implication that one cannot predict the outcomes of changes to the environment (Bell et al., 1996). The reality is likely to be somewhere in between (Rapoport, 1977), with certain behaviours more or less probable according to features of the environment ('environmental probabilism').

Assemblage theory sidesteps the question of environmental determinism by at once including a multiplicity of heterogeneous (environmental, conceptual and human) factors with capacities to affect and be affected, and conceptualising causality as non-linear and catalytic, with the same cause capable of leading to different effects, and different causes capable of leading to the same effect, depending on the relations between the factors in the assemblage (Anderson et al., 2012b; Scott & Storper, 2015). This leads to a methodological difficulty if the goal for this thesis is practice-oriented. How can the thesis lead to knowledge capable of being applied in design practice if causes might lead to highly diverse outcomes?

Prediction in assemblage is not equivalent to chaos (Buchanan, 2017). DeLanda (2016a) attempts to systematise the possibilities available to an assemblage through the concepts of *possibility space* and *virtual diagrams*, where high levels of coding and territorialisation restrict possibilities and perpetuate the status quo (i.e. outcomes are highly determined) and low levels of the same increase possibilities and reduce determinism. Even with low levels of coding and territorialisation, DeLanda (2016a) argues that patterns can be identified within the possibilities. Using the concepts of attractors and state thresholds from mathematics and physics (and drawing on readings of Deleuze (1994)), he outlines how assemblages with different levels of coding/territorialisation might circle around single or multiple points of possibility ('attractors'). The concept of an attractor can be compared to the eponymous 'plateaus' of Deleuze and Guattari's (1980/1987) work, as well as Barker's (1968) standing patterns of behaviour and social norms in general – behaviour (of both people and objects) will tend to circle around particular possibilities, based on the conditions of the assemblage.

While in DeLanda's conceptualisation (and similarly to Deleuze and Guattari's (1980/1987) original 'plateaus'), it appears that each assemblage will have its own attractor based on its specific history and interaction of parts, work on norms and 'genotypes' of behaviour settings (Barker, 1968; Wicker, 1987) implies that we can make more generalised statements on the types of behaviours that can be expected in particular settings. DeLanda's contribution here is that attractors differ at different levels of territorialisation and coding (different states of being), and by studying tendencies and trends and observing changes over time and attractors can be identified, enabling an estimation of what outcomes might happen under certain conditions. This means that results from the present research may be reliably used to predict how factors will influence CST development and produce a particular 'plateau' of social behaviour and CSTs, and so the findings can have a practical use.

At this point it is important to consider the implications of successfully guiding standing patterns of behaviour in a setting. There are of course a multitude of factors that may affect whether people interact in space, how they interact, and how this interaction may initiate, maintain or progress a social relationship. But even if we *can* determine and constrain behaviour to a great extent through the design of common spaces, *should* we? Sennett (2012) discusses the importance of incomplete specification in environments, in order to both enable future evolving uses, and to allow users some degree of agency, leading to feelings of competence and capability. Similarly, Dovey (2016, p. 42) speaks of the role of values in the overdetermination of public spaces, noting that underdetermination "expand(s) the possibilities for public space rather than seek[ing] to shape an idealized public life." A space should allow a wide variety of standing patterns of behaviour to cater for agency and different ways of using spaces, though Dovey (2016) also warns against

severe underdetermination, which can lead to barren, empty spaces. Similarly, Brill (2001) notes that overdesign of spaces prevents their appropriation by users.

Human and Non-Human Agency in Assemblage Theory

Another question is that of agency for non-human factors. DeLanda (2016a, p. 9) does not consider the question of non-human agency worth discussing, devoting only a sentence to it ("One can, of course, include only human beings as agents") before moving on to consider the efficacy of individual human agency against wider societal structures. Many other writers on assemblage, however, especially those influenced by Latour's (1996) Actor-Network Theory, consider that agency is spread across human and non-human parts (Gabriel & Jacobs, 2008), with Anderson et al. (2012b, p. 181) arguing that "assemblage thinking is more attentive to the autonomy of component parts". The authors may be focusing on different aspects of the concept of agency, with DeLanda (2016a) emphasising a more self-aware form of agency, while other authors wield the term 'agency' as a way to highlight the ability of human and non-human parts to affect other parts. DeLanda (2016a) notes that the term 'agency' connotes active choices, however he does not offer a replacement term for non-human 'agents' apart from 'part', which itself seems to imply cogs in a machine with little autonomy. I prefer the term used in Actor-Network Theory, *actants* (Latour, 1996), which connotes a capacity to affect and be affected without attributing self-aware agency to inanimate objects or other non-human things. It also does not suffer from overly-common use like 'part', which enables better precision. Latour (1996, p. 373) notes that "an actant can literally be anything provided it is granted to be the source of an action", matching assemblage thinking's ontologically-diverse perspective.

Terminology

This leads to the question of terminology. Buchanan (2017, p. 458) criticises a "plain language approach" to assemblage, where much of the original terminology is stripped from discussion or reduced to bare-bones, commonly-understood meaning. The matter is complicated by translation from French to English (with even 'assemblage' differing in meaning from the original '*agencement*'). There is, however, merit in using terminology which is more immediately accessible to a layperson or, in this case, specific audiences such as planners or designers (Taylor & Hurley, 2016). My integration of multiple theories (assemblage, behaviour settings and affordances) also necessitates choosing terms and pinning down their meanings for my specific purposes. I follow Dovey (2016, p. 1) in viewing theory as a "conceptual toolkit" and the "means rather than the end" (p.5), with concepts chosen based on their usefulness for tackling a particular problem. The following outlines the terms I use in this thesis.

Term	Origin	Explanation
Affect	Assemblage theory (Deleuze & Guattari, 1980/1987)	Used as a noun in the same sense as 'effect', however emphasising influence rather than causality.
Actant	Actor-Network Theory (Latour, 1996)	A 'part' of an assemblage, which may be any 'thing' that affects another 'thing'. Comparable to 'factor', which is used in place of 'actant' where assemblage thinking is not directly discussed for increased accessibility.
Affordance	Affordance theory (Gibson, 1977), with further narrowing to 'perceived affordances' by Norman (2002)	Combinations of properties that allow (or invite or constrain) certain behaviours. Can be compared to assemblage's 'functional capacities' or 'emergent capacities', but used due to its prevalence in design fields (Norman, 2002; Maier & Fadel, 2009; Dovey, 2016) as well as its conciseness and immediately-apparent meaning. Also understood as the physical counterpart to assemblage's 'coding'.
Assemblage (noun)	Assemblage theory (Deleuze & Guattari, 1980/1987)	Entities consisting of many heterogeneous, ontologically diverse parts/actants/factors that, when interacting, are more than the sum of the parts – they have 'emergent qualities'. These assemblages are nested (DeLanda, 2016a) and overlapping.
Assemblage thinking	Based on assemblage theory (Deleuze & Guattari, 1980/1987)	"An ethos of engagement that attends to the messiness and complexity of phenomena; an ethos that is committed to process-based ontologies that challenge conventional explanations by focusing on materially diverse configurations; and an ethos that emphasizes the open-ended, unfinished nature of social formations" (Anderson et al., 2012b, p. 175). Also entails consideration of how actants open up or close down possibilities.

Term	Origin	Explanation
Casual social tie (CST): absent tie, acknowledgement tie, chatting tie	Neologism based on 'weak tie' (Granovetter, 1973). Absent tie from Granovetter (1973). Acknowledgement tie and chatting ties based on Henning and Lieberg (1996), amended in Thompson (2015b).	Loose relationships with low time and emotional commitments, where people may simply recognise each other (absent tie), acknowledge each other in passing (acknowledgement tie), or engage in extended small talk (chatting tie). They may also be able to call on each other for favours. 'Acquaintance' is used to denote an individual one maintains a CST with.
Coding and decoding	Assemblage theory (Deleuze & Guattari, 1980/1987)	Consolidation of behaviour/possibilities based on language, for example rules, bylaws or signage.
Emergent quality	Assemblage theory (Deleuze & Guattari, 1980/1987)	A quality such as place attachment, social cohesion or simply a CST produced through the interaction of actants in an assemblage.
High density	Australian Bureau of Statistics (2004)	Areas where housing predominantly takes the form of residential complexes of four or more storeys.
Local area		The surroundings/ local neighbourhood of an apartment complex, within approximately ten minutes' walk (see Kearns and Parkinson (2001)).
Shared space		Any communal apartment space, commercial or public space accessible to residents.
Standing pattern of behaviour	Behaviour setting theory (Barker, 1968)	A particular set of behaviours that are expected and usually followed in a particular time and space; the norms of a space. May differ depending on culture.
Territorialisation and deterritorialisation	Assemblage theory (Deleuze & Guattari, 1980/1987; DeLanda, 2016a)	Processes that increase or decrease the delineation and permeability of physical boundaries, and the degree to which parts are homogeneous, either through selection or through a homogenising process. An assemblage can be territorialised to various degrees, and may be highly deterritorialised along one dimension while highly territorialised along another.

Term	Origin	Explanation
Triangulation	Whyte (1980)	Features of a space that break social barriers and spark conversation, e.g. a busker or food stand.

4.3. SUMMARY

This chapter has discussed the three main theories that inform the research approach in this thesis: assemblage thinking, behaviour setting theory and affordance theory. It argued the case for assemblage thinking as an approach that rises to the challenge of real-world complexity and as an orientation towards processes of production and change over time, with social networks in large apartment complexes seen as a collection of parts producing a whole through "flows, alliances and synergies" (Dovey, 2016, p. 263). Behaviour setting theory (Barker, 1968), specifically standing patterns of behaviour, provides a lens with which to conceptualise the behaviours followed in particular spaces, and affordance theory (Gibson, 1977) attends to the guidance or restrictions provided by the environment.

5. RESEARCH APPROACH

This chapter describes and justifies the methods used in the research, namely case studies including surveys, interviews and affordance evaluation of shared spaces based on photography and fieldnotes. It first restates the thesis aim and research questions, considers the methods commonly used by researchers who draw upon assemblage, behaviour setting and affordance theories, and outlines my research framework and approach. It then discusses case sampling methodology, fieldwork, ethics approval, the development of the questionnaires and methods, and finally data analysis.

5.1. AIM & RESEARCH QUESTIONS

The overall aim of my research is to **generate knowledge about how we might facilitate the development of casual social ties amongst apartment residents through shared space provision.**

My research questions are:

In large apartment complexes and their local areas:

1. **How do casual social ties influence the experiences of apartment residents?**
2. **Where are casual social ties developed and maintained?**
3. **How do human and built/natural environment factors interact to produce casual social ties?**

5.2. THEORIES AND METHODS

The complexity of factors involved in relationship development (including personality, resident homogeneity and design allowing both privacy regulation and visual integration[17]) means that many methodological orientations are ill-suited to the task of conceptualising the phenomenon. Positivist methodologies emphasising cause and effect and seeking to measure quantitative variables (such as in Barker's original (1968) study) are liable to "emphasiz[e] the explicit and avowed […] and completely eschew […] the lateral and heterological realms which lie concealed in praxis" (Lefebvre, 1991, pp. 20-21). More subjectivist methodologies tend to focus on people's interpretation of events and may provide limited insight into how the environment facilitates

[17] See sections 3.1 and 3.2

relationships (Di Masso & Dixon, 2015).

Given behaviour setting theory's more positivist, "labor intensive and time consuming" methods (Scott, 2005, p. 322), I draw primarily on its concept of standing patterns of behaviour and their relationship to affordances, remaining open to unexpected alternative influences. Affordance theory comes from a perceptual psychology background, with associated empirical experimental methods, and is best used in this research as a way to define what experiences a space affords. The territorialisation of objects and spaces is also analytically relevant, that is, how rigidly and in what ways behaviour is guided or restricted by affordances.

Methods used to analyse assemblage include "thick empirical description and micro-scale urban analysis" (Dovey & Wood, 2015, p. 4), sharing ground with anthropology on the one hand (for example, Geertz (1973)) and with environmental psychology's emphasis on real world observation (Barker, 1968; Cooper Marcus, 1990) on the other. The aim of research on assemblage is to identify assemblages and their parts/actants, explore the affordances and 'affects' produced, as well as territorialising and deterritorialising forces, coding, emergent qualities, and trajectories (Brenner et al., 2011; McFarlane, 2011b; Fox & Alldred, 2015; DeLanda, 2016a). Fox and Alldred (2015) note that research itself is a territorialising force, and that the researcher must be cognisant of the structures and theory they are applying to the studied assemblage. At the same time, I would argue, the process of territorialising in research is a necessary one, enabling the production of theory that simplifies the world to a point at which we might better understand it – it is key, however, to remember that the theory is a simplification or territorialisation of the actual world, and will not fully represent or predict actuality.

5.3. Research Framework and Approach

To answer the research questions, I use a mixed-method case study approach to closely examine several large apartment complexes and their local areas, focusing on the actants, processes (trajectories, territorialising forces including coding and affordances) and emergent qualities of the apartment complex socio-material assemblage.[18] Figure 5.1 shows how the different methods inform each other and are analysed through the different modes of analysis, and how these methods and analysis approaches are used to answer my research questions. For example, the resident interviews are informed by information from the survey, as well as fieldnotes, management interviews and 360° photos (which provide a better understanding of the spaces participants mention).

[18] See section 4.2.2 for a conceptual model of this assemblage.

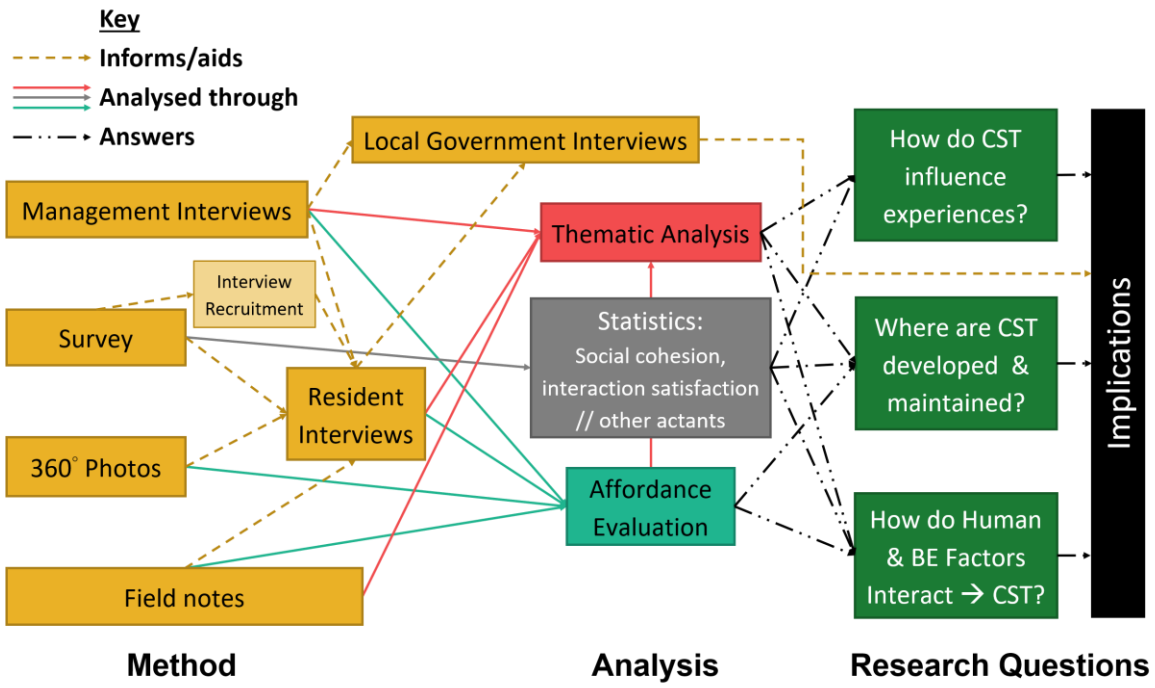


Figure 5.1: Research Framework for Case Studies

Surveying was chosen as a method to gauge perspectives and actants for as broad a range of residents as possible, with minimal time and effort requirements (Zeisel, 2006; Walter, 2010). The survey covers potential actants (e.g. tenure, having a dog) as well as emergent qualities (e.g. quantity of ties, social cohesion), and aims to show influences and associations between actants and emergent qualities through statistical analysis with a large dataset, with complex causality assumed. It also gives an indication of the actants and emergent qualities for each complex, though these should be read with caution given the somewhat-low response rate (see Table 5.4). While statistical analysis draws on a more positivist, quantitative tradition than is generally used in assemblage thinking (Coleman & Ringrose, 2013), I argue that it provides valuable insight on potential associations between actants, allowing triangulation of findings when related to qualitative data.

The survey was also used to recruit interviewees for later, more in-depth investigation of actants, processes and emergent qualities, aiming to elicit emergent qualities and actants not covered by the survey due to length constraints. Some subjects are also better dealt with qualitatively rather than quantitatively, for example experience of shared spaces, with an interviewer able to follow up on questions and ensure shared understandings (Walter, 2010). Interviews with building management and local government officers gave a more complete picture of context and constraints in the complex and local area. Finally, the fieldnotes and photographs were necessary to examine the environment and its affordances directly (Zeisel, 2006; Maier & Fadel, 2009).

These methods will be examined in more detail later in the chapter. First, I consider case studies as a method and discuss case selection.

5.4. Case Studies and Selection Methodology

5.4.1. Case Study as Method

As in much post-social research, a case study approach is necessary (Gabriel & Jacobs, 2008), due to emphasis in assemblage thinking on the individual historicity of each assemblage, as well as the necessity of using a case study for real world observation. Flyvbjerg (2006, p. 237) argues that case studies provide the exemplars critical for deep understanding of a subject, and that they are highly effective tools in theory development due to "a greater bias toward falsification of preconceived notions" than experimental methods. While even a single case study, if well-chosen, can prove or disprove a theory (Flyvbjerg, 2006), multiple cases can serve a similar role to that of repeated experiments in the physical sciences, building evidence towards a particular conclusion (Yin, 2003). Case studies are also vital when examining complex phenomena in their real-life contexts, especially when "the boundaries between phenomenon and context are not clearly evident" (Yin, 2003, p. 13). This relates clearly to assemblage thinking, where boundaries are blurred, everything is seen as an actant that may affect other actants, and each assemblage is formed of sub-assemblages and itself an actant in wider assemblages.

5.4.2. Sydney as Case

Sydney, Australia is undergoing rapid growth, with much of this growth planned through high-density development in established or brownfield areas (Greater Sydney Commission, 2018). Sydney is historically a lower-density city (Randolph, 2006), but many more people are living in apartments (10% of the population in 2016 (Australian Bureau of Statistics, 2016)) and this trend is predicted to continue (Deacon, 2017). Sydney is also a culturally and ethnically diverse city, with 43% of the population born overseas and 38% of households speaking a language other than English at home (Australian Bureau of Statistics, 2016). This combination of a transitioning compact city form, a cultural shift from single-family homes to multi-unit living, a diverse population, as well as the prevalence of investor-owned apartments (Easthope, Buckle, & Mann, 2018) associated with high residential mobility, makes Sydney a valuable case for investigating social tie development in apartments under challenging conditions, and potentially an extreme case following Flyvbjerg (2006).

Within Sydney, three areas were focused upon, based upon work for a pilot survey[19] where all Statistical Area Level 2 (SA2) areas in Greater Sydney were reviewed using Australian Census data (Australian Bureau of Statistics, 2011) and building approvals data. The aim was to determine areas with:

- high growth
- high number of apartment units
- higher-than-average proportion of renters
- high, low or mixed affordability and resident socio-economic level

These first three are likely to make social tie development difficult (see sections 3.1 and 3.2), while having different affordability and socio-economic levels in each chosen area was intended to enable social tie development to be investigated in different socio-economic contexts, given that higher income groups may be more likely to maintain 'community liberated' (Wellman, 1979) networks across the city, rather than connect with those in their neighbourhood (Henning & Lieberg, 1996; Gwyther, 2011). Areas with differing levels of affordability are also likely to differ in terms of the quality of new building. However, it should be noted that Census rental data covers all dwellings within the SA2, and newer buildings are likely to have higher-than average rent.

The three areas originally chosen, Parramatta-Rosehill (higher affordability), Glebe-Forest Lodge (mixed affordability) and North Sydney-Lavender Bay (lower affordability), also have planned urban renewal corridors within them, which are described in *A Plan for Growing Sydney* as "increasing housing close to centres and stations" (NSW Department of Planning and Environment, 2014, p. 11) and so are representative of areas planned for the implementation of high density in policy. Given the focus of compact city policy on increasing populations within urban renewal sites, these areas seemed appropriate for investigation.

Once it became clear that a wide survey of apartment complexes in these areas would not produce useful findings (see footnote 19), the focus shifted to recruiting particular complexes within these areas, or as close as possible to them.

[19] The original study approach called for a wide survey of 63 recently-built apartment complexes in three areas, followed by closer examination of three to six complexes chosen based on survey social cohesion scores. A pilot of four complexes (total 120 units) received just four responses to the survey, a response rate too low to make meaningful decisions or glean insights. The approach was therefore amended to focus on fewer complexes (see section 5.7.3).

5.4.3. Selection of Case Complexes

The aim when selecting case study complexes was to find complexes where literature suggests the presence of barriers to the development of ties or conditions that are not optimal (see sections 3.1 and 3.2), but where the complex nevertheless appeared to support a range of CSTs. While these buildings are unlikely to be the 'critical cases' described by Flyvbjerg (2006), the CSTs associated with them are useful to consider given their residents have successfully overcome theorised barriers.

To ensure the cases supported CSTs, special attention was paid to perceived social atmosphere, to provide examples perceived by residents and managers as being 'friendly' and having a 'good sense of community'. 'Friendliness' and 'sense of community' were chosen due to their relatively common use, and so increased likelihood that residents would be able to identify their complexes as such. It should be noted that these perceptions do not have to be true for all residents – in fact the presence of varying social experiences is illuminating, as residents share the same (or similar) shared spaces, but are likely to differ in various other ways. The existence of shared spaces was also a consideration, as well as the presence of onsite building management.

Based on this, the following criteria were developed to select case complexes.

Table 5.1: Case selection criteria

Criterion	Reason	How this is determined
Complex has a range of shared spaces, and is within 10 min walk of green space/shops/cafés	Range of spaces for residents to use, and to differentiate between in analysis.	Ask resident/manager informant, check area on Google Maps and visit.
Complex has at least 150 units	Too many people to know personally; resident population likely to be higher than 150 people, a suggested upper limit to active personal network size (Roberts, Dunbar, Pollet, & Kuppens, 2009)). Complexes this large are also more likely to have a greater number and variety of shared spaces.	Check strata [20] plan on NSW Land Registry Services site.

[20] 'Strata title' is the most common form of private property ownership used for apartments in NSW (Easthope & Judd, 2010), comparable to condominium ownership. It comprises individual ownership of the unit, shared ownership of common property, and membership in the complex's organisational body.

Criterion	Reason	How this is determined
Complex is 4 storeys or greater	Predicted greater difficulty of making contacts (Abu-Ghazzeh, 1999; Gifford, 2007; Dovey, 2016). The Australian Bureau of Statistics Census data also uses this split, making data more easily comparable.	Check Google Streetview, visit.
Complex built recently (since 2010), but residents have been living there more than one year.	Some residents likely to remember the original move into the complex, and CSTs likely to be of relatively recent commencement, making their evolution easier to remember. Complexes should be open more than one year so that CSTs have had time to develop (following Reid (2015)).	Check strata plan on NSW Land Registry Services.
Complex has renters, owners, people from different backgrounds.	Predicted greater difficulty of making contacts.	Complex in one of the original case study areas and/or social mix according to contacts.
Located in a centre for development	Area changing, and typical of where development is likely to occur in the future, possibly-increased transience, as well as new people arriving.	Large amount of recent and future residential development as identified through the NSW Department of Planning and Environment (2014) plan for Sydney.
'Friendly' and 'good sense of community'	Provides examples of CSTs to study, and allows examination of how this positive state developed despite theoretical barriers.	Ask resident informant and manager.

Several experts on apartments and social impacts of the environment were consulted to identify and recruit case study complexes fulfilling the above criteria. They were Professor Susan Thompson (expert on healthy built environments/HBE), social strategists and development application planners at two local governments, sustainability managers for a socially-conscious large-scale residential developer, and several strata managers. While three case study complexes were originally envisioned to match the case areas' different affordability/socioeconomic contexts, the search for the third complex led to two neighbouring complexes expressing interest. These complexes fulfilled the case selection criteria, however one had only minimal shared spaces within the buildings (lifts, lobbies, corridors, carpark, plus publicly-accessible pocket parks). I decided to include both complexes, given that the process of CST development in a similar

developmental and geographical context, but with differing internal shared spaces, would be enlightening. These may be seen as Flyvbjerg's (2006) 'maximum variation' cases, though following assemblage thinking, emphasis will be placed on process in different contexts rather than attempting to determine the influence of one variable (shared spaces) with others held constant.

5.4.4. Summary of Case Complexes

The following table summarises the characteristics of the case study complexes. Bay Court and Bay Park are within the same larger renewal area, and as such share some characteristics. Further details, including indicative plans of the complex and local area, are found in case chapters 5-8.

Table 5.2: Summary of case complexes

Feature	SHORE	RIVER	BAY COURT	BAY PARK
Number of units	190	164	345	185
Estimated population[21] (ABS 2016)	275 adults, 24 children	305 adults, 59 children	571 adults, 42 children	255 adults, 27 children
Estimated net density	968 people/ha 614 units/ha	368 people/ha 168 units/ha	624 people/ha 351 units/ha	542 people/ha 356 units/ha
Built form	Two buildings around small public courtyard	Five buildings around large public plaza	Multiple buildings around a courtyard, terraced units at base	Two buildings split by small lawn, terraced units at base
Height	5-17 storeys	4-8 storeys	7-8 storeys	8 storeys
Mixed use	Cafés, services, convenience store	Supermarket, childcare, cafés, restaurants, commercial gym, services	Residential only	Residential only
Year completed	2013	2011	2015	2014
Surrounding area	Existing established area: North Sydney	Existing established area: Parramatta	Large urban redevelopment within existing established area: Inner West	
SEIFA (socio-economic) Index, Range for SA2 (ABS, 2016)	97th percentile in NSW, range 156 (high)	64th percentile in NSW, range 281 (lower)	83rd percentile in NSW, range 460 (mixed)	

[21] Based on the smallest geographical unit for which Census data is available, the mesh block.

Feature	SHORE	RIVER	BAY COURT	BAY PARK
Median unit rent/buy price in suburb, 2018 (Realestate.com.au, 2019)	$523/wk 1 bed $650/wk 2 bed $660K 1 bed $1.01M 2 bed	$370/wk 1 bed $400/wk 2 bed No data 1 bed $540K 2 bed	$550/wk 1 bed $780/wk 2 bed $735K 1 bed $1.12M 2 bed	
Management	Onsite manager	Onsite manager	Onsite manager	Onsite manager
Renters (ABS 2016)	61% renters	61% renters	69% renters	67% renters
Diverse backgrounds	Yes	Yes	Yes	Yes
Recruited through…	HBE expert suggestion	Local government email list advertisement	Strata manager suggestion	
Shared spaces				
Carpark	Underground carpark	Underground carpark	Underground carpark	Underground carpark
Lobbies	Multiple (2)	Multiple (9)	Multiple (6)	Multiple (4)
Lifts	4	9	6	4
Corridors	Internal	Internal	Internal, with terraced houses at base	Internal, with terraced houses at base
Mailboxes	In public, but hidden, breezeway	In public, often relatively far from lobby entrance	In public, by lobby entrance or terraced unit	Apartment mailboxes in secure mail room, terraced unit mailboxes in public
Roof terrace	Yes	Yes	Inaccessible	No
Additional shared spaces	Meeting room, indoor bike storage	Pool, gym, sauna, WC, changing rooms, former BBQ on roof	Library and study spaces, courtyard garden	Public pocket parks

A further 64-unit complex recruited in the local government email list advertisement was used as a pilot ('Pilot') to test the methods used in the final cases (see section 5.7.3).

5.5. Ethics Approval

Ethics approval was granted by the UNSW Built Environment Human Research Ethics Advisory Panel in February-March 2016 (Approval no. HC16086). Further updates as methods were

amended and letters of support received were also approved. The Ethics Approval can be found in Appendix A.

I first discussed the project with my strata committee contact at each case complex, and presented at strata committee meetings for two complexes at their request. The strata committees then voted on participation in the research, and I received their letters of support covering photography of the buildings (avoiding identifying persons), distribution of surveys, posters on noticeboards, and interviews with volunteering residents and management. In all cases, my main contact was subsequently the building manager, with whom I arranged access to the complex as needed for photography, survey distribution and later, upon negotiation, for 'office hours' recruitment and unstructured observation in lobbies or other shared spaces (see Table 5.3). I wore a university lanyard at all times on site or nearby to identify myself. Strata committees were advised that, while individuals in the study would be anonymous and the complex name and address would not be used, it might not be possible to protect the anonymity of the complex as a whole, given the need for description of the complex.

5.6. CONDUCTING FIELDWORK

This section describes the procedures followed in fieldwork, once contact had been made with the case complex and permissions granted by the resident committee of the complex. The section following (5.7) describes how these procedures were developed and amended.

I additionally undertook two study tours in Europe in December 2017 (Vienna) and July 2018 (Copenhagen). While they fall outside the main research approach described here, these tours helped to inform my thinking and the later discussion of actants and design and policy possibilities. On these tours, I visited nine large apartment complexes in Vienna (LiSA at Seestadt Aspern, Wohnprojekt Wien, Wohnzimmer Sonnwendviertel at Hauptbahnhof, Seidler's Wohnpark Neue Donau, Alt Erlaa, Gasometers, Sargfabrik, Miss Sargfabrik and Karlmarxhof) and two in Copenhagen (8 House and Lange Eng cohousing).

Table 5.3: Details of Fieldwork Conducted

Method	**Additional Notes for Individual Cases**			
	Shore	**River**	**Bay Court**	**Bay Park**
Fieldwork dates	*January-October 2017*	*March-October 2017*	*January-April 2018*	*February-April 2018*
Interview/Survey Strata Committee Member	January 2017	March 2017	February 2018	April 2018
Interview Manager	February 2017	April 2017	February 2018	April 2018
Take 360° photos of complex shared spaces for later analysis (lobbies, roof facilities, gardens, corridors, carpark etc.), take fieldnotes.	February 2017: Courtyard, lift, lobbies, carpark, example corridors, roof terrace, meeting room	March 2017: Plaza, lobbies, example corridors, roof facilities (pool, gym, sauna, ex-BBQ), carpark, lift	January 2018: garden/courtyard, lift, entrances and lobbies, study and library common areas, example corridors	February 2018: entrances, lobbies, carpark, lift, example corridors, pocket parks, large public park under construction
Put up survey poster on lift noticeboards or other prominent place as pre-notice (Frohlich, 2002)	On noticeboard in View, beside lift call button in Street, beside mailboxes in March	In nine lifts in March	In six lifts in March	In four lifts in April
Two days later (to allow time to view poster): Distribute surveys to mailboxes and place survey returns boxes	Placed in View building mailboxes in February, Street building.	Placed under each apartment door due to manager's concern that few people regularly check their mailboxes.	Placed in all mailboxes concurrently.	Placed in all mailboxes concurrently (in mail rooms and terraced home mailboxes)
Survey returns boxes	Two: placed on lobby tables: one in View lobby for two weeks, then moved to Street lobby	Nine: four large plastic boxes in the largest lobbies, five small cardboard boxes in the remaining lobbies, concurrently	Six: one in each lobby near the lift, concurrently	Five: one in each mail room, plus one by the manager's office for terrace apartment residents (who do not have mail room access), concurrently
One week later: Check survey returns boxes and replace all posters with 'return by X date'	18 paper responses at View,1 online 0 responses at Street	16 paper responses, 5 online	43 paper responses, 10 online	19 paper responses, 8 online

One week later: Final survey collection and removal of posters and returns boxes.	10 further responses at View, 3 at Street. Distributed 'thank you' notes with 'you can still respond by…' instructions.	12 further responses. Distributed 'thank you' notes with 'you can still respond by…' instructions.	11 further paper responses from Bay Court residents, and 11 from Bay Park residents. Two mailed back. No 'thank you' notes distributed due to low response rate, as well as potential annoyance to residents caused by excess paper. Posters in lifts already thank respondents.	
Additional flyer drops or posters			Distributed flyers again to terraced units (35) due to low response rate. No additional responses	
Contact survey respondents who indicated interest in an interview	May, July 2017: 11 respondents, 8 resulting interviews (including 1 partner)	May-June 2017: 8 respondents, 2 resulting interviews	March-April 2018: 34 respondents, 13 resulting interviews (including one partner)	April 2018: 16 respondents, 12 resulting interviews (including one partner)
Recruit interviewees through 'office hours' in spaces within the complex. Interviewees are also asked to fill in a survey if they have not yet done so. Fieldnotes taken while onsite. (14 sessions, total 45 hours, 27 resulting interviews)	• One 3hr session in View lobby with banner (Thursday 4pm-7pm, August): 4 interviews • One 6hr session split between courtyard and View lobby with banner when meeting three organised interviewees (Saturday 10am-4pm September): 2 additional interviews, 1 contact made resulting in a later interview • One 3hr session in Street lobby with poster only due to smaller space (Thursday 4pm-7pm October): 2 interviews	• Two 3hr sessions in Plaza (a Saturday and a public holiday 1pm-4pm), but most people are not residents: 4 contacts resulting in no further interviews on Saturday, 2 interviews on public holiday • No seating in building lobbies, so carried two camping chairs and posters. Three 3hr sessions, one each in larger lobbies (Mondays and Thursdays 4pm-7pm): 6 interviews total • Two 3hr sessions by pool (Thursday 4pm-7pm, Saturday 1.30pm-4.30pm): 4 interviews total	• One 3hr session on park bench in adjacent pocket park: 1 interview • No seating in building lobbies. One 3hr session in largest lobby with camping chairs Tuesday 4pm-7pm: 2 interviews.	• No seating in building lobbies. Two 3hr sessions on park bench in pocket park (by path to commercial quarter): 3 interviews total.
Provide survey report to residents and announce winner of draw	June 2017	June 2017	April 2018	April 2018

Table 5.4: Number of responses

	Shore	River	Bay Court	Bay Park
Total complete survey responses including online and in-person (response rate)	41 (21.6% of units, 14.9% of estimated adult population)	47 (28.3% of units, 15.4% of estimated adult population)	71 (20.6% of units, 12.4% of estimated adult population)	43 (23.2% of units, 16.9% of estimated adult population)
Total Resident Interviewees • Recruited through survey/ initial contact • Recruited through 'office hours'	17 • 7 (average 43 min) • 10 (average 26 min)	14 • 3 (average 50 min) • 11 (average 27 min)	17 • 14 (average 42 min) • 3 (average 24 min)	15 • 12 (average 46 min) • 3 (average 19 min)
Total Management Interviewees	2	2	Manager of each building, plus strata manager overseeing both buildings (3 total)	
Local Government Representative Interviews	1 representative, October 2018	4 representatives, September 2017	1 representative, September 2017	

5.6.1. Practicality and Ethics of Conducting Research in Private Apartment Complexes

Survey respondent and interviewee recruitment was challenging, as indicated by the need for multiple strategies for interviewee recruitment (surveys, posters, 'office hours') in Table 5.3 and as detailed in sections 5.7.3 and 5.7.5. Appendix G outlines my participant recruitment methodology, based on experience during the research process. It was important to develop a good relationship with building management, negotiating access, keeping them informed of recruitment progress and discussing recruitment options with them. In all cases, managers were concerned that the survey returns boxes and posters would be too visible from the street when placed in lobbies, either due to aesthetic concerns, or to possible theft. I therefore worked together with managers to decide on placement locations, placing posters and especially boxes out of view of the street wherever possible, while still making sure they were prominent to residents. Time was also a concern in the first case, with a two-week survey returns box period decided upon through negotiation. Responses reduced in the second week, and I concluded that a third week would not secure enough responses to justify keeping the boxes in the lobby longer, and potentially straining my relationship with the manager. In introducing the research to managers in later cases, I requested a two week period based on this experience, and this appeared to put managers more at ease.

As further detailed in section 5.7.6, observation proved to be minimally useful due to the difficulty of identifying residents outside the complex, few people using the spaces, little interaction, or observer effects in spaces such as corridors or rooftop common spaces, where I was obliged to inform building management and users of my identity and purpose. Due to the terms of the ethics approval, I avoided photography where individuals could be identified, therefore I relied largely on participant report and my fieldnotes to gather data on interactions.

5.7. Development of Questionnaires and Methods of Field Recordings

This section describes the process that led to the development of the methods used in the field. I kept a log of activities as I conducted fieldwork and analysis, including reflections on what worked and did not work as well as personal positioning.

5.7.1. 360° Photographs and Preliminary Walkarounds

Early in the process of fieldwork, I took photographs of as many shared spaces as were accessible with management permission, including lifts, corridors, lobbies, courtyards, carparks, rooftops,

parks and the street. The focus here was on the built and natural environment, and following ethics approval guidelines and anonymity considerations, I took care to avoid photographing people at close range. Zeisel (2006) and Gehl and Svarre (2013) recommend photographs to allow physical traces in the spaces to be examined later, especially in cases where multiple return trips are unlikely (for example in residential corridors). Zeisel (2006) notes the choice (and sometimes difficulty) involved in what to record for analysis, a choice which I circumvented to some extent by using a 360° camera that takes a photograph in all directions at once. While some things in the space will be missed (for example, if they are too small to be seen at a given resolution), the 360° photos give a valuable, indiscriminatory overview of the spaces for later analysis.

The process of taking these photographs served a second purpose as an initial walkaround of the case study complex and local area, and I took fieldnotes in accordance with Zeisel's (2006) advice on noting what is in a space, and anything out of the ordinary.

5.7.2. Survey Questionnaire

Multiple iterations of the survey were tested in a series of pilot studies with colleagues, contacts, and respondents in the field (see section 5.7.3). This section explains the choice of questions used in the final survey (see Appendix D for final questionnaire).

Question 1 asks respondents to confirm they are adults, following the conditions of ethics approval. Question 2 consists of scales that aim to capture emergent qualities of the socio-material assemblage. A short discussion of the process of selecting the final scale and items is below.

Based on the review of relationships in Chapter 2, a succinct scale was needed to measure a range of potential experiences, that is, help, social interaction, homey atmosphere/belonging, exchanging information, working together, security, social support, social cohesion, sense of community, loneliness and social capital. Social cohesion, sense of community and social capital are broad, complex concepts, while the remainder are relatively less complex, with some able to be measured with one or two items. For this reason, social cohesion, sense of community and social capital were expected to have entire scales associated with them, while individual items within these scales might measure the other potential beneficial experiences.

Social interaction, help and working together/exchanging information fit most closely with the cosmopolitan, cooperation, privacy and personal well-being arguments for CSTs. On a more global level, satisfaction with the living environment and local area is also relevant in that it may incorporate several of these factors and enable a comparison of these with environmental variables, such as building quality. After a literature search for scales or measures dealing with sense of community, social capital, social cohesion, residential satisfaction, neighbourhood

attachment and neighbouring behaviour, a range of scales were reviewed and the 'social cohesion' subscale of Fone and colleagues' (2006) amended Neighbourhood Cohesion Instrument deemed most appropriate (see Appendix C for reasoning), with additional items on irritation, intrusion, satisfaction with local contact and isolation. This formed question 2 in the questionnaire.

Question 3 surveys the number of strong and casual social ties a respondent has in their building and area, differentiating between chatting and acknowledgement ties. Some people may prefer to have relationships with people outside their complex (Kusenbach, 2008), and so this captures their wider local CST network. For ease of answering, ranges are given, based on the numbers of ties found in a previous study (Thompson, 2015b). Question 4 asks the respondent to name spaces (if any) in which they talk to neighbours or acquaintances at least once a month, to elicit spaces for further investigation in interviews.

Questions 5 and 6 ask if the respondent has recently attended building social gatherings or served on their building's governing body (executive committee), to see how these may act as catalysts for CSTs (as found by Williams (2005)). Questions 7-11 and 13-17 ask about demographic characteristics and issues around residence (including length of residence, type of household, and optional questions[22] on building within complex and 'terrace'/ apartment where applicable) to estimate the homogeneity/territorialisation of people as well as other factors that may affect CST development (ownership of a dog, time pressure, owner/renter). The questions were based on Australian Census questions where possible (Australian Bureau of Statistics, 2016), with birthplace region used as a proxy for culture and familiarity with cultural norms.[23] Question 12 investigates satisfaction with the building/complex and also measures extraversion/introversion with two items adapted from Gosling, Rentfrow, and Swann Jr (2003), as this is expected to be related to ease of forming CSTs (Asendorpf & Wilpers, 1998). The final question asks for contact details for a prize draw, and includes a tick-box for respondents to indicate their willingness to participate in an interview on the same topic.

5.7.3. Survey Piloting

As mentioned in section 5.4.2, the original intent was to distribute the survey to over sixty apartment complexes in multiple areas of Sydney. Before doing so, I distributed a pilot survey in two stages to all mailboxes in four complexes of between 27-31 units in Parramatta. At each

[22] To allow respondents concerned about anonymity to skip these questions

[23] While questions on birthplace, ethnicity and length of residence in Australia would provide a more holistic picture of cultural background and familiarity with Australian norms, questionnaire length and anonymity considerations led to using just 'birthplace', which was deemed more likely to reflect familiarity with Australian/other norms than ethnicity.

complex, half the units received a 'full pack' of survey materials and half received a 'flyer-only pack'. The 'full pack' contained a flyer (with survey URL), a project information statement, survey questionnaire and an addressed return envelope, while the 'flyer-only pack' contained only the flyer. The results of that pilot and lessons learnt are summarised in Table 5.5.

Table 5.5: Survey Pilot Findings and Amendments

Finding	Amendments/Decisions made
After Stage 1 (2 complexes)	
Low response rate – 2/61 units	Survey made more visually appealing and cut from four pages to two, as longer surveys are likely to deter respondents (Zeisel, 2006).
One respondent answered all items the same ('straight-lining') on a Likert question set, indicating likely survey fatigue (Fanning, 2005).	
After Stage 2 (2 complexes)	
Continuing low response rate – 2/57 units. Overall response rate for all 4 complexes was 3.3% of households.	Decision to focus on fewer complexes to enable a more concentrated recruitment effort, with the assistance of building management.
'Full pack' performed better (3 responses, all online) than the 'Flyer only pack' (1 response, online).	The 'full pack' is more effective at encouraging participation, even though respondents did not use the extra materials contained in it.
Despite reply-paid envelopes being supplied in Stage 2 (following Frohlich (2002) and Easthope et al. (2014)), none were used.	The cost involved in supplying reply-paid envelopes outweighed their usefulness (though were successful in other cases, e.g. Easthope et al. (2014)). This may be due to the differing standing of the surveyor, e.g. local government vs. student.
All responses received online.	Respondents are unlikely to mail surveys back. Final survey used returns boxes placed in lobbies or by management offices for survey collection, and an online option was also provided.

Subsequently, a further pilot was run with the 'Pilot' complex (see section 5.4). This included both survey distribution and several resident interviews. The survey used 'full packs' and the aforementioned returns boxes, which were placed in building lobbies for 2 weeks.[24] Thirty survey responses were received in total (2 paper surveys completed by committee members, 22 paper surveys returned to boxes, 6 online surveys), a response rate of 47% of households. This percentage is relatively high given the difficulty of accessing apartment residents (Lette, 2011; Reid, 2015), and the previous response rate of 3.3%. This was the approach adopted for the main

[24] Length of time based on negotiation with management committee – Thomas, Bloor, and Frankland (2007) highlights the necessity of maintaining good relationships with gatekeepers.

study. See Appendix F for example recruitment flyers and posters, and Appendix B for the survey project information statement, as well as the consent form and project information statements for the interviews.

5.7.4. Interviews

The resident interview was piloted with three apartment-dwelling personal contacts, and further refined for length and understanding after each of three interviews with resident committee members of the Pilot, Shore and River cases. All interviews were held with residents onsite or within ten minutes' walk of their complex, if possible,[25] to enable more immediate consideration of the environment.

The interview was semi-structured and the questions (included in Appendix E) aimed to cover as many as possible of the potential actants based on the literature review (see Chapter 3), but also to minimise leading and represent interviewees' views. While the interview questions were pre-determined, their order was rearranged to follow a the natural flow of the conversation as needed (Walter, 2010), and interviewees were encouraged to pursue tangents if they desired, increasing the likelihood of unexpected information coming to light (Thomas et al., 2007; Walter, 2010).

The questions are split into two sections. The first section explores resident experiences of CSTs (RQ1) and touches upon the actants that contribute to the development and maintenance of CSTs (RQ2). The second section focused on spaces used, including the relationships maintained there, standing patterns of behaviour (operationalised as what is 'normal' in a space), activities afforded, misuse of the space, and potential improvements both to individual spaces and the provision of spaces in general. Many participants had limited time, so in these cases I ensured the main points of the interview were covered (experience of CSTs, how CSTs developed, discussion of spaces used).

The manager interview was based on the resident interview. Several questions only applicable to residents were removed, and questions on management philosophy were added, looking to discover aims when managing apartment complex spaces, and to what extent social aspects are considered amongst other goals. Due to widely differing management office locations in Shore and River (down steep stairs and through four locked doors in River, through a large open doorway off the lobby in Shore), a question on management office location was also added. The interview schedule is shown in Appendix E.

[25] Four interviews were held near interviewees' workplaces due to interviewees' time constraints, and one interview was conducted by telephone.

The interviews with local government officers focused on their views on the role of policy and design guidelines in facilitating local social connections, the kinds of information on developing apartment complexes that would be helpful in their role, barriers to socially-successful apartment complexes, and examples of complexes that were seen as particularly successful (with discussions of reasons behind this). This was useful to provide background information on general development and policy considerations, as well as how findings might potentially be applied. The interview schedule is found in Appendix E.

5.7.5. Interview Recruitment

As Reid (2015) also found in Brisbane apartment complexes, recruiting participants was challenging. I initially contacted survey respondents who had indicated their willingness to participate in an interview, however I received a low response rate for my first two cases, potentially due to the time between survey distribution and interview contact (see table 5.3). None of the complexes had an email list or electronic noticeboard on which to advertise, so I was unable to send out invitations in ways other than mailboxes or noticeboards. I asked permission from building managers and management committees to conduct 'office hours' in lobbies or in plazas/courtyards, where passing residents could stop if they were interested and had time to chat (Figure 5.2). This introduced a face-to-face aspect to survey recruitment, which has been successful in increasing response rates due to allowing potential participants to assess the interviewer in person (Lindsay, 2005). I asked if residents had twenty minutes to talk about living in the building, a length of time which seemed to have reasonable success: around one interviewee for every hour spent waiting, with many more refusals due to time or apparent language difficulties. As Thomas et al. (2007) advises, I tried to balance recruitment attempts with a respect for refusals, being aware that I was on private property subject to the permission of the management and committee.

Figure 5.2: 'Office hours' in a lobby

This 'office hours' method was useful in recruiting interviewees, and is also likely to reduce the impact of self-selection (Groves & Peytcheva, 2008), given that several interviewees appeared to participate through having nothing else to do, rather than being overly interested in the topic. These interviews also tended to be shorter than those organised ahead of time (see Table 5.4). I asked these interviewees to complete a survey if they had not done so already, however in eight cases they were pressed for time and were unable to do so. In these cases, I noted as much

demographic information as I could observe or deduce from the interview (e.g. gender, tenure, age, extroversion/introversion, country/region of birth). These are reported for each interviewee quotation where relevant.

Appendix G provides a summary of the survey and interview recruitment activities, which may be helpful for future researchers recruiting apartment complex residents.

5.7.6. Observation/Fieldnotes

I originally intended to observe spaces within the complex and the local area to document the standing patterns of behaviour common to each space, and I conducted several pilot observation sessions in spaces including two cafés (Shore & River), a courtyard (Shore) and a plaza (River). Observation in other spaces such as corridors was unlikely to be useful, due to the rare incidence of social contact as well as creating an observer effect (or Hawthorne effect) where people change their behaviour when they know they are being observed (Walter, 2010).

For the pilot observations I was a marginal participant (Zeisel, 2006), and aimed to remain relatively unobtrusive by sitting in a quadrant of the space most acceptable for solitary work with an iPad and sketchbook. I made sketches of the space and people within it, documented location, time and date, context (weather, use, events etc.), a description of behaviour (participants, apparent relationships, standing patterns of behaviour), apparent cause/focus of behaviour and any additional notes, based on Zeisel (2006), Gehl and Svarre (2013), Whyte (1980) and Barker (1968) Zeisel (2006).

There were several difficulties with these observations. First, standing patterns of behaviour in well-used areas generally appeared to be civil inattention, with users politely avoiding contact, or else talking to staff or companions. Incidental interaction was rare, which made it difficult to build up a picture of the circumstances in which it might happen. In the plaza and courtyard, many people were simply passing through (using the space as a ‘link’, in Lang & Marshall’s (2016) terms) without stopping. Additionally, it was unclear in many cases who was a resident and who was not, which is important information if I am considering interaction from a resident- and case complex-centric perspective. In all, the data drawn from the observations did not add much value to the data already found in the interviews, especially considering the time taken to collect it.

I had already planned to rely on interviewees’ accounts and fieldnotes for spaces such as residential corridors, and I decided to extend this to all spaces, using fieldnotes taken whenever onsite or in the local area, considering them in conjunction with interviews and photographic documentation. The ‘office hours’ method of interview recruitment meant that fieldnotes could be taken during the stretches of time when I was not interviewing, without an additional outlay of

time for observation. These 'office hours' increased my confidence in the decision.

Sitting here for two lots of three-ish hours […] observing spaces isn't particularly fruitful for observing/getting information on interactions. – Fieldnotes, River Rooftop Pool, Saturday 3.15pm on a 30° day.

5.8. ANALYSIS

5.8.1. Case by Case Analysis

I first analysed the case study apartment complexes separately with descriptive analyses, considering the actants and processes that led to their particular emergent qualities. Assemblage theory assumes that the same outcomes can arise from different factors, and divergent outcomes from the same factors (DeLanda, 2016a), therefore comparing the details of cases may be misleading. Each case study is therefore treated separately, with direct comparisons of features avoided. Findings from these descriptive analyses will be synthesised in the next stage of analysis (see section 5.8.2).

SURVEY ANALYSIS

First, the data was cleaned, a task which Van den Broeck, Argeseanu Cunningham, Eeckels, and Herbst (2005) advise to minimise the impact of errors on findings. One survey respondent was removed due to flippant answers. The 'rarely have a neighbour over' question appeared to have been misunderstood in certain cases, with some respondents strongly disagreeing that they visited their friends in their homes in the complex or local area (Q2a) while also strongly disagreeing that they rarely had neighbours over (i.e. implying they very often had neighbours over). This seemed unlikely, and the difficulty with the question was confirmed when I witnessed interviewees filling out the survey – some misread the word 'rarely'. Based on this logic and observation, I reversed responses to this question in the seven illogical cases (correcting the response from (strongly) disagree to (strongly) agree), following Van den Broeck et al. (2005). The inverse (strongly agreeing they visit friends, but strongly disagreeing that their neighbours come over) could conceivably be true, therefore no changes were made in these cases. This increased the eight-item social cohesion scale's Cronbach's alpha from .755 to .772, indicating increased reliability due to these corrections. While removing the question from the scale entirely was considered, the question was retained to enable comparisons with previous studies (e.g. Fone et al. (2007)) and because the Cronbach's alpha dropped to .735 when the question was removed.

The range of spaces in which residents met each other (Q4) was reviewed to inform discussion in resident interviews. A report for each complex was also prepared for residents and management,

showing key demographics, the spread of answers for questions on social cohesion, satisfaction with unit/complex/area, and number of strong ties and CSTs. Response rates for the buildings were not high enough for the results to be reliably representative of the complexes, and this was noted in the reports. The thesis case chapters compare respondent demographics with 2016 Australian Census data, and present descriptive statistics of the responses from each complex.

Interview and Fieldnote Descriptive Analysis

The interviews and fieldnotes were transcribed and coded through several rounds using NVivo 10, case by case to attend to each case's particular actants and qualities, following assemblage thinking. First, the sources were structurally coded (Saldaña, 2009) according to spaces mentioned in the interviews or dealt with in fieldnotes. This produced a preliminary coding structure that brought together all data relevant to particular spaces that could then be reviewed, supporting a focus on space within a materialist ontology (see section 4.1.1). Secondly, a round of thematic coding was undertaken, focusing on how CSTs affected the experience of living in a large apartment complex (RQ1), how CSTs were developed, and the reasons particular spaces were used for social or other activities (RQ2 and RQ3). As Walter (2010) advises, I kept in mind that the interview data was coproduced by myself and the interviewee, and that their answers may be affected by social desirability and memory issues. Once themes were coded, I re-read the interview extracts to ensure that the themes properly represented interviewees' views, and adjusted the coding if not. I then wrote up the themes in sections focusing on *where* CSTs were (or were not) maintained, how CSTs affected *experience*, and how CSTs *developed*, with relevant interview extracts accompanying each theme for illustration following Braun and Clarke (2006). The themes were presented in order of their prominence in the coding structure, based on the extent of examples in interviews and/or the number of interviewees mentioning a theme.

Analysis of Built/Natural Environment Actants (Affordance Evaluation)

When assuming a materialist ontology, it is important to ensure that the potential affects of material actants are not overwhelmed by the perspectives and affects of people, who are likely to privilege their own agency over potential environmental actants (Dovey & Wood, 2015). To achieve this, a framework was developed to consider how the built/natural environment might afford use and particular standing patterns of behaviour, while acknowledging that the framework territorialises possibilities and consequently being open and aware of other influences. This 'affordance evaluation' was used as a tool to encourage focused thinking on the spaces, both within the constraints of the framework and as a starting point for thinking outside it, drawing on examination of the 360° photographs, fieldnotes and interview transcripts. Physical traces in the photographs were considered, including "erosions, leftovers, missing traces […] personalization,

[…] public messages" (Zeisel, 2006, p. 170), and photographs were analysed concurrently with the fieldnotes and interviews. The affordance analyses were drawn on in writing the case chapters and later synthesis and discussion chapters, and are found in Appendix H.

The affordances of an object may be limitless, therefore, I focus on a set of affordances that are associated with use of space and social interaction, based on the literature in sections 3.1 and 3.2, and reflect on how each space provides, or does not provide, these affordances: affording propinquity, territory, triangulation, lingering, attraction and exposure (in no particular order and acknowledging that these may not have equal weighting). By considering a space at the more abstract level of affordances, the range of design features that contribute to these affordances can be better identified.

Several spaces within each case were chosen for affordance evaluation, based on their use (especially well-used, or under-used) and their current and potential social function (spaces where residents are likely to meet incidentally or through organisation), drawing on interviews and site visits. I aimed to analyse both why spaces appeared to work well for developing and maintaining CSTs, and why they might not.

5.8.2. Analysis Across Complexes

At the second stage of analysis, the findings from the cases were synthesised. I analysed the way processes and actants led to outcomes (emergent qualities), rather than comparing complexes and determining which factors were missing or present in each case and might effect 'success'. I argue that the cases are too complex for this kind of detail-oriented comparative analysis, and any comparisons should instead be made at a more theoretical level, following assemblage theory's emphasis on process and 'plateaus' (Anderson et al., 2012b; DeLanda, 2016a).

Interviews, Fieldnotes & Affordance Evaluations

A third round of coding was undertaken using a second cycle coding method (axial coding) to draw together the themes from the interviews and fieldnotes from separate case studies, aiming to develop a conceptual model for how themes, categories and spaces relate to each other (Saldaña, 2009). This stage specifically focused on the third research question, how human and built/natural environment factors interact to produce CSTs, and draws on an understanding of the apartment complex and local area as a complex socio-material assemblage of many different interrelated actants interacting to produce emergent qualities. See Appendix K for the final coding structure. Together with the affordance analyses for each case, this was used to inform a model of actants that, in concert, increase or decrease possibilities for CST development and maintenance. This model is presented in Chapter 11 (Synthesis), and was used to guide the write-

up of themes/actants in the same chapter.

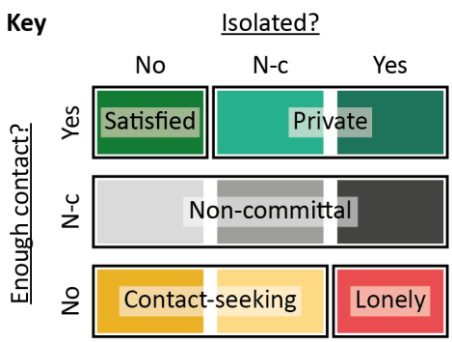
Survey Analysis

While analysing relationships between factors may be seen as overly positivist and at odds with the assemblage philosophy of a multitude of actants all affecting each other, as well as with non-linear and catalytic causality (Anderson et al., 2012b), I argue that the relationships found through quantitative survey analysis can be illuminating; if the findings are viewed within their wider context, and the complexity of causality acknowledged, a relationship between quantity of chatting ties and social cohesion, for instance, may be supportive of similar findings in interviews.

Keeping in mind an understanding of the complex causalities involved, I used IBM SPSS Statistics 22 to analyse relationships across the entire survey dataset of four complexes, using this large dataset to increase the chances of external validity and identification of significance (Lund, 2002; Norman, 2010). I ran two sets of analyses with the data, with the choice of these based on discussion with statistical consultants at UNSW Sydney. First, I carried out a hierarchical multiple regression to examine surveyed actants' contribution to social cohesion (as measured by the social cohesion scale of the amended Neighbourhood Cohesion Instrument (Fone, Farewell, & Dunstan, 2006)). To judge the relative impact of CSTs over and above stronger ties (family and friends) and other actants as well as interactions between these, CSTs and stronger ties were added to the model in stages. The procedure is further discussed in Chapter 10.

To examine satisfaction with social contact and isolation, I examined responses to two items: 'I have enough contact with people in my local area' and 'I feel isolated from others in my local area'. Conceivably, some participants might feel isolated, but also feel they have enough contact in their local area, meaning they feel no need for intervention. Combining responses to these produces nine groups, which can be combined into the following groups for more rapid gauging of the distribution of responses:

Table 5.6: Satisfaction with interaction groupings



- **Satisfied:** have enough contact, unisolated
- **Contact-seeking:** not isolated, but want more contact

- **Lonely**: isolated and want more contact
- **Private**: enough contact, not unisolated
- **Non-committal**: non-committal on contact, may be isolated or not

The dataset was then split by various actants (e.g. tenure) and the spread of groups compared visually using the diagram in Figure 5.2 (here shown with equal groupings for informational purposes). This is, at heart, visually comparing the results of two cross-tabulations. The number of cells in the cross-tabulation and the limited data makes significance impractical to determine, but the diagrams can give some indication of how different actants affect satisfaction with interaction (further discussed in section 10.2).

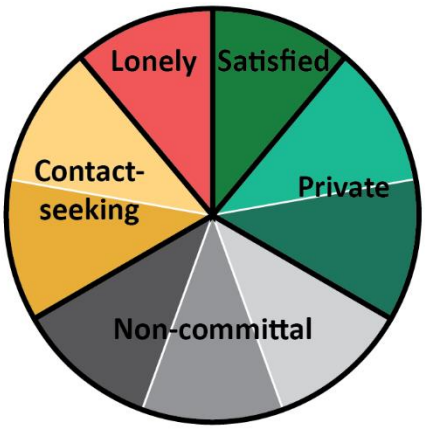


Figure 5.3: Example diagram of satisfaction with interaction groupings

The vast majority of respondents answered all questions, however a few missed some, and they have therefore not been included in analysis of these specific variables. This meant that a total of between 198 and 202 respondents were included in each analysis.

5.9. Conclusion

This chapter presented the research framework and approach, and detailed the methods used to investigate my research questions. These included resident surveys, interviews with residents, management and local government representatives and field recordings using 360° photography and fieldnotes. The four 'friendly' case complexes were presented and their selection justified, and the fieldwork was outlined. Several aspects of the methods evolved over time, and the decisions involved in this process were discussed. Finally, the methods of analysis were presented. These involved case by case analysis with affordance evaluations and thematic analysis of interviews and fieldnotes, as well as descriptive statistics. Analysis across complexes involved statistical analysis of the full survey dataset and the drawing together of the cases through axial coding of interviews, fieldnotes and affordance evaluations, and the final write up.

6. CASE 1: 'SHORE'

The next four chapters (Chapters 6-9) present descriptive analyses for each case complex, examining the socio-spatial assemblage of each case separately (in the spirit of "thick empirical description and micro-scale urban analysis" (Dovey & Wood, 2015, p. 4)). The implications of these findings for theory on CST development will be considered in Chapter 11, which synthesises these findings as well as the survey findings in Chapter 10.

Each case chapter has the same structure. The first section describes the apartment complex and its residents, and the second gives an overview of interaction in the complex, describing the social assemblage (Appendix L shows social assemblage Figures for all cases side-by-side, to enable better understanding of outcomes in different cases). The third section focuses on how CSTs influence the experience of living in a large apartment complex (RQ1). The fourth section discusses where CSTs are developed and maintained in the complex and local area (RQ2), and the fifth investigates what other actants are involved in developing and maintaining these ties in conjunction with built/natural environment actants (RQ3). These last three sections (3-5) follow the coding structure arrived at through the coding analysis described in Chapter 5, presented in order of prominence in the interviews (based on the extent of a theme's discussion in interviews as well as the number of interviewees who mentioned the theme).

The case complexes have been given pseudonyms, as have participants, to maintain anonymity (following the terms of ethics approval and the permissions given by management of the complexes). For quotations, participants' age and tenure are given to provide general context, and gender is also given where unclear. Some quotations benefit from more context, therefore further information has been provided where relevant (for example country/region of birth or extraversion/introversion).

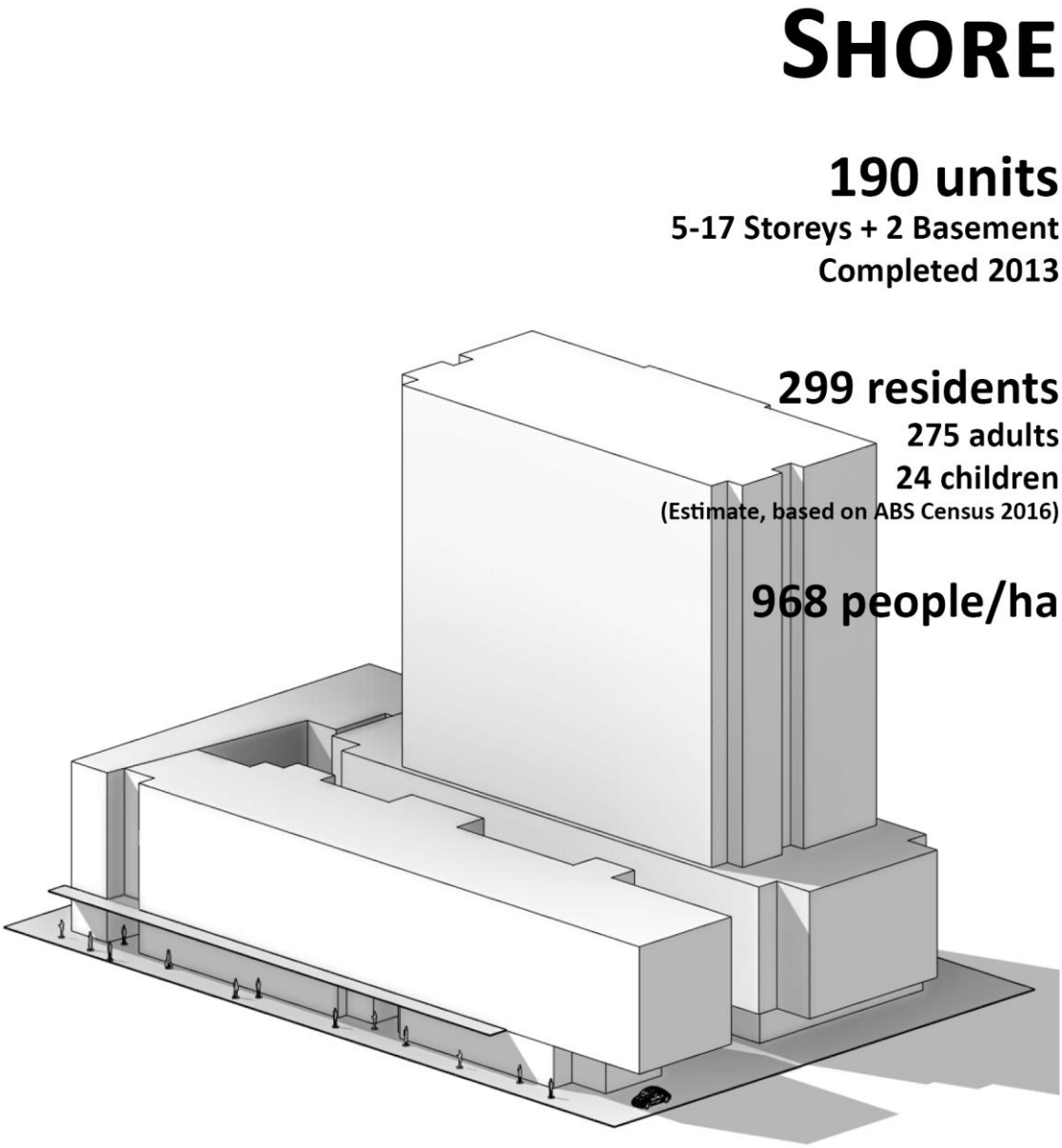


Figure 6.1: Indicative Model of Shore (for anonymity purposes, wide-angle exterior photographs are not shown)

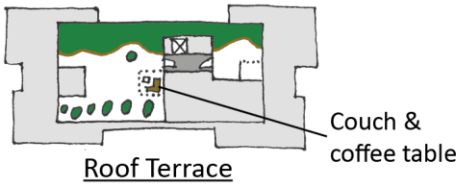
6.1. THE APARTMENT COMPLEX, LOCAL AREA & RESIDENTS

6.1.1. The Apartment Complex & Local Area

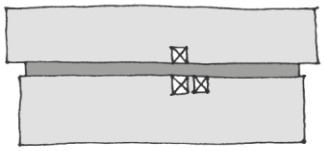
Indicative plans and details for the complex and local area are found on the following pages.

SHORE
COMPLEX

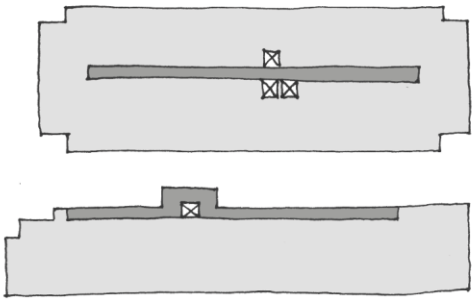
LEGEND
Lobby/Corridor
Private
Community Amenity/Retail
Seating
Vegetation

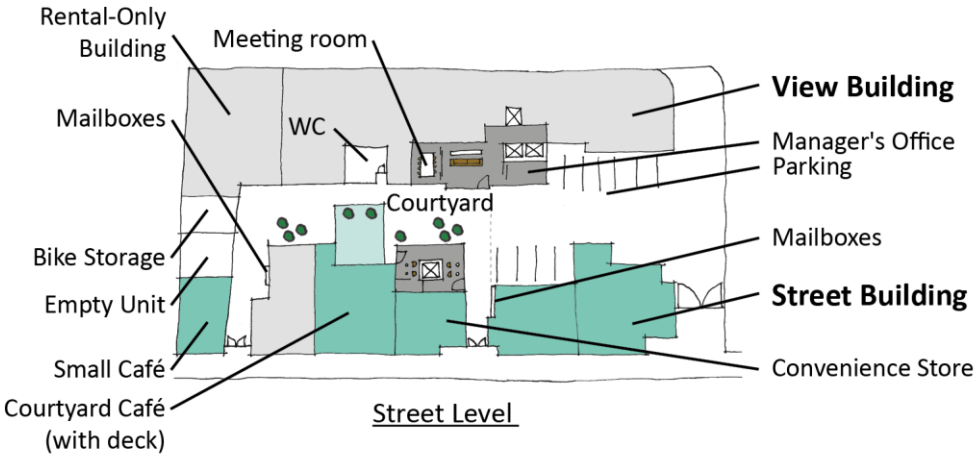


SHARED SPACES
- 4x Lifts
- 2x Lobbies
- Corridors
- Carpark w/ Storage Cages
- Semi-Public Courtyard (public in business hours only)
- Meeting Room
- Roof Terrace (2x)


Typical Upper Floor: View Building

NOTES
- Mixed Use
- Third, rental-only building not included due to permissions
- Street-level parking is private or for visitors with accessibility needs

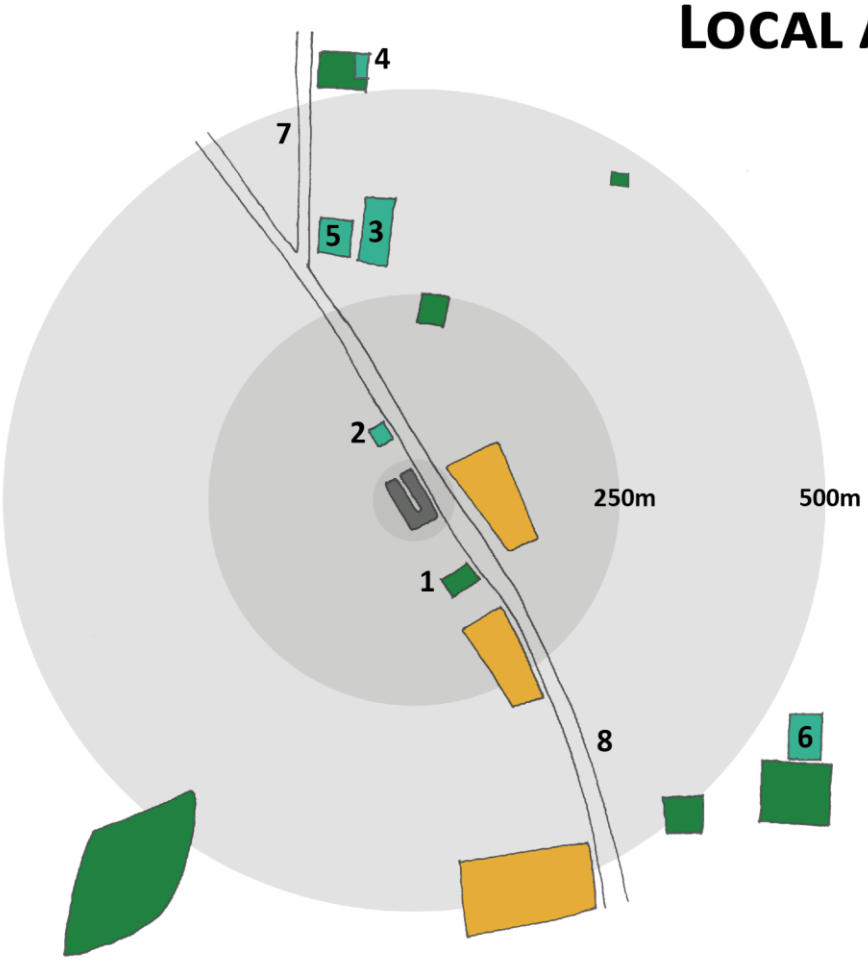

Typical Floors: Street & View Buildings



50m

Figure 6.2: Complex Details for Shore

SHORE
LOCAL AREA



LEGEND (key spaces mentioned by participants)

Kindergartens or Schools

Green space

1 Park with roses

Community Amenities & Retail

2 Newsagent

3 Supermarket

4 Community Centre

5 Pub

6 Library

7 Local restaurant/ shopping street

8 Busy road

LOCATION

- Sydney's North Shore, 30 min public transport to CBD.
- Well-established suburb of Sydney
- Mix of new large apartment complexes, older 3-6 storey apartment complexes and older detached housing
- Hospital and North Sydney business district nearby
- Located within an urban renewal area and growth corridor (Greater Sydney Commission, 2018)

POPULATION (ABS Census 2016):

- Top birthplaces: 55% Australia, 6% England, 3% China
- Median weekly personal income is double the state average

Figure 6.3: Local Area Details for Shore

6.1.2. Comparisons of Shore Mesh Block Residents (ABS Census 2016), Resident Interviewees and Survey Respondents

The following Figures show demographics for residents of Shore's Mesh Block, which had a population of 441 people in 2016 (one year before fieldwork), in comparison with demographics of resident interviewees and survey respondents. This provides context for the following qualitative and quantitative analyses, showing who was represented in this research, as well as the demographics of the broader resident population. Commentary on key characteristics is provided beside each figure. Where the case complex is particularly different from other complexes, this is noted. These Figures may be compared to those in other case chapters.

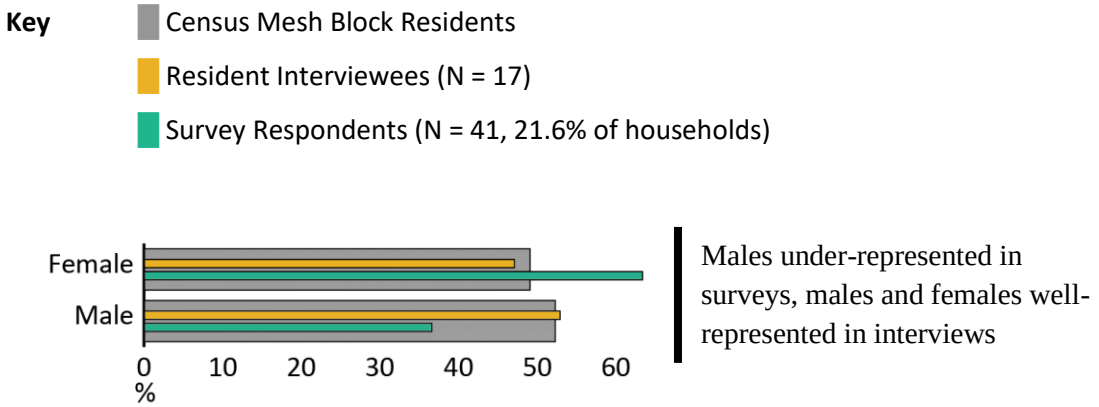


Figure 6.4: Gender

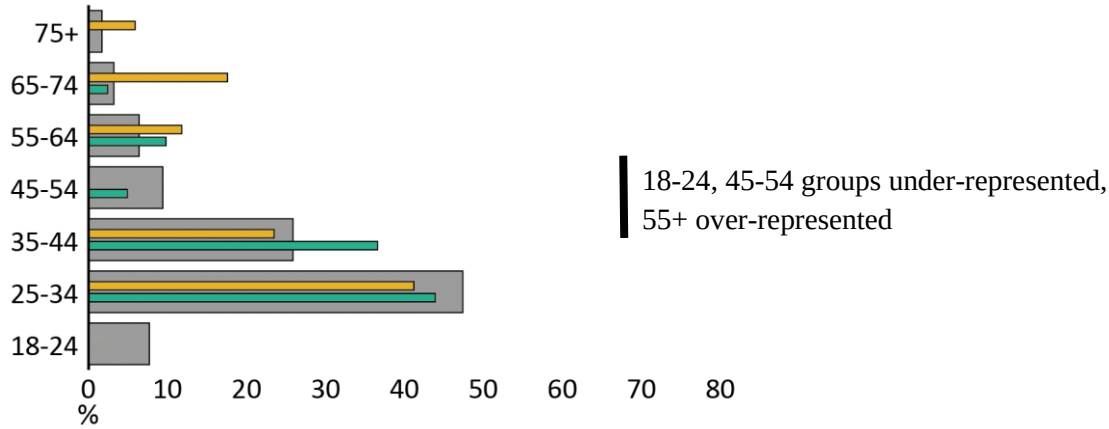


Figure 6.5: Age (Adults only)

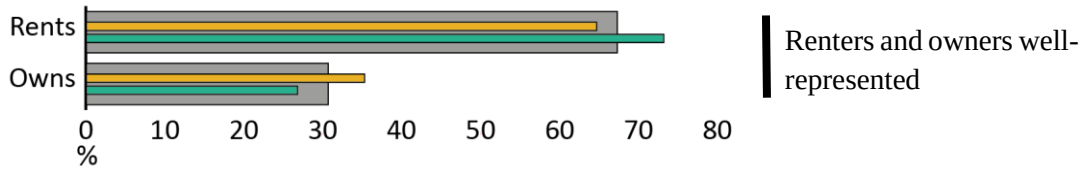


Figure 6.6: Tenure

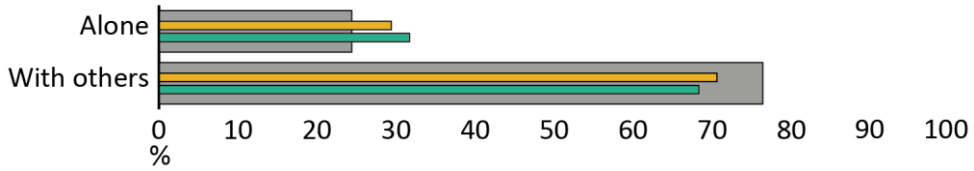


Figure 6.7: Living Alone

Residents living alone a little over-represented

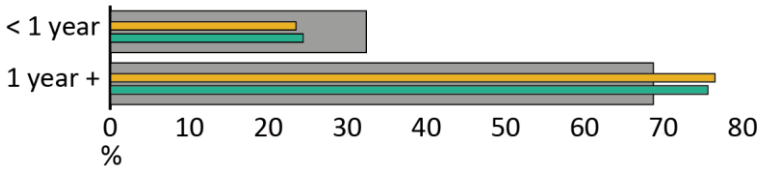


Figure 6.8: Length of Residence

Newer residents (<1 year) a little under-represented

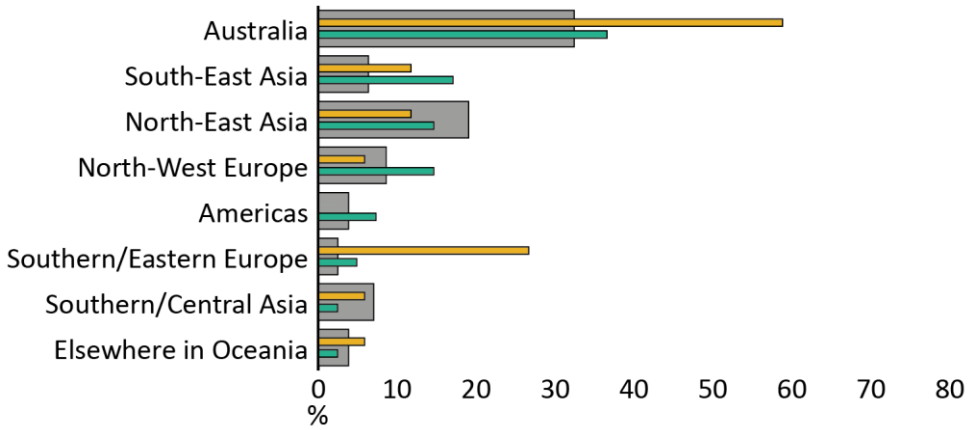
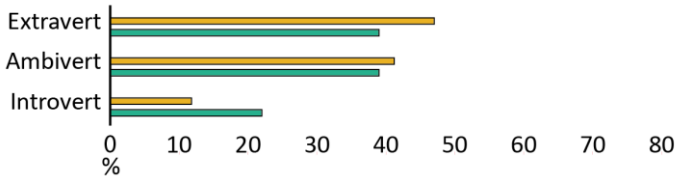


Figure 6.9: Country or Region of Birth

Australian-born, Southern/Eastern Europe-born and South-East Asian residents over-represented, especially in interviews, other residents slightly under-represented.



Introverts under-represented in interviewees, based on survey responses

Figure 6.10: Extraversion/Introversion

6.2. Describing the Social Assemblage

The following figures show survey responses for social ties (Figures 6.11 and 6.12), satisfaction with local social connection (Figure 6.13), and social cohesion and irritation/intrusion (6.14) in the complex and local area. This is followed by qualitative description based on the interviews.

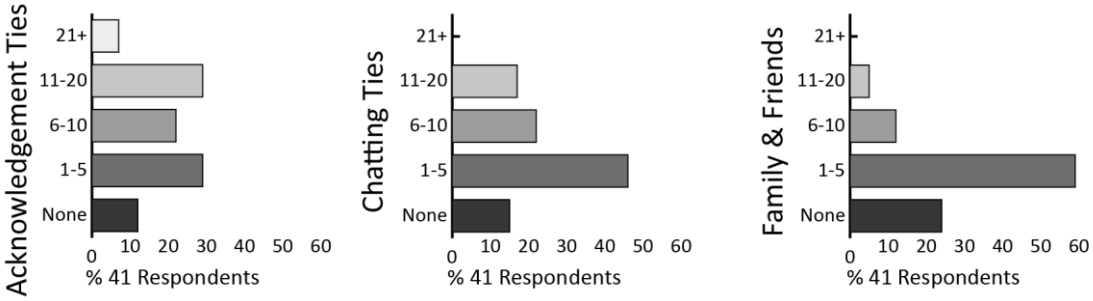


Figure 6.11: Quantity of CSTs and Family/Friends ties

It was common to have at least a few chatting ties and a few more acknowledgement ties, and more than half had family/friends in the area.

		Acknowledgement Ties		
		None	1-5	6+
Chatting Ties	None	7%	7%	0%
	1-5	5%	22%	20%
	6+	0%	0%	39%

Figure 6.12: Quantity of CST

Three respondents knew no one, though only one of these was 'lonely' (as per Figure 6.13). The largest proportion of any case had 6 or more of both chatting and acknowledgment ties.

As explained in section 5.8, satisfaction with local social connection is derived from the items 'I have enough contact with people in my local area' and 'I feel isolated from others in my local area'. This allows the identification of people who might fit the 'community liberated' model (Wellman, 1979), or simply do not desire local connection ('private'). The nine answer combinations are grouped into five groups to enable rapid gauging of distribution of responses on satisfaction with local social connection without needing to examine the proportions of all nine groups (Figure 6.13).

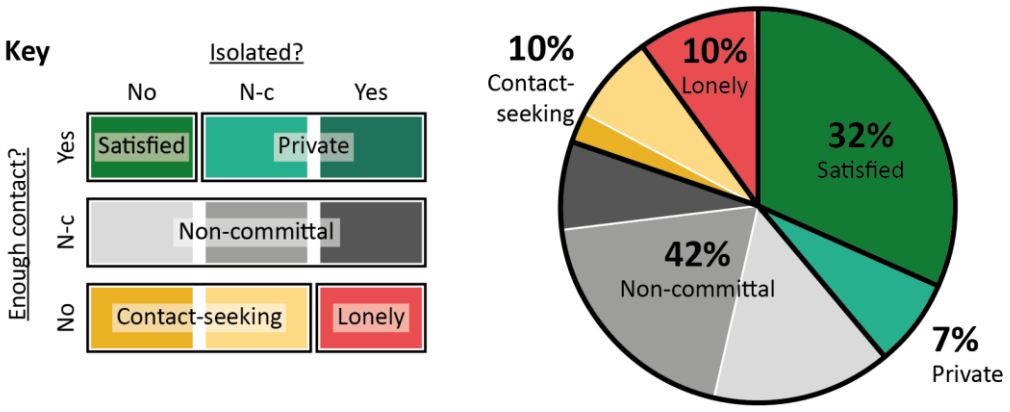


Figure 6.13: Satisfaction with Local Social Connection (N = 41)

> Almost one third of respondents were satisfied, the largest proportion of any case. A large proportion were non-committal, and one in ten were lonely and one in ten contact-seeking.

Figure 6.14: Social Cohesion (upper) and Intrusion/Irritation (lower) (N = 40-41)

> Around half of respondents believed their neighbours would help in an emergency and could go to someone in their local area for advice, however few borrowed things or exchanged favours with neighbours.

The social assemblage in Shore can be described as generally friendly, with a predominance of acknowledgement ties and a standing pattern of behaviour of greetings and small favours (such as opening doors or holding lifts) between unknown or familiar strangers, though civil inattention was also common. Some people maintain chatting ties in the area, often with building, shop or café staff. While simple acknowledgement ties were acceptable to some (and occasionally valued for their friendly anonymity), others felt they would like to know other residents and locals on a deeper level.

> *I want to know more people, yeah. I want to know, even like to do Saturday-Sunday stuff with more people. – Jason, extravert renter 25-34*

Residents of the same complex may have widely differing experiences, however. While most interviewees agreed that the complex had a friendly atmosphere, there were a few isolated exceptions including a man from the Street building who returned a survey in person and felt his building was 'not at all' friendly. The two other interviewees from this building felt differently, though their experiences differed where integration between the buildings was concerned. Nicole (renter 35-44) pointed out that the entrances, carpark and mailbox area were shared, and spoke to View residents "every now and then", while William felt there was a great divide between the buildings.

> *I have met [Street building people] in the lift and things like that. We talk and do the normal things, but as far as knowing anyone from [View building], nothing. It's a totally separate thing. – William, ambivert owner 65-74*

Several interviewees felt they should know more neighbours and to a deeper level, but at the same time were satisfied with what they currently had.

> *[I know people] below average, I would say. […] But as of now, I think, I prefer to keep it that way. – Panit, male introvert renter 35-44*

6.3. How do CSTs Influence Experience?

As argued in section 3.4, a main advantage of CSTs is that they allow people to balance interaction and privacy, which can be especially important when living at close quarters with many others. In the words of Steven (renter 35-44), these relationships are "respectfully disconnected" and maintain privacy, but are still valued for their role in exchanging favours, trust and security and brightening days. On the other hand, negotiating boundaries and interaction can be difficult. This section examines the experiences or 'emergent qualities' associated with the assemblage of CSTs in Shore, as well as those cited as reasons to further develop CSTs.

Regulation of Contact

CSTs with neighbours and locals allowed interviewees to maintain privacy, while enjoying the

benefits described later in this section. Interviewees were often mindful of not imposing on others, with Steven (extravert renter 35-44) preferring to text a neighbour to organise a bike ride, rather than knock on his door.

> *In some ways I like not being best friends with your neighbours, because you have that space, particularly if you're living in a really confined environment and you're kind of on top of each other, and a very thin wall. – Alexander, extravert owner 25-34*

Many interviewees preferred not to invite neighbours to their apartments, which were often relatively small.

> *I don't mind meeting you for coffee outside, but coming to my house for coffee, well maybe, maybe not. Because you've got a very small space and you just want to keep it to yourself. – Yu, female introvert owner 55-64*

Several interviewees brought up the possibility of a relationship going sour or becoming an annoyance. Keeping a relationship superficial at once limited this possibility, and meant that a disagreement was not particularly serious, especially with the large population in the complex.

> *If they think I'm a knob, who cares? I probably won't see them again 'cause it's such a big building. And if I do see them again, well we just ignore each other like we have for the last eighteen months. – Steven, extravert renter 35-44*

Having only acknowledgement ties was valued by some for the anonymity it provided, and the fact that "nobody cares what others do" (Sanjana, renter 65-74).

FAVOURS

CSTs were also valued for the favours they could provide, including practical help when locked out, information on current events in the complex, and the possibility of emergency help (especially for older interviewees).

> *He was in the committee for the building. He was great. He was super nice and he would update us on what's going on. – Jason, renter 25-34*

> *I know that I could ring any one of them and say, could you please help me with something, and as I'm getting a bit older, to just know that, if I drop dead for some reason somebody would miss me, sooner rather than later. – Paula, owner 55-64, living alone*

For those satisfied with few CSTs, needing help was often seen as the main reason to develop relationships with others in the building.

> *It doesn't really mean much to me […] maybe the reason I say that is because I've never had […] something catastrophic happen, like a fire and people need to evacuate. Maybe knowing your neighbours would help in that kind of situation. – Panit, introvert renter 35-44*

Trust and Security

The standing pattern of behaviour of acknowledgement and small talk, as well as knowing familiar faces, meant people felt safer. Some interviewees were also motivated to develop ties with neighbours for a greater sense of security.

> *It's giving you that sense of safety, I guess, they're just not some randoms coming here to suss out the joint and steal something. – Megan, renter 25-34*

While the building was generally described as friendly and safe, one grandmother felt she would be more at ease about her ten-year-old granddaughter's safety if she knew more people.

> *I don't know who she is going to meet in the lift, these days when you hear things, you know? So we always have to be with her, or somebody has to come. [S: If you knew more people would you be less worried?] Yes, yeah. And people keep an eye on one another. – Sanjana, renter 55-64*

However, as noted in 6.5.5, living in a secure apartment with a manager means that you might not need to call on neighbours for assistance or security.

> *In a big place like this, if you didn't have the security, there'd maybe be a bit of danger, but this place is like Fort Knox. – Alexander, owner 25-34*

Brightening Days

Interviewees valued their CSTs for the daily social interaction they provided and their role in brightening days, especially for those living by themselves. Stronger emotional support could also be offered.

> *It's good for wellbeing I would say. If I'm just going out and I see a couple of smiling faces, I smile at them, and they smile at me. It probably sets the day up. – Arjun, ambivert renter 25-34*

Local relationships were not the only ones that could fulfil this role, however.

> *I think that is important generally, [interaction], but I think I get most of that hit or fix at work 'cause I'm talking to people all day. – Sean, extravert renter 25-34*

Interaction with complete strangers could also be beneficial – though with a general standing pattern of behaviour of civil inattention, this might only happen in specific spaces (as discussed in section 6.4) or due to a person's strong initiative.

> *You know how it is, when you talk to strangers and then you're actually better for your health? So, I talk to everybody. – Yu, introvert owner 55-64, living alone*

6.4. Where are CSTs Developed & Maintained?

This section considers the spaces where residents developed and maintained CSTs, as well as several spaces that interviewees felt could be better used for social or leisure purposes. I start with

a general overview of the spaces cited by survey respondents, and follow this with deeper consideration of particular spaces (or types of spaces) through interview and space analysis. Supporting affordance analyses for key shared spaces in the complex (courtyard, roof terrace, View lobby) are found in Appendix H.

6.4.1. Survey

Of 41 usable responses, 26 respondents cited spaces they spoke to neighbours/ acquaintances at least once a month, with the remaining 15 respondents indicating 'no spaces'. Of these 15 respondents, only two knew no one in the area according to Q3, while of those who cited spaces, one respondent indicated they knew no one (despite seeing 'people they knew' in the local area).

The disjunct between these answers implies that some respondents may see contacts inconsistently in many different spaces (and therefore have no one particular space in which they talk to contacts at least once a month), they met contacts only rarely, and/or that respondents did not equate the geographical area and relationships dealt with in Q3 with those covered in Q4. Responses to the question on number of ties may also be subject to recall bias: in interviews, interviewees would often increase their estimate of the number of people they knew in the area as they thought about it, in several cases remembering more relationships halfway through the interview.

Table 6.1: Spaces survey respondents encounter contacts

Space type	# (%) Respondents citing
Café	11 (27%)
Small store	7 (17%)
Park	6 (15%)
Lobby	**5 (12%)**
Lift	**4 (10%)**
Roof Terrace	**3 (7%)**
Pub/Restaurant	2 (5%)
Gym	2 (5%)
Market	2 (5%)
Carpark	**2 (5%)**
Corridor	**1 (2%)**
Mailboxes	**1 (2%)**
Other	3 (7%)

Table 6.1 details the types of spaces cited by survey respondents for Q4. Where a respondent cited multiple instances of the same type of space (for example, two cafés), this has been counted only once, due to a focus on respondents' use of types of spaces, rather than the number of spaces used.

Notably, few survey respondents cited resident-only spaces within their complex (bolded in the table), whereas the lift and lobby were invariably the spaces interviewees 'most often' saw CST contacts. The interview responses are likely more reliable than the survey responses, given the longer time and more in-depth questioning in interviews, and this implies that the survey responses should be taken as a minimum, rather than as fully

representative of all spaces respondents encountered CST contacts.

6.4.2. Interviews, Fieldnotes and Photographic Documentation

Circulation Spaces: Lifts, Lobbies, Corridors & Carpark

The standing patterns of behaviour across the lifts, lobbies, corridors and carparks were broadly similar, with small talk or civil inattention being most common. Interviewees often linked this to the fact that other people were likely to be residents. The lift was the most common space in which to meet and interact with another resident, due to its regular use and the likelihood of running into another person here, while encounters in residential corridors were rare but more likely to prompt an introduction. Participants tended to feel they *should* know neighbours on their floor.

> *When I first moved in I noticed when people came out on the same level as me, I'd stop, shake hands, introduce myself. – Ben, extravert renter 25-34*

The close quarters of lifts often prompted interaction due to a desire to reduce awkwardness, however views on the necessity of this varied and were tied to expectations of future interaction.

> *If you're in a lift with someone in your building, you should say hello. I suppose it's 'cause you could run into them again. – Sean, extravert renter 25-34*

> *If you don't really care […] just keep quiet. You don't need to ask. – Panit, introvert renter 35-44*

While high traffic in the lifts and lobbies meant residents were likely to regularly run into others, interactions here tended to be brief, lasting for the length of the lift ride or the time taken to walk from the lift to the main entrance. This meant it was difficult to develop ties past superficial small talk.

> *[We don't chat] too much, just a brief, oh jeez that was a cold day today. – Megan, renter 25-34*

While people may not interact at length in these circulation spaces, a short contact here might lay the foundation for further interaction in other spaces.

> *We would see him in the restaurant and have a good chat. That came from just being nice within this area [lobby]. – Jason, renter 25-34*

Figure 6.15: View Building Lobby, Street Building Lift and Street Building Lobby

Shore is the only one of the four case complexes with seating in its lobbies. This seating does not receive much use, except when waiting for people or finishing a phone call. I used the seating while recruiting interviewees, and received several confused looks and residents asking if I had locked myself out before I explained my presence, indicating it is not a common activity. Even if people do sit there, the standing pattern of behaviour was civil inattention. Its busyness also precludes its use as a space to sit and have a conversation.

> *People are going in or going out, they're not sitting there for... for a chat. Sometimes they're waiting for someone to come, so you don't want to intrude. – Sandra, ambivert owner 65-74*

Some interviewees felt the large space could be used more effectively, such as making the seating more sociopetal (seats facing each other) or creating a book swap area. The long, low table in the View building was in fact used as a swapping area for unwanted (but usable) items for a time, but this was controversial, with some feeling it marred the 'classy' look of the complex. Others felt it contributed to a sense of community.

> *There was community through people leaving things here that said, 'please take free'. – Yu, owner 55-64*

However, it was also felt that the lobby was not the correct place to linger or "have a good catch up" (Victoria), unless there was some more overt separation from the main trafficway.

> *Why wouldn't you just go and sit on your balcony? Or go on, you know, sit on the roof. – Victoria, renter 25-34*

The manager's office opens directly off the View lobby, with a sliding door that is kept open during office hours. This meant that most participants were reasonably well-acquainted with the manager, through greeting him in passing or popping in to ask a question.

Many interviewees rarely used the carpark due to the quality of public transport connections and walkability of the neighbourhood. Those who did use it mentioned greeting those with adjacent spots, especially if schedules aligned or they lived on the same floor. Cars could also help with recognition of neighbours.

> *It's terrible - but you recognise people by their car [laughing]. That's the truth. You think, oh that's the lady that's got the sports car. – Sandra, owner 65-74*

Courtyard (Including Mailboxes)

The courtyard, though it has café seating, plants and is large enough for people to use it for more extended periods (Figure 6.16), was seen only as a through-passage by the majority of interviewees, or as part of the café. It could therefore more properly be described as a circulation space.

> *They're just transiting. Coming and going. – Megan, renter 25-34*

Figure 6.16: Courtyard and Street Level Carpark

Before the Courtyard Café opened, there was no deck extending from this commercial unit, and one grandmother described her granddaughter using the space to ride her scooter. The arrival of the deck meant there was no longer enough space for this activity, however. The presence of the café, while valued by several interviewees, means that the courtyard is not able to function as a common space for residents to linger (though it admittedly does not get much sun, which was seen as a disadvantage).

> *If you had some sitting arrangements here... [S: You've got the café seats.] There's the café but it's still a café. I cannot just go out and sit there. – Arjun, renter 25-34*

Residents run into each other as they pass through either set of main doors or the driveway entrance and walk to their respective building entrances. They may engage in civil inattention or acknowledge each other, and intermittently interact with acquaintances at the mailboxes (Figure 6.17).

> *I just walk past [the courtyard]. Collect my mail and sometimes you talk to people collecting their mail and coming in the door. – Yu, female owner 55-64*

Figure 6.17: Mailboxes

An empty commercial unit opens off the south side of the courtyard (see Figure 6.2). Several interviewees discussed potential uses for it, including an extension of the Small Café, a resident gym or library. Its position away from the street was seen as highly disadvantageous for commercial businesses, and interviewees expressed frustration that the space was left unused.

> *That is a waste of space, why can't they turn that into a gym or even... […] that hasn't been used the whole time I've been here. – Alexander, owner 25-34*

Roof Terrace

The main attraction of the roof terrace spaces (Figure 6.18 and Figure 6.19) is the view, which was mentioned by almost all interviewees. Upon encountering other residents on the roof, participants might chat with a known resident, or acknowledge and engage in civil inattention with an unknown resident or those apparently otherwise occupied. However, encountering another person was uncommon.

> *I've [chatted to people] maybe once. Just once. Not very many people go and use that area. – Arjun, ambivert renter 25-34*

Activity on the roof terrace is restricted, with glass, alcohol and large groups prohibited due to past incidents and concerns about noise, and access is awkward due to the fact that only one lift reaches the top floor. There are also no toilet facilities, and the seating and weather protection are both minimal and in need of some maintenance.

Figure 6.18: Larger Roof Terrace Space

Figure 6.19: Smaller Roof Terrace Space (with cushion)

Notably, there are many relatively-wide wooden planter edges that could be used for perching, though these were not perceived as seating by participants, and there is only one low table. At least one resident regularly took cushions from the couch through the passage (see Figure 6.2) to the smaller space, placing them on the decking to read in this makeshift seating area with a view (the couch does not afford a particularly good view) (Figure 6.19).

These factors all combine to make the spaces suitable for quiet solitary use, but not much else.

> *It's a good place to go if you want to go think. I had a big interview so I went up there to practise by myself, because I knew no one would be up there. – Sean, renter 25-34, living with partner*

> *There's no toilet […] so you wouldn't want to really entertain up there. Especially because you could wait a couple of minutes for the lifts. And then to get back up. – Victoria, renter 25-34*

Participants also did not use the roof because it did not offer them anything they cared to do apart from admiring the view (which some could admire from their apartment windows in any case).

> *If it was a gym or something like that, I'd use it. I'd prefer like a gym than like... a herb garden[26] [laughing]. – Alexander, owner 25-34*

The complex holds a New Year's fireworks-viewing event on the roof terrace, however numbers are restricted for safety and only two people per apartment can take advantage of this. Most people do not linger and are unlikely to interact much.

> *If I have people here I can't sort of go, well, I can take one of you up to the roof [laughing], that won't work. – Paula, owner 55-64*

Meeting Room

The meeting room adjacent to the View lobby is available to book, however there was confusion over how this could be done, and the door is largely kept closed.

> *[The marketing said] if you worked from home, and you wanted clients here, you'd take them down to there, but they lock that up. […] I don't think you can book it. It's just locked up. – Alexander, owner 25-34*

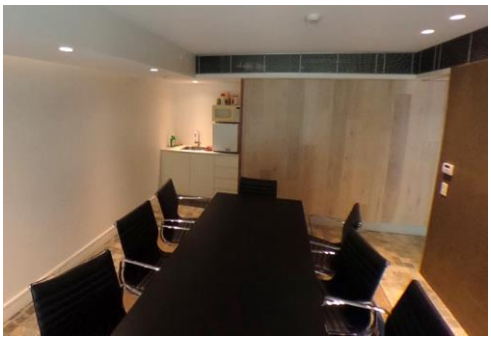


Figure 6.20: Meeting Room

The room is also slightly cramped with furniture, leading one interviewee to use other spaces for meetings.

> *No one could get in, no one could get out, if they wanted to go to the bathroom, everybody had to stand up... So I haven't asked to use that again. – Sandra, owner 65-74*

Cafés and Small Stores

There are two regularly-used cafés and one convenience store in the complex (see Figure 6.2), and many other cafés and small stores within walking distance. CSTs here were mostly with staff, who sometimes acted as 'local characters' connecting customers. Customers would otherwise engage in civil inattention (as I observed in 'Courtyard Café'), or would talk only to people they'd organised to meet. In some cases relationships with staff led to a strong loyalty to particular businesses, especially at 'Small Café'. Steven felt the layout of this café had an influence on the

[26] Maintained by management – not a community garden.

customer-staff relationship: staff prepare food and coffee in a prominent position near the café entrance.

> *[The barista is] already saying hello to you before you even walk in the door […] There's all this energy that comes from that because [the staff] are front and centre. – Steven, renter 35-44*

'Courtyard Café' was seen as more child-friendly than 'Small Café' due to its size and enclosed outdoor area, and its connection to the internal courtyard also made some interviewees feel it was more part of their complex. The less-extroverted staff were also a drawcard for Panit, an introvert.

> *If I was trying to have a breakfast and then all of a sudden [manager's name] just comes out, and if he was trying to have a small chat, oh you know- Just leave me alone [laughing]. Let me enjoy my breakfast, and that's it. – Panit, introvert renter 35-44*

Other Spaces: Parks, Gym, Pubs and Restaurants

The closest park is across a minor road, about two minutes' walk from Shore. It has some park benches and roses, but is relatively small (1400m^2) and surrounded by overlooking buildings. Alexander was not particularly impressed with it (though a few other participants enjoyed the peace and flowers).

> *That's really tiny... the only ones that go in there are people with dogs. I've never gone in there, probably just full of dogshit. – Alexander, owner 25-34*

Dog owners mentioned speaking with other dog owners in parks, and walkers and runners greeted each other in passing. However, apart from the small park, there is little convenient green space in the area.

> *There are parks nearby, but not in the immediate vicinity. [S: That stops you using them...?] Yeah, yeah. For instance, taking a blanket down and just sort of sitting on the grass. […] There's not really anywhere within a 50m, 100m radius. – Ben, renter 25-34*

Several interviewees visit local gyms or pools and know other gym- or pool-goers, especially if exercise is structured around classes or the gym is specialised.

> *[There are] like-minded people attracted to that gym. It's a little bit special. It's not your Fitness First, it's just a little more specialised. Everyone goes there with the same mindset. – Jason, renter 25-34*

Participants tended to visit restaurants and pubs with friends or family, and were unlikely to strike up a conversation with a stranger, or chat at length with an acquaintance met incidentally.

> *If you go into a pub, people are there with people they want to be there with, they're not going there and going 'I'm gonna just go and chat to everyone in there.' – Alexander, extravert owner 25-34*

SUMMARY

Circulation spaces such as the lifts, lobbies, carpark and courtyard tended to have standing patterns of behaviour of acknowledgement and sometimes small talk, depending on the person (further explored in 6.5). Spaces that theoretically might be used for lingering and potentially socialising, such as the roof terrace, courtyard and meeting room, were rarely used to linger due to lack of space, facilities, access difficulties and regulations around use. Interviewees maintained CSTs with the staff of cafés and small stores in the local area, and had also developed ties through exercise classes or walking dogs in parks.

6.5. HUMAN ACTANTS IN THE PRODUCTION OF CSTS

In addition to the built environment actants discussed in 6.4, a number of human actants are involved in the development of CSTs in Shore. This section details those that arose most frequently in the interviews.

6.5.1. Having Time

The time available to residents has a great impact on their ability or desire to get to know others in their complex and local area. Busy lifestyles and focus on other areas of life were the most common explanations given for not developing more local relationships.

> *I feel here, a lot of people work long hours including myself, and then you just go in, you're on autopilot, go up to a lift, and then […] I just want to relax, I don't want to meet my neighbours. – Rebecca, extravert renter 35-44*

High levels of mobility mean that long-term residents may also feel it is not worth getting to know newly-arrived residents (especially renters, who were perceived as likely to move on relatively quickly). Travelling or foreign ownership of apartments also had an impact on how well people could get to know each other, with some residents spending only part of their year living in the complex.

> *You think, gosh how much effort do I put in if they're moving out in a month's time. – Megan, renter 25-34*

Time also played a part in facilitating crossed paths, with matching or differing schedules meaning that interviewees might see the same people on repeated occasions, or not.

> *My neighbour, she's a nurse. Her hours are just really different from ours, normal 9-5. So it makes it difficult to get to know her. – Jason, renter 25-34*

6.5.2. Culture and Language

The high number of residents recently arrived in Australia also had an impact on relationship

development. Language barriers meant that, even if people wanted to pursue a relationship, it was difficult to take it further.

> *They're always very friendly, and they bow and bow and bow, and we bow back [laughing], but we don't know them, they don't speak English. – Sandra, Australian-born owner 65-74*

> *I know how isolated you are if you don't speak English. – Yu, Chinese-born owner 55-64*

Cultural norms around civil inattention or acknowledgement also appeared to play a part (though there may be other factors at play – further discussed in 8.5.1).

> *Other cultures, they don't say hi. Asians and the Indians. The Australians here always do. So, it might be a culture thing, that they don't interact. Or they think it's rude to talk to you while you're on your way. – Victoria, Australian-born renter 35-44*

> *Maybe in their country they don't talk to people […] We talk to everyone, we come from Fiji, so yes. We say hi, bula, hello to everybody, namaste. – Sanjana, renter 65-74*

The standing pattern of acknowledgement in Australia might be misconstrued by new arrivals, however.

> *[Newcomers from Hong Kong could be] like, 'Why are you talking to me?' That's my background, so that's what I'm used to. […] I have no problem doing it in Australia. Just need to recognise it's a cultural thing. – Jason, renter 25-34 from Hong Kong, living in Australia for 6 years*

On balance, it appears that what interviewees described as the Australian (or Fijian) pattern of acknowledgement is mostly followed in Shore.

6.5.3. Number of People

Around 300 people live in the complex. This means, on the one hand, there are many opportunities to meet people and develop relationships, but on the other hand, initiating conversation with everyone you meet is a large drain on time. Some interviewees felt the size of the building contributed to the standing pattern of behaviour of simple acknowledgement (or civil inattention).

> *It's a lot more impersonal with a big building. Because there's so many people, and I don't think people really have the need to take the time. Whereas if you're in a smaller building and you're going to run into them on a lot more regular basis, then you do tend to stop and chat more. – Victoria, renter 25-34*

> *I've heard maybe 30 years ago [in Hong Kong], it used to be pretty friendly, when there's less people living in those buildings. As they grow, stack it up with more levels, like 50 levels, 60 levels, that [civil inattention] just becomes normal. – Jason, renter 25-34*

Interviewees also associated the number of units with residential mobility, linking to the impediments around this phenomenon including being less inclined to form relationships). In a block of eight, if 25% of units are vacated each year, this is only two sets of neighbours who will move on. In a block of 190 such as Shore, 47 sets of neighbours will move on.

6.5.4. Personality and Common Interests

Personality was often the first explanation given when interviewees were asked why some people knew many neighbours and others did not. Almost every interviewee felt that personality played a large role in getting to know others, specifically in how extraverted or introverted people were, as well as their openness to interaction.

> *Some people are extraverts, some people are introverts, some people are outgoing, some people are shy, some people wanna make conversation and some people don't. – Alexander, extravert owner 25-34*

> *I'm not really an outgoing person, so I don't really stop and say hello and start talking to people. – Arjun, ambivert renter 25-34*

While personality definitely plays some part, it is notable that some professed introverts knew many people in the area, for example Yu who felt she was "happy on my own" but maintained more than thirty CSTs in the complex and local area. Personality was also mentioned in relation to staff; people developed relationships with friendly staff members, and might also develop relationships with other residents or locals through them. Initiative was also important.

> *A lot of the interactions that I'm finding happen here, unless I actually speak out or unless my partner speaks out, they kind of don't happen. – Steven, extravert renter 35-44*

Common interests came up most often in relation to life stage, as well as more personal interests such as cycling or being from the same suburb, city or country.

> *I think age groups tend to play a big part […] a young family would probably chat to another young family or an older couple […] might make friends amongst their own group. – Ben, extravert renter 25-34*

6.5.5. Self-Sufficiency

The fact that the complex is relatively well-maintained and secure meant that people generally did not have to rely on each other for help, which reduced the need to develop relationships for support.

> *If someone really needed something and they were unwell or whatever, we would help them. But they don't indicate that they have any needs. They're quite self-contained. – Sandra, owner 65-74*

Similarly, already-existing social networks across the wider city reduced motivation to develop

local ties, with some participants feeling they did not need further relationships, or preferring to spend their time on other relationships. Newcomers were more likely to seek out connection.

> *You've got your own friends, I have mine. So in that sense, there is no urgency, there is no compulsion. – Rehan, owner 75+*

> *I'm from England, I'm here by myself, so you actually meet people who are over here by themselves. So it's nice to go out for dinner you know, just once in a while. – Rebecca, extravert renter 35-44, living alone*

Technology both supported connection with these ex-area ties, and afforded civil inattention in the complex and local area, contributing to disengagement with the local area.

> *I kinda don't need [more/stronger relationships] because there's enough social connection electronically now. – Steven, extravert renter 35-44*

> *I'll have headphones in […], it doesn't really allow opportunities to engage other people. Which I'm completely fine with, I'm not looking for that engagement, but it does shut down that opportunity. – Alexander, extravert owner 25-34*

6.5.6. Catalysts

A particular standing pattern of behaviour, for example civil inattention or acknowledgement, might be disrupted by icebreakers or catalysts that prompt people to interact. This section considers the catalysts that appeared to have had the most impact in Shore: pets, problems and moving in and out. Children were also mentioned as playing a role, but only rarely.

The complex has a pet-welcoming policy, and pet owners, other residents and management discussed the importance of pets (especially dogs) in facilitating conversation and demonstrating a common interest, both between owners and between owners and other residents.

> *How I know people in here is to do with my dog […] You see them at the dog park, or we see each other in here, I suppose our dogs get to know each others' dogs, and that's how we come to know each other. – Rebecca, renter 35-44*

Shared problems also provide an occasion to interact. A few times a year, fire alarms force people to gather in the evacuation area, sometimes in the middle of the night. People must wait together, exchanging reassurances and speculating about the alarm, though it can be awkward.

> *Probably the time I've had the most interaction is when the fire alarm goes off. […] We normally have a bit of a chat and we whinge about the fire alarm. – Nicole, renter 35-44*

> *People in their pyjamas, it's not the best situation. – Jason, renter 25-34*

Parking problems were also another common catalyst for conversation, as was a programming quirk with the lift.

> *Sometimes you have to go back down to get back up. […] And everyone knows about it, so everyone jokes about it. – Alexander, owner 25-34*

Moving days appear to be another 'event' that invites comment, and several interviewees mentioned welcoming newcomers to the building, and subsequently having a more extended relationship with these people.

> *When you move in you've got all your stuff. And people go, "Oh, you just moving in or moving out?" And then you just get talking. – Victoria, renter 25-34*

6.6. SUMMARY

As described in section 6.2, many interviewees at Shore felt that relationships in the complex and local area were friendly, but did not often advance past the acknowledgement stage. While this was suitable for some, other interviewees felt a need to deepen these relationships, either to stronger chatting ties or friends. Similarly, one fifth of survey respondents felt they did not have enough local social connection, with a further 42% non-committal on this question.

Some interviewees maintained relationships with staff and others in commercial spaces (though these require purchases), and the roof terrace was sometimes suggested as a suitable space to linger and get to know others, though its lack of seating, weather protection and toilet facilities, as well as maintenance and regulations, meant that few residents use it. The courtyard was seen as an extension of the café, and therefore needing a purchase to linger. The lack of deeper relationships may be related to the lack of suitable lingering spaces in the complex and local area. Extraversion and pets were also strong influences on CST development.

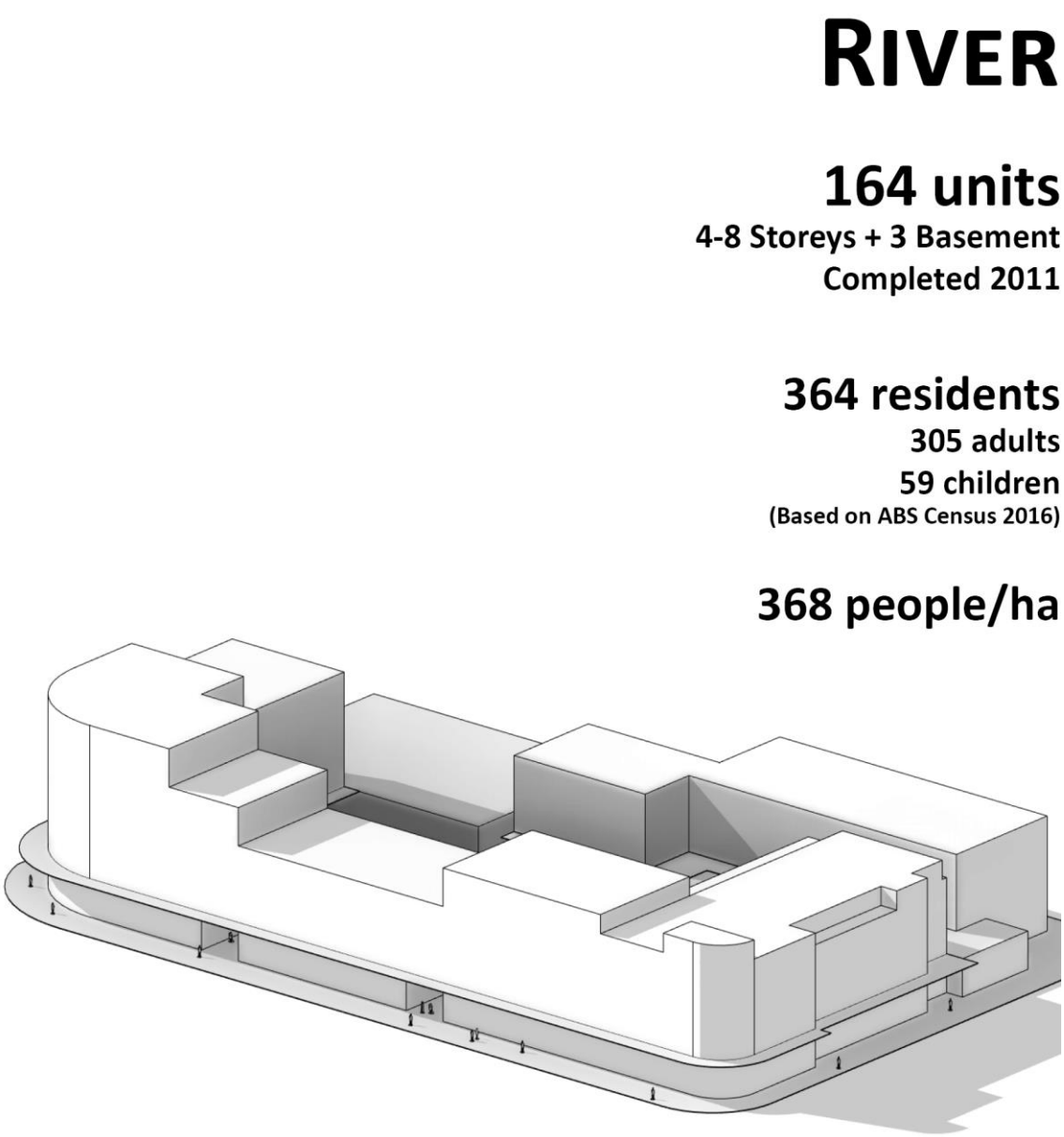


Figure 7.1: Indicative Model of River

7. CASE 2: 'RIVER'

This chapter presents the descriptive analysis for the second case, pseudonym 'River'.

7.1. THE APARTMENT COMPLEX, LOCAL AREA & RESIDENTS

7.1.1. The Apartment Complex & Local Area

Indicative plans and details for the complex and local area are found on the following pages.

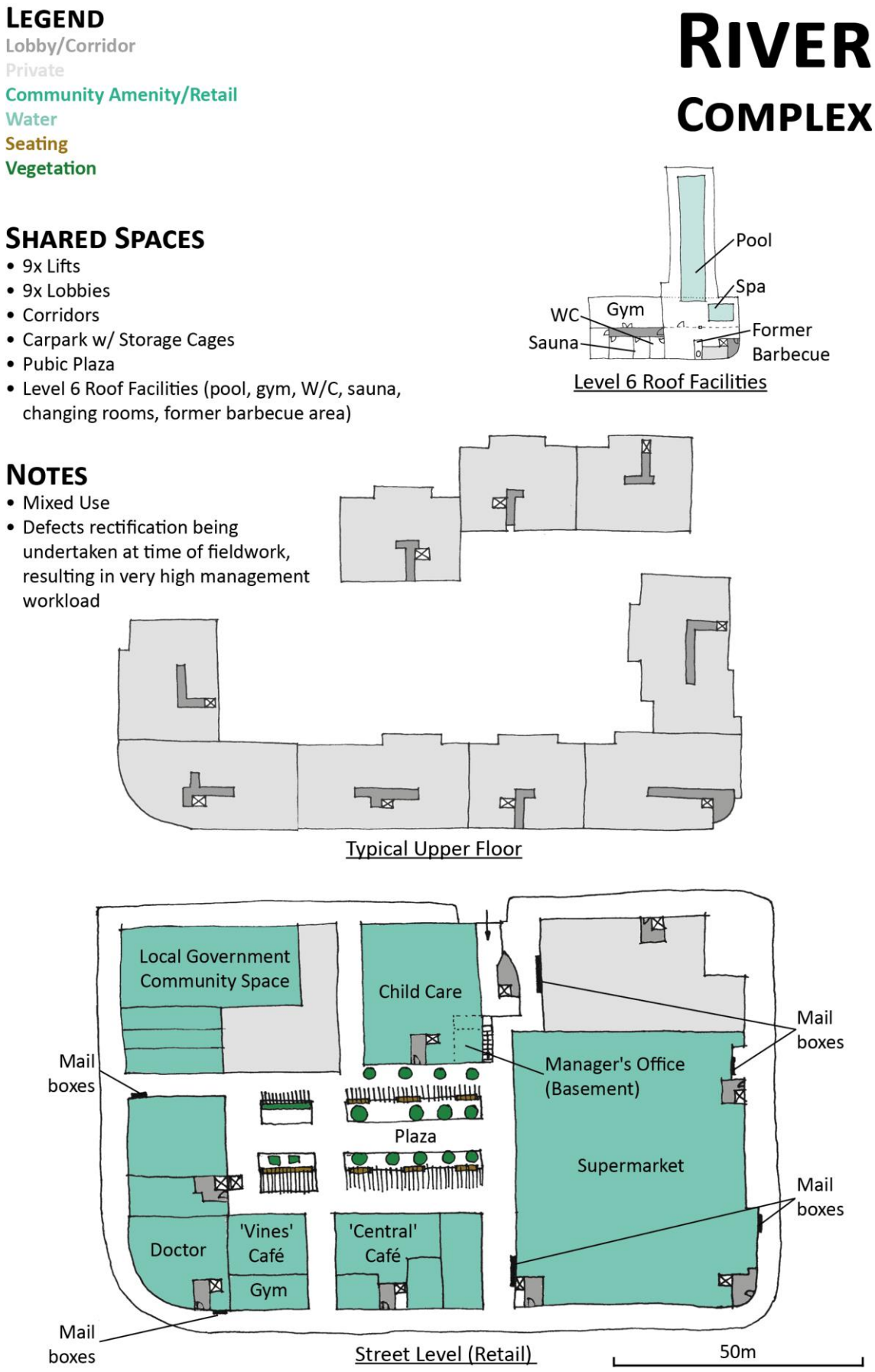
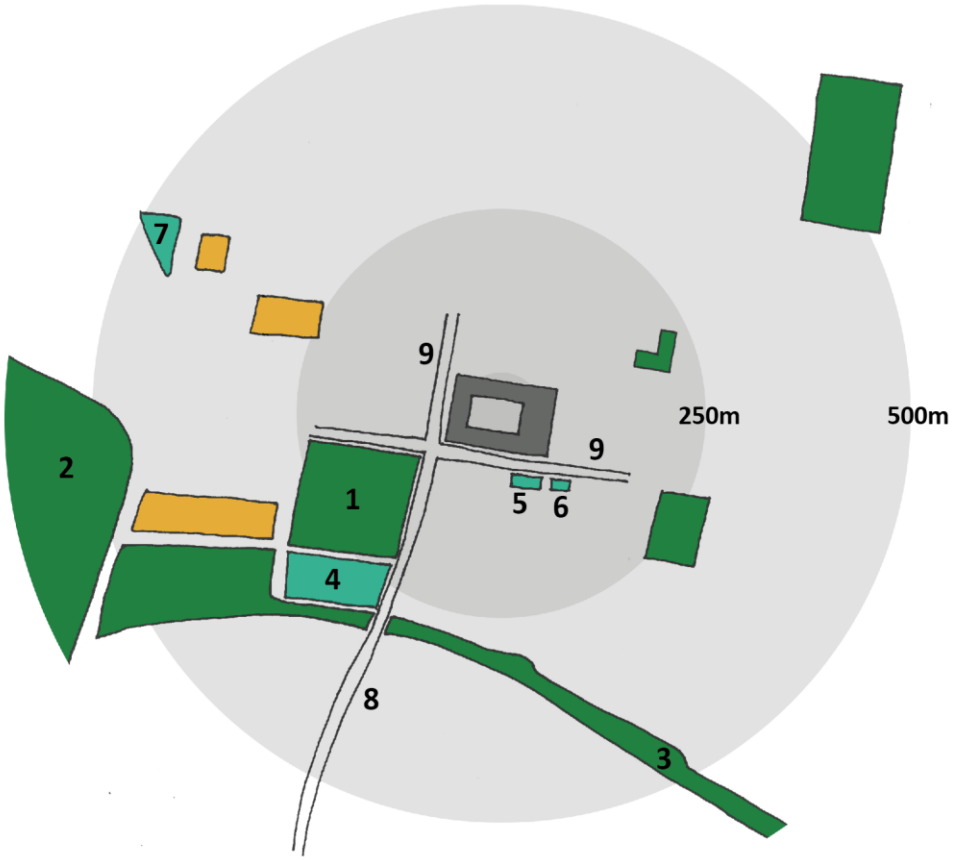


Figure 7.2: Complex Details for River

RIVER
LOCAL AREA



LEGEND (key spaces mentioned by participants)

Kindergartens or Schools

Green space

1 Park across busy intersection
2 Regional Park
3 Linear Park

Community Amenities & Retail

4 Theatre
5 Gym
6 Pub
7 Sports club
8 Local restaurant/ shopping street
9 Busy roads

LOCATION

- Parramatta, West Sydney, 30 min public transport to CBD.
- Well-established suburb of Western Sydney
- Mix of new large apartment complexes, older 3-6 storey apartment complexes and older detached housing
- Parramatta business district nearby
- Located within a metropolitan centre and urban renewal area (Greater Sydney Commission, 2018)

POPULATION (ABS Census 2016):

- Top birthplaces: 40% Australia, 12% India, 8% China
- Median weekly personal income 10% above the state average

Figure 7.3: Local Area Details for River

7.1.2. Comparisons of River Mesh Block Residents (ABS Census 2016), Resident Interviewees and Survey Respondents

The following Figures show demographics for residents of River's Mesh Block, which had a population of 364 people in 2016 (one year before fieldwork), in comparison with demographics of resident interviewees and survey respondents. Commentary on key characteristics is provided beside each figure. Where the case complex is particularly different from other complexes, this is noted. These Figures may be compared to those in other case chapters.

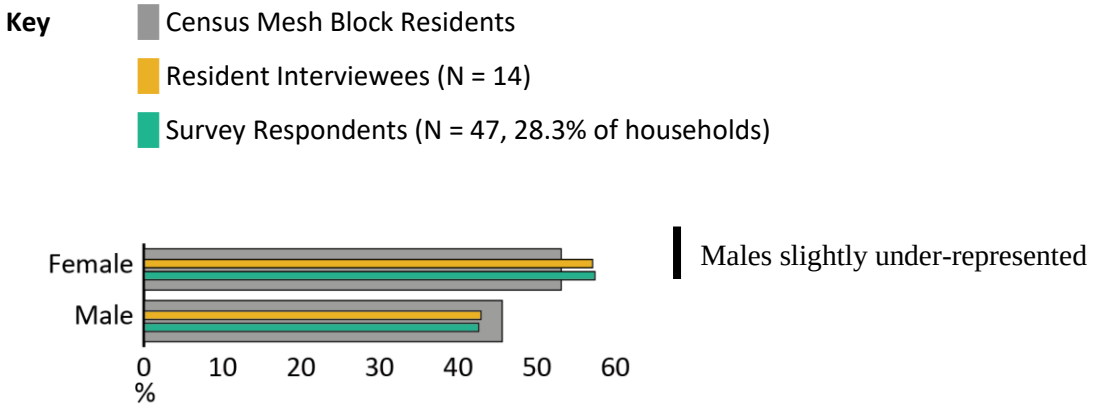


Figure 7.4: Gender

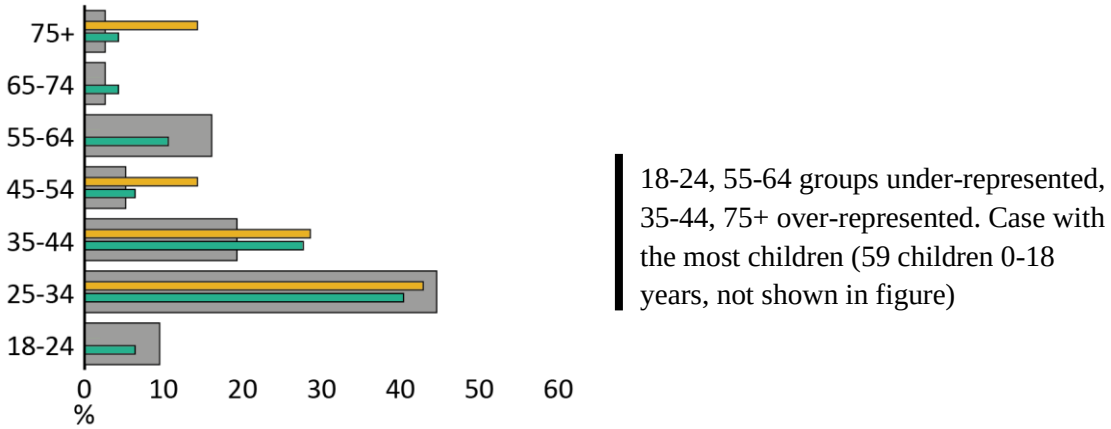


Figure 7.5: Age (Adults only)

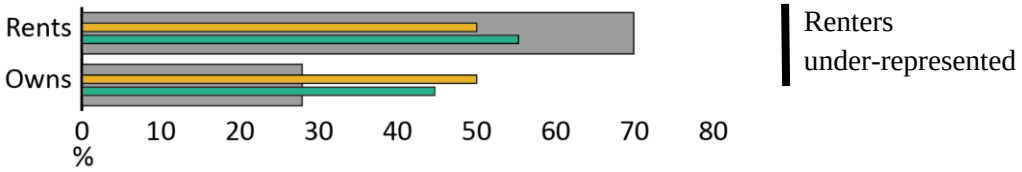


Figure 7.6: Tenure

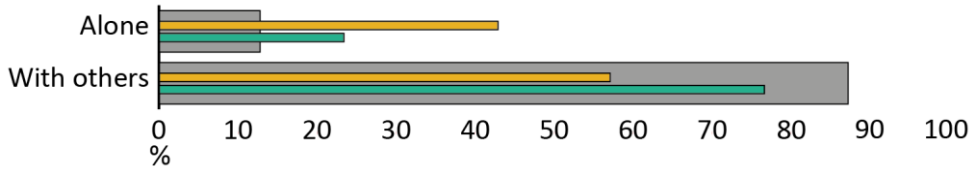


Figure 7.7: Living Alone

Residents living alone over-represented

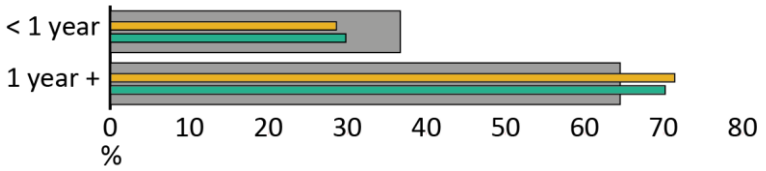


Figure 7.8: Length of Residence

Newer residents (<1 year) a little under-represented

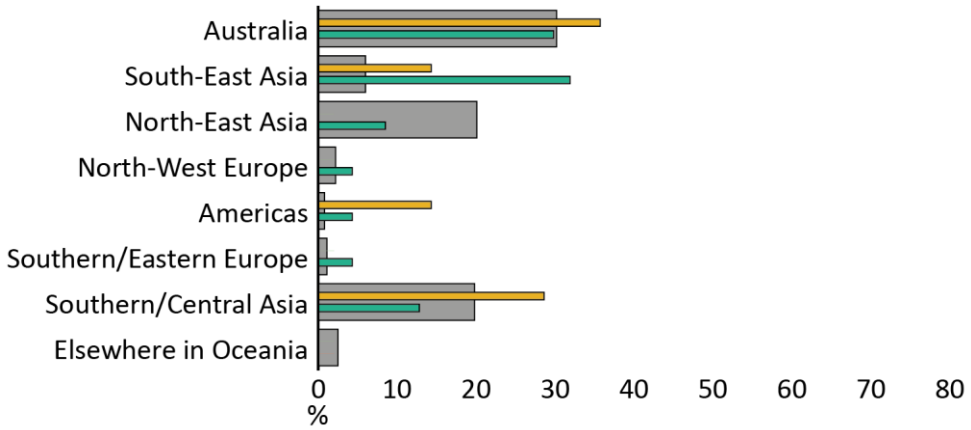
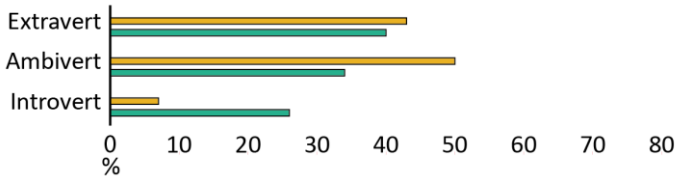


Figure 7.9: Country or Region of Birth

Australian-born residents not particularly over-represented (contrary to other cases), North-East Asian-born residents under-represented and South-East Asian-born and American-born residents heavily over-represented.



Introverts under-represented in interviewees, based on survey responses

Figure 7.10: Extraversion/Introversion

7.2. Describing the Social Assemblage

The following Figures show survey responses for social ties (Figures 7.11 and Figure 7.12), satisfaction with local social connection (Figure 7.13), and social cohesion and irritation/intrusion (7.14) in the complex and local area. This is followed by qualitative description based on the interviews.

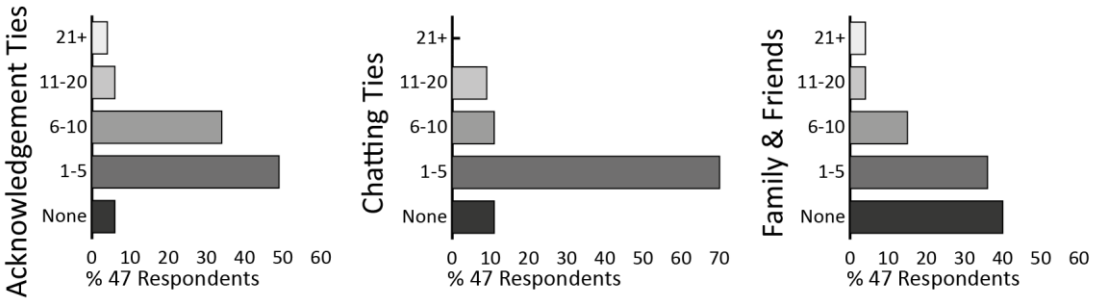


Figure 7.11: Quantity of CSTs and Family/Friends ties

More than half of survey respondents had friends/family living locally, and 89% had at least one chatting tie, with one in five having at least ten. Only two respondents reported no relationships in the complex and local area.

		Acknowledgement Ties		
		None	1-5	6+
Chatting Ties	None	6%	4%	0%
	1-5	0%	43%	28%
	6+	0%	2%	17%

Figure 7.12: Quantity of CST

Almost half of respondents had between 1-5 acknowledgement ties, and between 1-5 chatting ties.

As in the previous chapter, satisfaction with local social connection is derived from the items 'I have enough contact with people in my local area' and 'I feel isolated from others in my local area' (Figure 7.13).

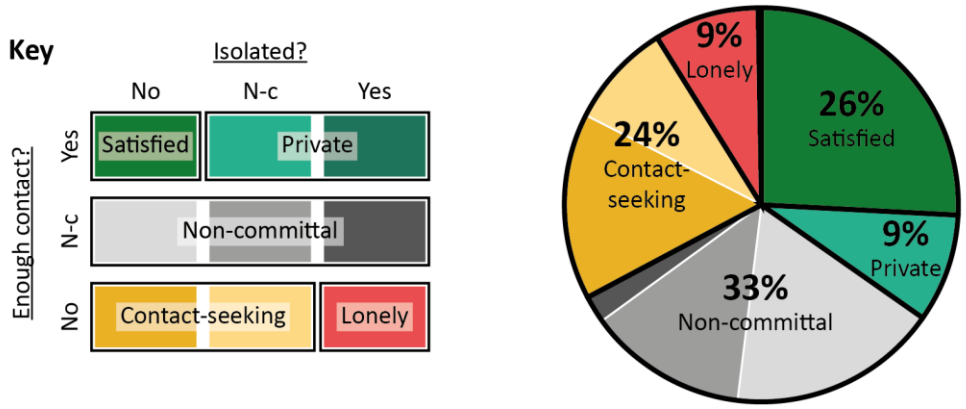


Figure 7.13: Satisfaction with Local Social Connection (N = 46)

> River had the largest proportion of contact-seeking respondents of all cases and a relatively low proportion of non-committal respondents. It also had the lowest proportion of lonely respondents.

Figure 7.14: Social Cohesion (upper) and Intrusion/Irritation (lower) (N = 45-47)

> Three quarters of respondents believed their neighbours would help in an emergency and over half felt their associations with people in the local area meant a lot, however one in five were often irritated with people in the local area and few exchanged favours with neighbours.

River was generally seen as a friendly complex by resident interviewees, with most reporting at least smiles or acknowledgement between residents.

> *Everyone is sorta smile, hello, little chitchat you know, no one looks very like 'don't wanna talk' or anything like that. – Melissa, renter 35-44*

Owners especially tended to know other owners in their building, often through working together to fix problems (see section 7.5.4: Events and Incidents) as well as longer residence.

> *The owners, we actually have a personal relationship. Because we talk about issues with the building and that type of stuff. – Joshua, owner 45-54*

> *Most of the people I'm familiar with are the owners, and very little are the people that rent the places here, because they go and come and go and go again. – Hua, female owner 45-54*

The diversity of cultural backgrounds (discussed further in section 7.5.23) as well as the physical separation between the nine different buildings meant that the social assemblage was somewhat fragmented. Interviewees rarely crossed paths with residents of other buildings within the complex, except if they crossed into other sections of the carpark basement levels.

> *It's only in the minus three basement that we have any chance to meet each other, except for the meetings. – Hua, owner 45-54*

Several interviewees also commented on the superficial nature of most interactions (though, as was the case in Shore, this was valued at times).

> *We don't **know** know them, when you get into the lift, you say hi, but that's about it. – Kavya, renter 25-34*

7.3. How do CSTs Influence Experience?

This section outlines the experiences associated with having CSTs at River, covering the balancing of interaction, help and information, novelty and enjoyment, comfort and security, and finally a sense of community associated with maintaining norms and working together.

Regulation of Contact

While many participants had at least a few CSTs, relatively brief interactions and weak CSTs were common at River. This appeared to be related to the large size of the complex and living close to many other people, making regulation of contact important. While a few interviewees spoke of visiting other residents in their apartments (particularly interviewees with children), there was a common feeling that one's apartment was a private zone where only close friends and family could intrude.

> *Especially with apartments, you're living with people underneath you and on top of you, […] I need a space that is mine, that I can just demarcate, and none shall pass. – Laura, ambivert owner 25-34, living alone*

Previous negative experiences could also impact on interviewees' willingness to develop relationships.

> *[At a former residence] my neighbour became my friend. [And then] when my friend was not around [friend's husband] was trying to harass me. That was quite scary for me and now I'm very, very, very careful in keeping any sort of any relationship especially in my neighbourhood except for hi, hello. – Riya, renter 35-44*

Keeping relationships at a low level also meant they were "uncomplicated", with "no expectations either side" (Margaret, extravert owner 75+), and allowed people the time and space to pursue their own lives.

> *Sometimes you're in a rush, […] sometimes you just want your own space, you're not obligated to have a chat with them. – Kavya, renter 25-34*

While many interviewees enjoyed maintaining CSTs through small talk and working together (see following sections), for some there was a clear sense of ensuring boundaries were not overstepped.

> *Friendly distance [laughing]. Like, yes, you exist and that's amazing, and you know, let's think about each other a bit more. But that doesn't extend to, 'oh hey, can I borrow a cup of sugar', that kind of thing, I don't want that constantly. – Laura, ambivert owner 25-34*

Help & Information

Several interviewees told stories of exchanging small favours, including helping wheelchair-bound neighbours down the fire stairs and keeping an eye on neighbours' apartments or children. The possibility of immediate help was also a commonly-mentioned benefit of knowing one's neighbours, especially when friends and family lived further away.

> *If you need any immediate help regarding fire or any medical emergency within the apartment […] I think that's the most basic thing. – Riya, renter 35-44*

Additionally, many interviewees saw help in time of need as a primary motivation to get to know neighbours, even if they hadn't personally made many connections. This also extended to simple information. Kavya, a time-pressed renter, had not found the swimming pool in two years of living at River (further discussed in section 7.4.2), and noted that she might have learnt its location from neighbours, had she developed stronger relationships with them. Helping a neighbour was another way of developing a CST, as discussed in section 7.5.4: Events and Incidents.

Novelty & Enjoyment

CSTs could provide simple daily interaction, which several interviewees enjoyed.

> *It's one of those things where you just like to talk to people, and it's probably just about nothing, just about everyday stuff. – Robert, renter 35-44*

Laura noted that, because interaction with acquaintances was limited, relationship development was drawn out, and one could enjoy the novelty of a relationship for longer (and meet a variety of people).

> *They're different people from my close friends, and you get all the benefits of like a new and special and fancy friendship […] it sort of prolongs that feeling of 'ooh, new person, novelty, wow!' – Laura, owner 25-34*

Several interviewees valued interaction with acquaintances, or even briefly-met strangers, for the horizon-broadening experiences it provided.

> *I came out of India to learn more about, experience different ... I wouldn't say culture but I definitely want to make new friends in different countries. – Aziz, renter 25-34*

> *I had a conversation yesterday with a, I presume it was a transgender person, and we had quite a conversation at the checkout. – Margaret, owner 75+*

Comfort & Security

Several interviewees mentioned passing on information about building security to solve problems such as theft and intrusion by non-residents, and spoke of how maintaining CSTs encouraged people to watch out for the complex as a whole.

> *If you get to know your neighbour, and speak to them, you know you're safe. You're in a safe environment. They know who you are. You know who they are. They look out, if anything suspicious is around. – Rose, owner 25-34, living alone*

Demonstrations of this watching-out could provide a strong sense of comfort, as shown in the following.

> *The other day my wife set off the alarm. And [next-door neighbour] just came, "What happened? I thought there was a robbery." It gave me a good sense of feeling that, okay, somebody is bothered, somebody knows me, and because they know me they just ran out of their house. – Aziz, renter 25-34*

Riya pointed out that knowing familiar faces also encouraged a sense of investment in the complex.

> *You feel more secure, and you feel like you know the surroundings and you start owning the place. So, a sense of ownership comes, when you see familiar faces. And a sense of security. – Riya, renter 35-44*

Sense of Community, Norms and Working Together

Developing CSTs could, as described above, help with feeling invested in the complex through being part of the community, and meant residents might look after the complex and local area more.

> *It's like "I recognise who you are, you recognise me," so I kind of feel like I'm part of this community. […] If you have roots here, you feel you have ownership, I feel*

> *like I want to look after Parramatta and I want to have a say in how Parramatta's going. – Teresa, owner 25-34*

This was corroborated by several resident interviewees, who felt that longer-term residents of River were more likely than short-term residents or the public to be "considerate" of others in the complex (Rose, owner 25-34). The fact of living in a large group also means negative norms could catch hold easily, and investment and belonging to the group could counteract this. Management played a part in curating group norms and keeping them positive.

> *It's one of the good and bad things when you're living in a big apartment like this, any messages you need, if you send a good message, it's like you'll receive a good response, if it's a bad message, next day it will be double, triple. – River Manager*

Several interviewees had worked with other residents to solve problems in the complex, and noted the advantage of strength in numbers.

> *[If] we want to enforce something, we can all do it together. […] A few of us know each other quite well, so we keep an eye on the building. Any particular issue, we talk about it. – Hua, owner 45-54*

7.4. Where are CSTs Developed & Maintained?

This section examines spaces in the complex and local area in which CST development and maintenance occurred, firstly covering the survey responses (section 7.2.1). Section 7.2.2 uses the interviews, observation and photographic documentation to evaluate spaces, building on the affordance analyses for key shared spaces in the complex (the plaza, rooftop facilities and pool building corridors) found in Appendix H. The section also considers why some spaces did not appear to support CST maintenance and development.

7.4.1. Survey

From 47 usable responses, 35 respondents cited spaces where they spoke to neighbours or acquaintances at least once a month, with the remaining 12 respondents indicating 'no spaces' (26%). Ten of these 12 respondents have acknowledgement, chatting or friends/family ties in the area, however. As for Shore, this may be because they simply did not think of where they met these people, were unclear about the question, met them in a range of different spaces, or met them less often than monthly.

Table 7.1 presents the types of spaces cited by survey respondents as spaces they spoke to neighbours/acquaintance.[27]

Cafés were the most common spaces cited, followed by lifts and the onsite supermarket. There are a number of parks in close proximity, and these were mentioned by around one in ten respondents, on par with the carpark. Corridors and lobbies of the buildings were less often mentioned. This is further discussed in the following sections, which consider the complex and local area spaces most commonly associated with CST for interviewees living at River.

Table 7.1: Spaces survey respondents encounter contacts

Space type	# (%) Respondents citing
Café	15 (34%)
Lift	**12 (26%)**
Supermarket	11 (23%)
Park	5 (11%)
Carpark	**5 (11%)**
Restaurants	4 (9%)
Local streets	4 (9%)
Gyms	**3 (6%)**
Church	2 (4%)
Corridor	**2 (4%)**
Lobby	**2 (4%)**
Liquor store	2 (4%)
Plaza	**2 (4%)**
Complex pool	**2 (4%)**
Other	4 (9%)

[27] Where a respondent cited multiple instances of the same type of space (for example, two parks), this is counted only once, due to a focus on respondents' use of types of spaces.

7.4.2. Interviews, Fieldnotes and Photographic Documentation

This section outlines the spaces in which interviewees interacted with contacts, followed by commentary on how the design or layout of the space might affect this pattern.

Circulation Spaces & Carpark

In contrast to the surveys, lifts were the most often-mentioned contact space for interviewees, with acknowledgement and small talk common. One interviewee noted the lift was "an awkward place" without interaction (Aziz, ambivert renter 25-34). The brief time spent in the lift meant that more in-depth conversations were unlikely, however, and civil inattention was also relatively common, and disliked by some.

> *There's a lot of people who do that kind of thing [greeting others] in my building, and there's a lot of people who don't. And, I mean, it's nice to say hello to someone every so often. – Laura, ambivert owner 25-34*

The lift could also prompt favours: when her building's lift was down for maintenance, one wheelchair-bound woman relied on a neighbour's help to leave and return to her apartment.

> *She had to ask our neighbour upstairs, he's a strong guy, to piggyback. – Teresa, owner 25-34*

Figure 7.15: Lobbies

The carpark was a common space in which to acknowledge other residents. Margaret noted that, similarly to other circulation spaces, people were likely to interact briefly here because:

> *You're passing, so you're not going to be cornered or held up. […] It's on common ground, we're on equal footing. – Margaret, owner 75+*

The residential corridors in eight of the buildings are reasonably short, with between two and six units on each corridor. Interviewees often spoke of knowing people on their floor, due to meeting them when leaving or entering their unit and hearing them from within their unit:

> *We just walked over when he was singing really loudly on the karaoke, no alcohol. […] It's just a wall apart. When he practises at home it's really nice for us. It's good entertainment. – Aziz, renter 25-34*

It is clear, however, that outcomes such as this depend on the people involved, with human and built environment actants interacting to produce a positive or negative experience.

Eight of the nine lobbies are relatively small, with no seating (Figure 7.15). Some lobbies open directly to busy roads and are relatively noisy, and interaction in lobbies was mentioned less often by interviewees. The pool building is distinctive in having large, naturally-lit lobbies on each level (Figure 7.16), though the lack of air conditioning means temperatures can reach over 40°C in summer. The manager reported this space had been used for children's birthday parties, and some residents used it as an extra everyday play space for children.

> *It is a good area, because you can take your stuff there. [My two year old] can ride around in there because it's safer than say, going out in the street. […] Our next door neighbour, when they have visitors, sometimes because the apartment is so small, the older kids are outside. […] it's good because it's just our building, our floor space is kind of like ours, and having privacy and you can use that space and you don't have to worry. – Teresa, owner 25-34*

Figure 7.16: Residential Corridor/Lobby, Pool Building

Level 6 Roof Facilities

The pool building's sixth floor has a pool, spa, gym, sauna, toilet facilities and changing rooms, and formerly had barbecue facilities. A main concern with this area was its accessibility.

> *The place that it is built is not suitable. You have to go through minus three level [carpark] to access that area […] Most of the people don't find it comfortable. – Riya, renter 35-44*

Kavya felt that, were she to use these spaces, she would know more people in the complex, due to spending more extended time outside her apartment. She had attempted to locate the pool several times without finding it in her two years living at River.

> *I don't even know where the pool is to be honest, I think there's a gym, somebody once told me? […] There's no information anywhere. – Kavya, renter 25-34*

The importance of common recreational spaces was supported by several interviewees who had developed CSTs with residents they'd met on Level 6, sometimes facilitated by their children.

> *[In summer] it's a long day, and hot, we are swimming, and families [come to use the] gym, so other people are coming, and we sit together. – Tarun, male renter 35-44 with children*

The outdoor area has no seating (Figure 7.17), meaning children's caregivers must stand, and activities such as reading a book are not easily afforded (though some residents sunbathe on the paving). Caregivers do chat here, but civil inattention or brief acknowledgement was also common.

> *If I see someone at the pool that I know or see on my floor […] I'll be like, "Hey!" And that's it. I wouldn't go and sit with them. – Rose, introvert owner 25-34*

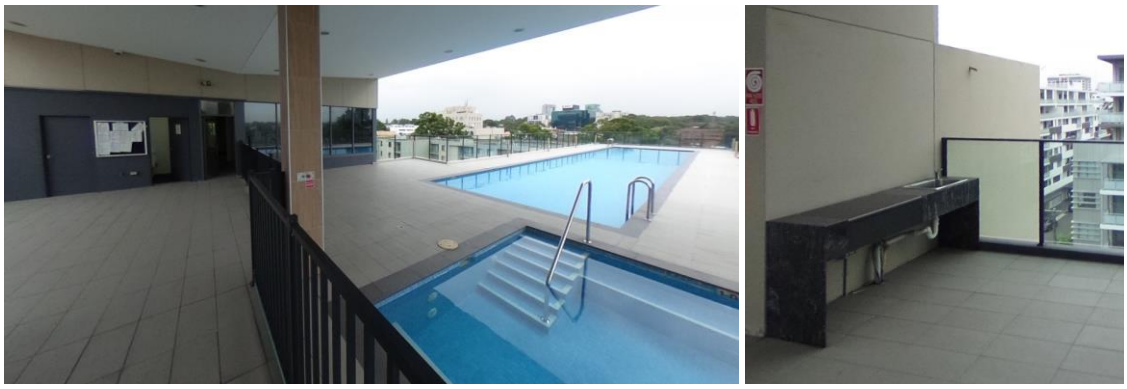


Figure 7.17: Pool and Spa, and Former Barbecue

Some interviewees did not trust the pool's cleaning,[28] and limited and out-of-order gym equipment meant several used local commercial gyms instead. One woman preferred not to use the gym due to feeling uncomfortable around other users.

> *There was a lot of young, unsavoury dudes […] Maybe if there was another woman here I'd be okay […] Not to say they were harassing me or anything, it was just a sort of a, you ['dudes'] are only here […] to look at yourself in the mirror. – Laura, owner 25-34*

Several interviewees had developed CSTs at both the complex gym and commercial gyms (especially group fitness gyms), though a few noted people generally focused on their workout.

> *That's not a good area to meet people, because people come for exercise so they have a very*

Figure 7.18: Residential Gym

[28] Cleaning was an issue general to the complex due to budget constraints, though management and greater funding improved the situation over the course of fieldwork.

> *short time span. They have their headphones on, they don't want to speak. – Riya, renter 35-44*

The barbecue had been removed due to lack of cleaning after use (Figure 7.17), reducing event facilities. Residents had once gathered informally on Level 6, however this had stopped, partly due to access restrictions after nine p.m.

> *Heaps of the first timers would go up to the roof and watch the fireworks from up there. – Joshua, owner 45-54, resident of pool building*

Plaza, Manager's Office & Complex Retail

Participants often developed and maintained CSTs in the complex supermarket due to regular use, though interactions tended to be brief.

> *I've run into people several times, and I don't know their name, but I run into them down there, and we continue the conversation, and then keep going [laughing]. – Margaret, owner 75+*

Several interviewees knew staff in the pharmacy and doctor's surgery, as well as in takeaway stores. Most of the stores open off the plaza (Figure 7.19), and some used this large public space solely to access stores.

> *The only time I do walk past is if you're going from [supermarket] to [restaurant], […] or sometimes there's the pharmacy as well. […] But apart from that, just using that space for itself, no. – Kavya, renter 25-34*

Figure 7.19: Plaza

Some were concerned about safety in the plaza, especially at night.

> *[A man] charged at me once. He was old, puny. I was not scared. […] That's okay. But then everybody with a family or children they would be like, "No let's not. After seven o'clock, whenever sun sets, let's not go there". – Aziz, renter 25-34*

> *I don't even walk through there. There's homeless people there. I don't know who they are so I don't go there. It doesn't look safe. It looks very nice. Well maintained. But it doesn't look safe. – Rose, owner 25-34*

From observation, people most commonly walk through the plaza talking only to companions or

engaging in civil inattention. Lingering people appeared to be mostly workers. Children played here in the daytime, however, due to its mostly-enclosed nature.

> *Children are playing, mothers are sitting, it feels like a family atmosphere. […] The children can safely play here. Because otherwise on both sides there's traffic. – Riya, renter 35-44*

Building management had arranged several plaza events, where families came together and parents would chat. Several interviewees spoke favourably of these events, though they have been discontinued.

> *There was a Saturday market […] a small trampoline, […] this magician was coming, […] the parents were sitting [at cafés] and the children were playing in front of them, it was a good event. – Tarun, renter 35-44 with children*

The plaza becomes very hot in summer, with little shade. Several interviewees mentioned the possibility of having a grassed area which would be "kind of soft and not so… hard" (Teresa) compared to the paving. Management was aware of these issues and was working to improve them, however workload was an issue (potentially contributing to the discontinuance of events).

> *[We're working] to make this area more comfortable, so if it's too sunny, or raining […] I want this place safe, because people want to use this area! – River Manager*

The location of the management office (and 'public' toilets) was also a problem (see Figure 7.2) as it is down a steep flight of stairs with an intercom at the bottom, posing difficulties for the elderly as well as making the office less visible and locatable. The toilets are locked due to prior problems with homeless people, and are accessible only with a key from businesses, or if the manager lets people in individually.

Cafés & Restaurants

The nearby restaurant strip was valued by many interviewees, however social interaction here was generally arranged with friends. Cafés, likely due to their lower minimum price and therefore more regular use, were mentioned more often.

There are two cafés with seating extending into the plaza. While the cafés are not open in the late afternoon or evening, they are generally busy at other times of the day, lending a vitality to this section of the plaza.

> *My wife a couple of times she joked, "What, people don't cook over here on Saturdays and Sundays?" […] It's quite a buzz crowd, it's nice to see. – Aziz, renter 25-34*

Café clientele consists mostly of non-residents, with Margaret (owner 75+) pointing out that café-going would be expensive for young families living at River. Interviewees who did use these cafés spoke of incidental interaction with staff and passing acquaintances, meals with friends and business meetings.

While 'Central' Café held some children's events, opinions were mixed about their attendance and success. Several interviewees spoke of problems with café management, dislike of staff and food/coffee offerings. 'Vines' Café brands itself as a place to hang out and socialise, however Laura felt its popularity worked against it in this goal.

> *It's a very high turnaround. […] you go there, you eat, you have a coffee, you bugger off. […] you have to have something else other than just the food and the coffee. You have to have like, stuff to read, a spare space where you can sit around and have a yarn. – Laura, owner 25-34*

Laura instead frequented a café on the way to the train station, due to its superior coffee, friendly staff and regulars, and community-outreach program. She also spoke of a local not-for-profit café that had previously filled the role of third place for her, with board games, books, music/poetry events and rooms for club meetings. That café closed in 2015 due to increasing rent.

Other Spaces

River is within walking distance of a large number of parks. The closest (Figure 7.20) is very well-maintained by the council and directly across a busy intersection. Interviewees used it mostly when events were held here, and described arranging to meet, or running into, contacts at events. These events were seen as especially valuable in bringing many different groups together, and drawing people out of their apartments.

> *I think the council, the things that they run, the festivals and everything, trying to get people together, I really love. – Teresa, owner 25-34*

Figure 7.20: Council Park across busy intersection

At other times, the park did not appear to be well-used by residents. According to interviewees, this was due to its non-enclosed nature (less safe for children), safety concerns around homeless residents, the obstacle of crossing the busy intersection when other parks were accessible across smaller roads, mulch rather than grass under trees (less comfortable to sit), and lack of apparent purpose for adults.

> *What would you use the park for, I don't know. I went for a walk in there once... Walk around, hopefully you come out alive! [laughing] – Robert, renter 35-44*

A number of interviewees spoke of walking in other parks, especially the large regional park fifteen minutes' walk away, rather than using gyms. Parents used a linear park along the river with their children (no roads, but water was an issue for toddlers), as well as a centre-block park

across a minor intersection with a playground and cycle track. Using parks with children was an opportunity to interact with other caregivers.

> *There are many people from the school, so they will play, the children meet together, wives meet together, it's good. – Tarun, renter 35-44 with children*

The onsite childcare centre opens off the plaza, and was mentioned by several interviewees as a space they developed CSTs with other parents. The local school was also an important focus for meeting other local residents when picking up and dropping off children.

> *I think it's just that, you bump into each other and you kind of stay, and chat, so I mean with the kids at school that's always an easy, an easy sort of friendship to build. – Melissa, renter 35-44*

There is a local government-run community studio space on the same block as River, where dance groups, art exhibitions and others can hire the space for a low fee. Laura had developed many CSTs through a dance group here, and highly valued its existence and convenient location, though few other interviewees mentioned it. Shared activities at the library, public pool and a nearby film/stage theatre were also mentioned by some interviewees as supporting relationship maintenance and development.

SUMMARY

In summary, participants most often met contacts in circulation spaces, however interaction here was brief. The pool area on Level 6 afforded lingering and tie development, though maintenance problems had forced the removal of a barbecue and the space was also awkward to access for the majority of residents. Participants tended not to linger in the plaza, because they were so close to home or for safety reasons after dark. Children and their supervisors did use it in the daytime, however, supporting tie development. Participants ran into contacts at the supermarket and organised to meet at local cafés, and some developed CSTs through activities and events in local community spaces.

7.5. HUMAN ACTANTS IN THE PRODUCTION OF CSTS

In addition to the built environment actants discussed in 7.4, a number of human actants are involved in the development of CSTs at River.

7.5.1. Having Time

Time appeared to have a great impact on the development of local CSTs, with time pressure mentioned by many, particularly in association with work.

> *It's a stressful environment where once you're done with work you've got your goals to finish, right, got to go home, get this done, I don't have enough time already. – Kavya, renter 25-34*

Other priorities, such as families, other friendships, work or simply wanting time alone meant that people rarely spent their free time meeting neighbours or other locals.

> *People are really busy, and so they've established their friendships and their relationships with other people so they kind of focus their time on that. – Teresa, extravert owner 25-34*

People whose schedules aligned might develop CSTs due to repeated incidental interaction, often in lifts, lobbies or the carpark. This necessitated long-term residence (building up interactions over time, and creating an expectation of future interaction), which many interviewees felt was rare, especially for renters.

> *People are coming in, moving out, coming in, moving out, it's difficult to maintain those kinds of relationships. – Aziz, renter 25-34*

7.5.2. Personal Attributes

Personal attributes were a strong determinant of whether residents developed relationships with others, specifically personality, status as renter or owner, appearance, or being the 'right' sort of person. Several interviewees described themselves as 'friendly', noting that they were likely to say hello to people they encountered in the lift, lobby, corridors or carpark. The idea that engaging in interaction was up to the individual was common, and often seen as a right.

> *I guess social inclusion is good... if you want it. If you don't want it, well then you should be allowed to say [just] hello. Hello, and see you later. – Robert, renter 35-44*

Being an owner or a renter affected residents' likelihood of interaction in several ways. As detailed above, renters were associated with short-term residence, making them potentially less likely to seek a relationship. Owners are financially more invested in the complex, and were more likely to work together, as well as be on the lookout for potential comrades in arms (see section 7.5.4: Events & Incidents).

> *The owners, we actually have a personal relationship. Because we talk about issues with the building and that type of stuff. – Joshua, owner 45-54*

Tenure status was also a common question to ask when encountering other residents (presumably to gauge potential length of residence and likelihood of helping with issues), however one renter felt uncomfortable with this question, implying a sense of class division.

> *At times people ask very personal questions. Where you work, is it your own apartment or you are leasing? – Riya, renter 35-44*

A distinctive appearance could increase the chances of recognition, and repeated encounters could

spur residents to develop relationships further. Appearance could also make relationships more difficult to develop, however.

> *The fact that I have pink hair makes it a little bit obvious? So there tends to be a couple of people who say, 'oh, hey, I keep seeing you'. – Laura, owner 25-34*

> *My wife says, "I think you should shave your beard, then people will start talking to you." […] Being Asian, having a beard, black hair, they look sceptical. […] It's nobody's fault but that happens. – Aziz, South Asian-born renter, 25-34*

Being the 'right' sort of person was also a reasonably common sentiment expressed, especially in regard to homeless people and antisocial behaviour.

> *[S: any drawbacks to knowing your neighbours?] If there's a druggo, or a piss pot. Then obviously… [eugh]. But someone who's got a straight mind and has a good direction in their life, you want to have that friendship. – Joshua, owner 35-45*

One interviewee described the experience of being on the receiving end of this wariness.

> *People don't really want to talk to me. […] I don't know, maybe they're just like... scared a little bit... to say more than hello, but... Generally people just walk past me and say hello, or nothing at all. That's all right, it's fine by me, I don't care. – Robert, renter 35-44*

Despite this avoidance (likely based on appearance), Robert maintained a CST with an elderly lady on his floor, often helping her out. During Robert's interview, a retired South Asian man approached us to chat about the study, and was met with overt hostility from Robert, who accused him of being a rich investor owner; prejudices are obviously multiple, and social exclusion based on one might lead to escalation of another.

Interviewees also tended to develop relationships with people they had commonalities with, whether this was a life stage or common interests such as dancing, sport or the resident committee.

> *People make mates here if they're sporty. Sporting methodology and mentality, you can also talk about problems. Just common interests. – Joshua, owner 45-54*

7.5.3. Culture and Language

The presence of diverse cultures and languages variously had a strengthening or a weakening effect on relationship development. In the first respect, it drew together those that shared a culture or language and provided an interesting topic of conversation between groups.

> *I very much enjoy this building because this is a building where you can find people from everywhere, local, from across the world, anything. – Tarun, South Asian-born renter 35-44*

However, differing culturally-accepted standing patterns of behaviour could be tough to negotiate, making it difficult to connect and develop relationships, and leading to people sticking to their 'own' groups.

> *Nobody has my background, I don't have their background. What's their nature? All of those self-conscious thoughts just keep passing. – Aziz, South Asian-born ambivert renter 25-34*

> *It's very multicultural, like I think every neighbour of mine is from a different culture. […] it's not necessarily a bad thing, […] I just think in terms of closer friendships, to get along with someone you generally have to have more in common. – Dylan, Australian-born extravert renter, 25-34*

Aziz, a male renter recently arrived from India, spoke at length about the cultural differences between India and Australia, which he'd found difficult to get used to.

> *People from India will like to bond and connect very quickly. […] Here everybody's on the run […] After dinner, people [in India] used to come out on the streets. Just chat up for an hour or something. […] I do miss just going out and chatting with someone. – Aziz, renter 25-34*

7.5.4. Events and Incidents

The building defects suffered by the complex had brought residents together on multiple occasions, due to having to gather for repeated fire alarms or work together to rectify problems.

> *We both say, oh, the water pressure is not that good […] So then we talk about it and we can do it together, to push the strata company to help us to fix that. – Hua, owner 45-54*

Security was also an ongoing issue in the complex, with instances of robberies in the carpark as well as intruders gaining access to residential corridors – in the following case, a "shirtless, shoeless, and under the influence of something" man. These incidents could spark CSTs.

> *[Neighbour] came down and said 'did you just have a visitor [intruder]?' and I said 'yes, I did, what happened to you?' […] So it was kind of good in a way, because [the intrusion] fostered another relationship in the building, but I really don't want to be home-invaded! – Laura, owner 25-34*

On a more positive note, interviewees had developed and maintained CSTs at local government events and festivals, and several spoke of past public markets and events held in the plaza (see section 7.4.2). Tarun felt that attending these events was a particularly good way of meeting people.

> *They should come to these events, and create chances, create more opportunities to meet, see each other. – Tarun, extravert renter 35-44*

While the residents' committee wanted to hold events for River residents, logistics had proven complicated, and some interviewees expressed doubt about attending should there be an event.

> *We had thought of having a barbecue or something, but then we were told we'd run into all sorts of insurance problems, and it's just too hard. – Margaret, owner 75+*

> *I'm just curious how many people actually would want to do [a barbecue and drinks]? […] Personally, I might come out of curiosity to see who's in the building. – Dylan, extravert renter 25-34*

7.5.5. Children and Staff: Commonalities and Open Persons

Many children live at River, and parents and caregivers developed relationships through waiting for children at school or day-care, meeting their children's school friends at events or supervising play in the local area. Children in this case provided a commonality and topic of conversation (similarly to pets at Shore, though no pets are allowed at River).

> *There are a lot of families in here, even in this block, a lot of families, and so they can get together. Even the kids, their kids know my kid and my kid knows their little kids, so it's really good. – Hua, owner 45-54*

Those without children noted their role in initiating interaction – they are 'open persons' who it is generally acceptable to interact with (though 'stranger danger' might work against this).

> *The toddlers say hi, hello and then you'll start having conversations with the parents, you know? – Riya, renter 35-44*

Staff are another example of open persons, with whom there is a strong reason to interact due to commercial exchanges. Interactions with friendly staff were valued for the regular small talk they provided, and relationships could develop from regular encounters – more so than with other complex residents.

> *We frequent a lot of cafés so they know who we are, and so you kind of get to know them, but you don't actually know the people who you live with. – Teresa, extravert owner 25-34*

Staff could also have a large impact on whether a particular business was used if they overstepped the mark in connecting people (or sharing gossip).

> *She was like, did you hear about this? Did you hear about that? Did you see this? Did you see that? […] Because she was just too full-on, I stopped going there. – Rose, introvert owner 25-34*

As noted in Figure 7.2, workload is extremely high for building management staff. One interviewee felt that River's management was not "strong", due in large part to never having seen the building manager, and perceived an impact on the building's sense of community.

> *[Manager at former residence] used to take the rounds of each and every level to make sure that everything is fine. Hi, hello to everyone. We used to know him by face, by name by everything. Here? [shakes head] […] People start to feel like they are living on their own. – Riya, renter 35-44*

7.6. SUMMARY

River is generally seen as a friendly building, with acknowledgement of other residents common, though further interaction was often reliant on working together to solve building problems (largely owners) or regularly using common facilities, especially with children. Residents' range of cultural and language backgrounds sometimes prevented extensive interaction, but could also be an easy topic of conversation (for example, "where does your accent come from?" – River Manager). Time pressure made it difficult (and sometimes undesirable) for residents to develop relationships to a higher level, and residential mobility exacerbated this problem; one third of residents in the 2016 Census had been living in the complex for less than one year. Workload was a difficulty for building management (due in large part to the time spent addressing building defects).

Safety issues (especially concerns around homeless people and antisocial behaviour) prevented extensive use of the plaza and a local park, and difficulty finding and accessing the rooftop common facilities (including the pool, gym) meant they were not used by some. Large, naturally-lit lobbies in one building were valued by parents for the extra semi-private space they provided, and local parks across minor roads also provided spaces for children and caregivers to meet. Cafés could also become foci for incidental interaction with acquaintances, however expense and the ability to linger were important factors.

BAY COURT

345 units
7-8 Storeys + 2 Basement
Completed 2015

613 residents
571 adults
42 children
(Based on ABS Census 2016)

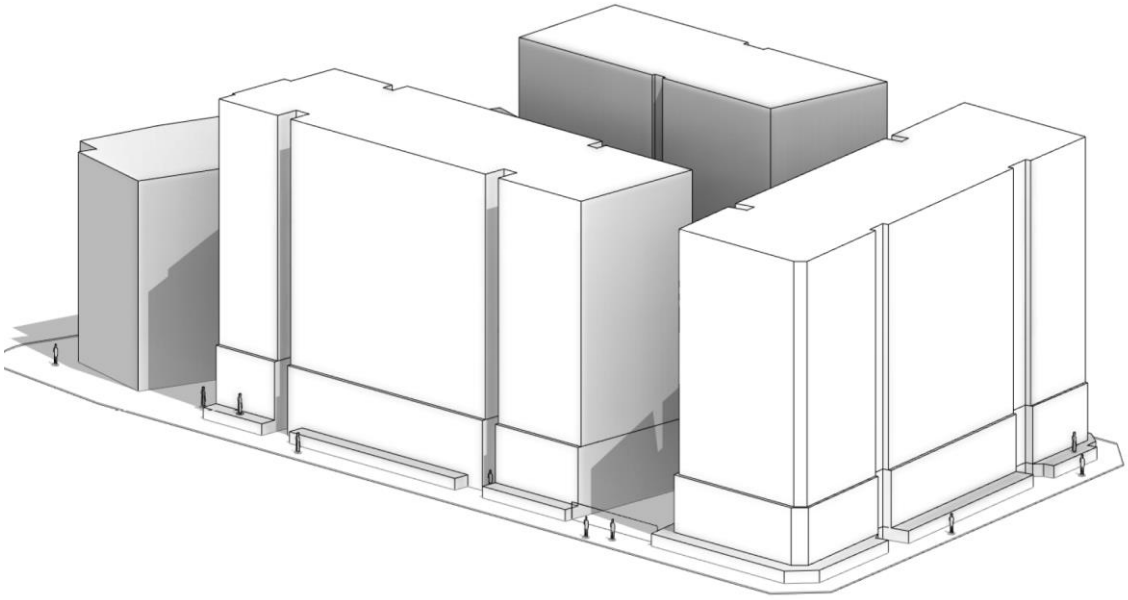


Figure 7.1: Indicative Model of Bay Court

8. CASE 3: 'BAY COURT'

This chapter presents the descriptive analysis for the third case, pseudonym 'Bay Court'.

8.1. THE APARTMENT COMPLEX, LOCAL AREA & RESIDENTS

8.1.1. The Apartment Complex & Local Area

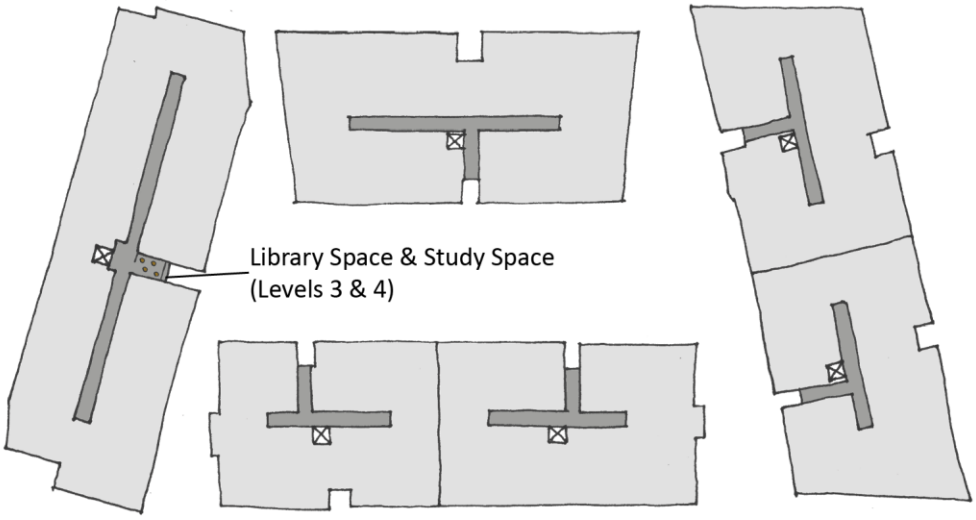
Indicative plans and details for the complex and local area are found on the following pages.

BAY COURT
COMPLEX

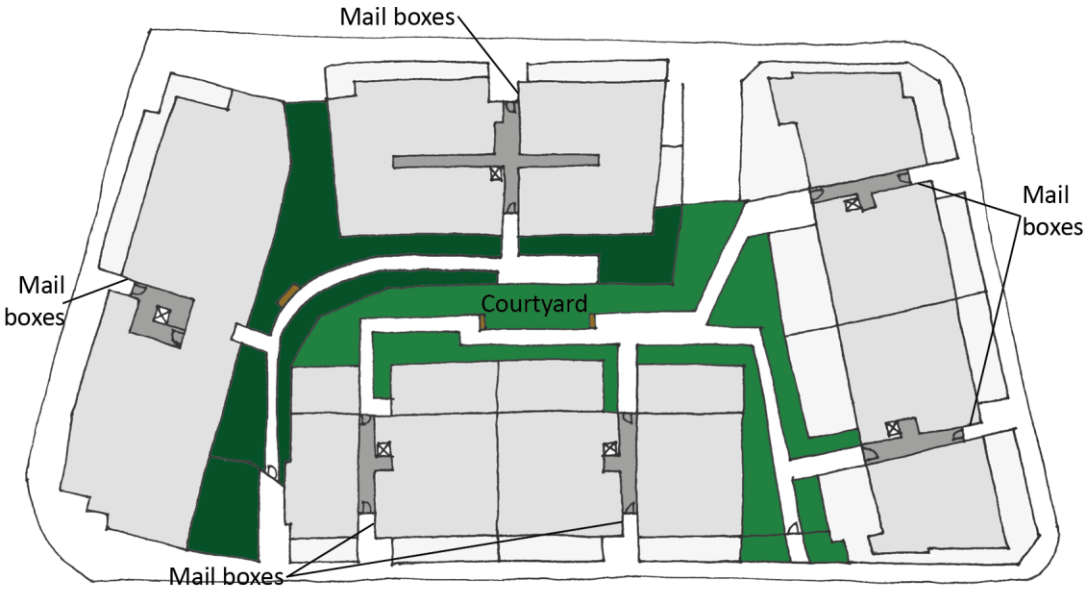
LEGEND
Lobby/Corridor
Private
Seating
Vegetation: Upper Courtyard
Vegetation: Lower Courtyard

SHARED SPACES
- 6x Lifts
- 6x Lobbies
- Corridors
- Carpark w/ Storage Cages
- Study Space
- Library Space
- 2-level Resident-only Courtyard

NOTES
- Manager's office in basement carpark
- Residential only



Typical Upper Floor



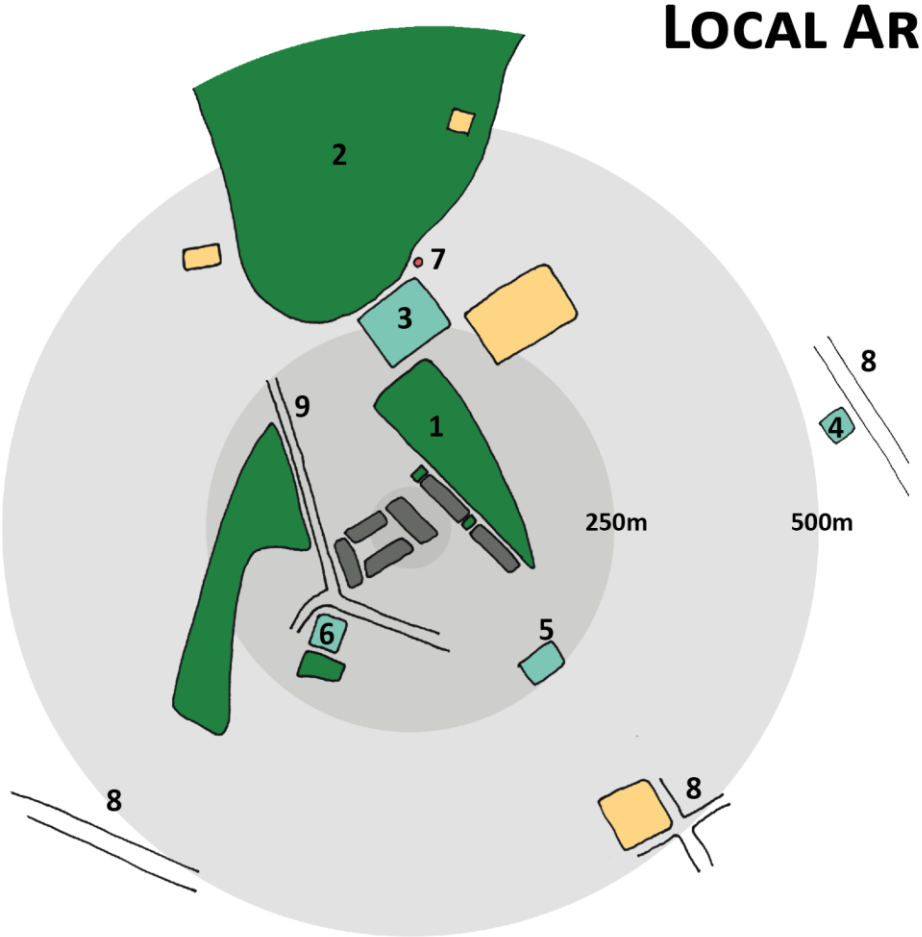
Street Level
(Terraced Units)

50m

Figure 8.2: Complex Details for Bay Court

Bay Court & Bay Park

Local Area



Legend (key spaces mentioned by participants)

Kindergartens or Schools

Green space

1 Local Park (closed at time of fieldwork)

2 Regional Park

Community Amenities & Retail

3 Retail Centre (supermarket, restaurants, cafés, beauty, medical centre, recently-opened community centre)

4 Library

5 Pub

6 Youth Centre

7 Transit Stop

8 Local Shopping Streets

9 Busy Road

Location

- Sydney's Inner West, 30 min public transport to CBD
- Well-established inner suburb of Sydney
- Mix of heritage terraced/detached housing and more recent apartment complexes of varying sizes, including public housing
- University nearby
- Located within an urban renewal area and near a metropolitan centre (Greater Sydney Commission, 2018)

Population (ABS Census 2016):

- Top birthplaces: 52% Australia, 7% China, 5% England
- Median weekly personal income 40% above state average

Figure 8.3: Local Area Details for Bay Court

8.1.2. Comparisons of Bay Court Mesh Block Residents (ABS Census 2016), Resident Interviewees and Survey Respondents

The following figures show demographics for residents of Bay Court's Mesh Block, which had a population of 571 people in 2016 (18 months before fieldwork), in comparison with demographics of resident interviewees and survey respondents. Where the case complex is particularly different from other complexes, this is noted. These figures may be compared to those in other case chapters.

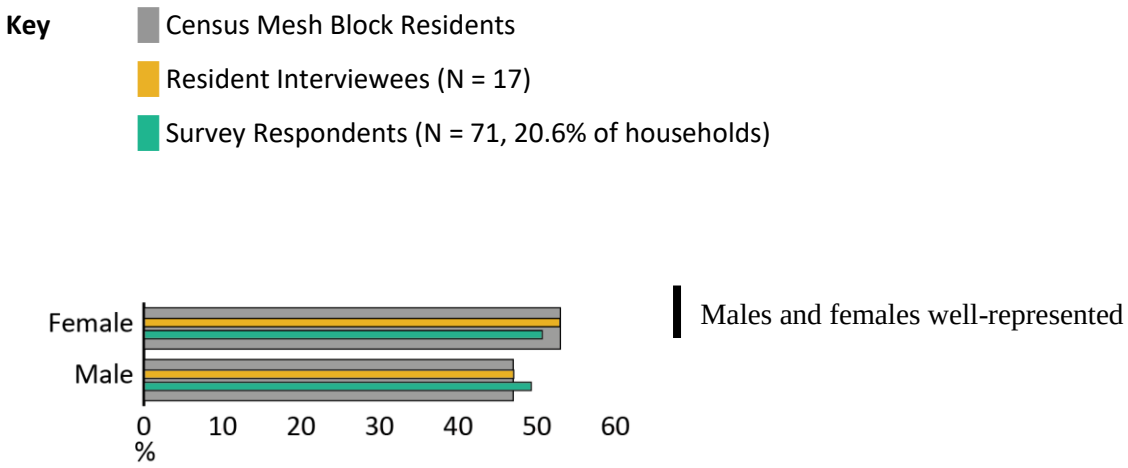


Figure 8.3: Gender

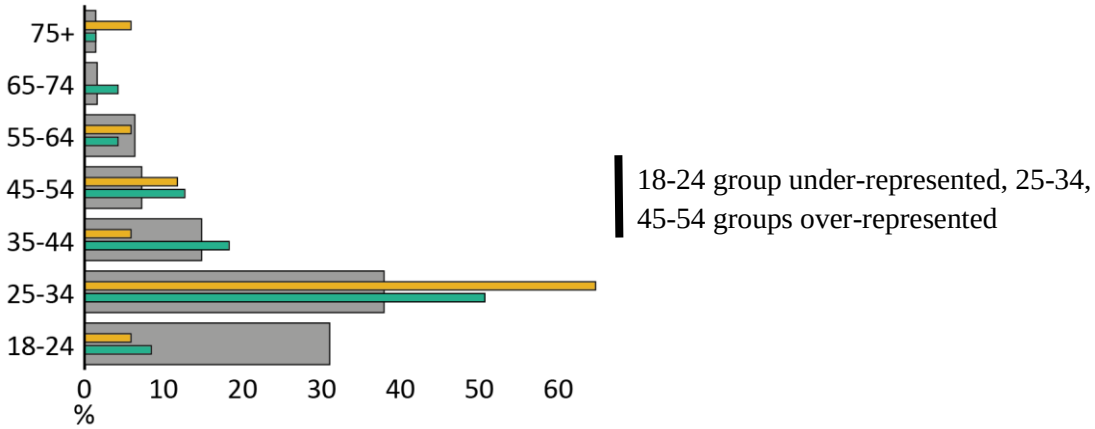


Figure 8.4: Age (Adults only)

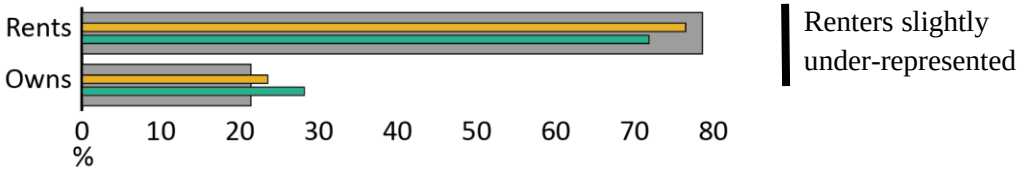


Figure 8.5: Tenure

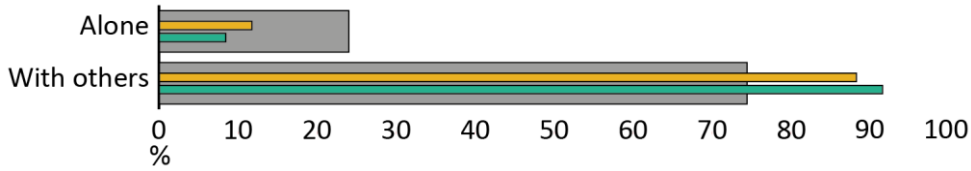


Figure 8.6: Living Alone

Residents living alone under-represented

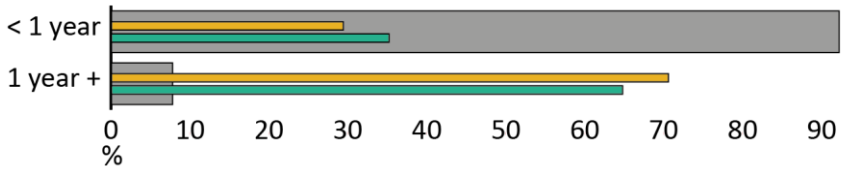


Figure 8.7: Length of Residence

New residents (<1 year) apparently under-represented, however the Census took place one year after the complex's completion so it is to be expected that most had been living there less than one year. Case with the highest proportion of new-resident interviewees and survey respondents.

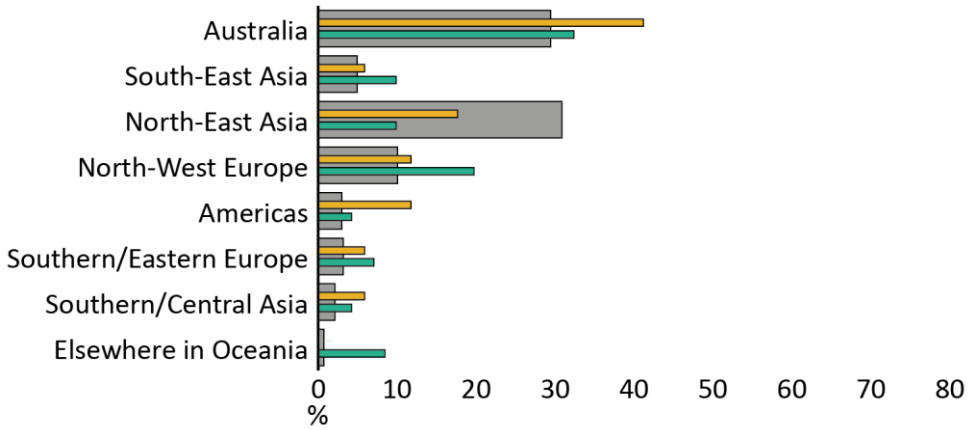
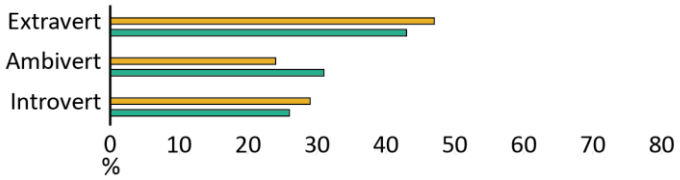


Figure 8.8: Country or Region of Birth

Residents born everywhere except North-East Asia over-represented



Extraversion/Introversion groups reasonably balanced in surveys and interviews

Figure 8.9: Extraversion/Introversion

8.2. Describing the Social Assemblage

The following Figures show survey responses for social ties (Figures 8.11 and 8.12), satisfaction with local social connection (Figure 8.13), and social cohesion and irritation/intrusion (8.14) in the complex and local area. This is followed by qualitative description based on the interviews.

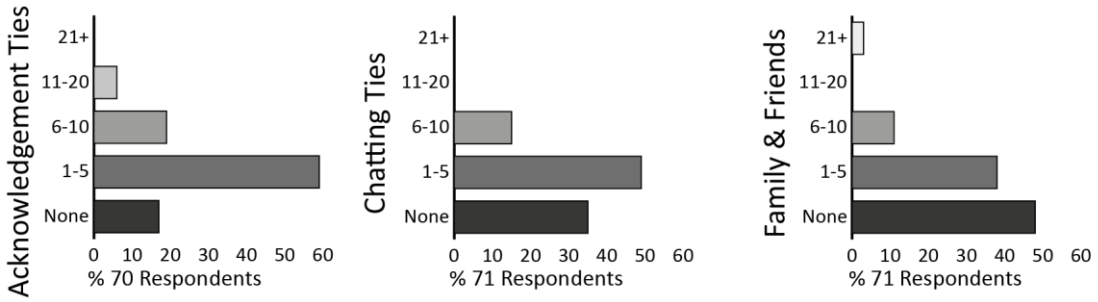


Figure 8.10: Quantity of CSTs and Family/Friends ties

A large majority of respondents knew at least a few people in the area (only six of 71 knew no one), but almost 20% had only acknowledgement ties. No one had more than ten chatting ties, contrary to other cases.

		Acknowledgement Ties		
		None	1-5	6+
Chatting Ties	None	9%	24%	3%
	1-5	9%	29%	11%
	6+	0%	6%	10%

Bay Court had the largest proportion of respondents with no chatting ties and few acknowledgement ties, and the lowest proportion of respondents with 6+ ties of both types.

Figure 8.11: Quantity of CST

As in previous chapters, satisfaction with local social connection (Figure 8.13) is derived from the items ‘I have enough contact with people in my local area’ and ‘I feel isolated from others in my local area’.

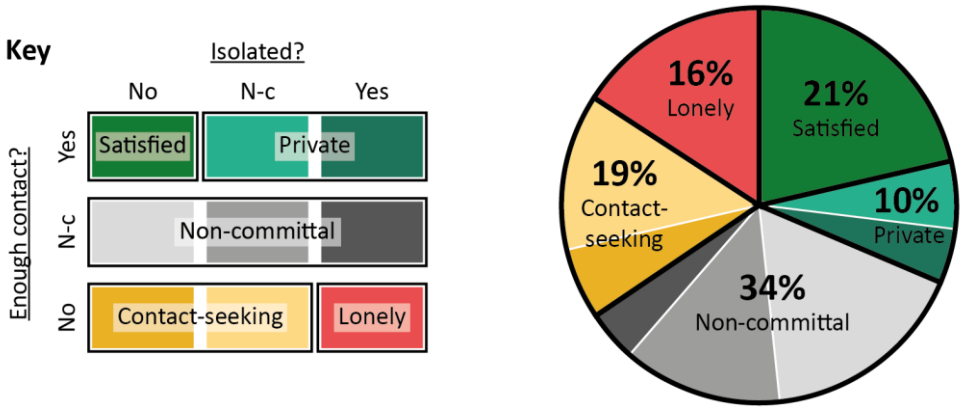


Figure 8.12: Satisfaction with Local Social Connection (N = 70)

> Bay Court had the largest proportion of 'private' respondents, at 10%, and one fifth were satisfied with their local social connection. One third were non-committal, and 16% were isolated and desired more contact.

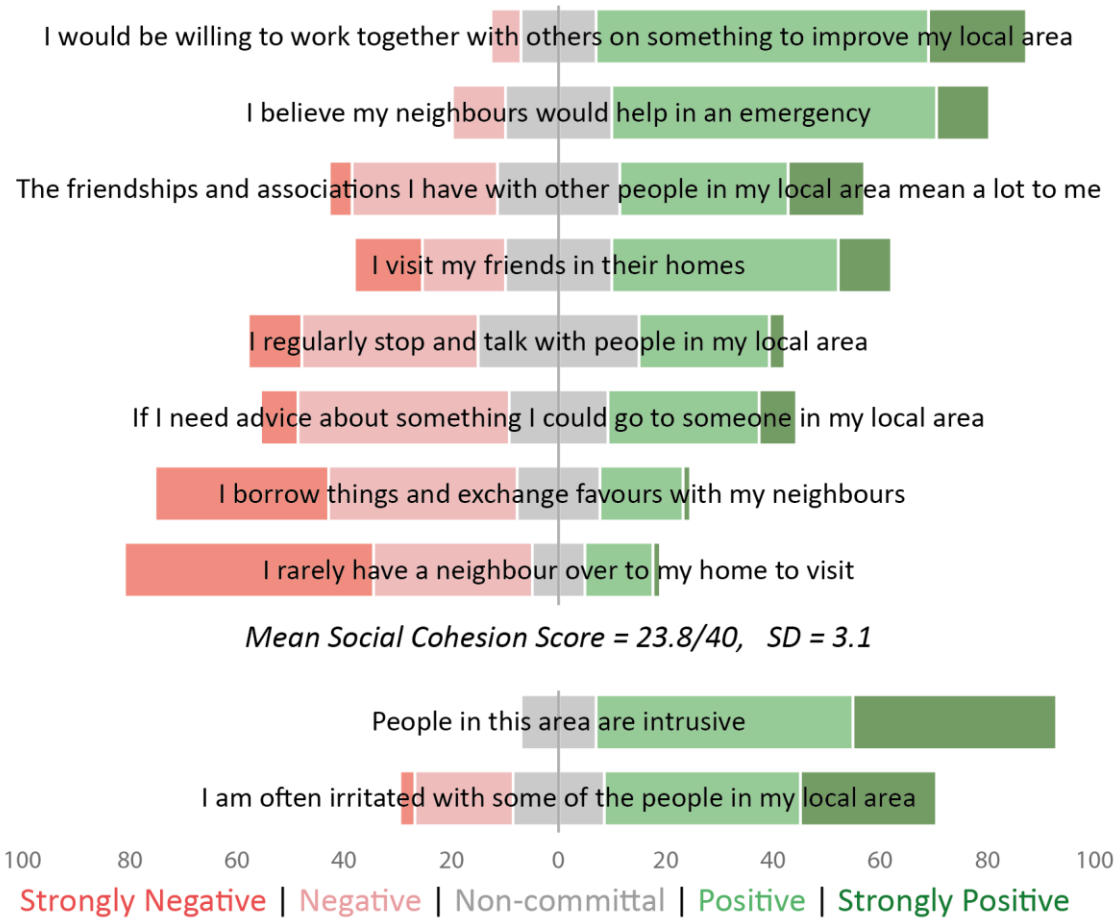


Figure 8.13: Social Cohesion (upper) and Intrusion/Irritation (lower) (N = 45-47)

> Few survey respondents exchanged favours or stopped to chat in the local area, but most believed neighbours would provide emergency help, suggesting some trust exists between residents even if they do not often interact. Mean social cohesion was the lowest of all cases.

Social experiences in the complex ranged from "very friendly […] say hello and ask how their day's going" (Mark, extravert owner 45-54) to those who felt "conversation or just friendliness or interaction [are] notably absent" (Liz, extravert renter 25-34). Most interviewees maintained a few acknowledgement ties with their neighbours, but the relationships often did not extend past this.

> *I recognise them, and we smile, but I've been there two years and we still don't really ... we say hi but don't know names, don't know what they do. – April, extravert renter 25-34*

Several interviewees had developed stronger CSTs with their neighbours or others in the local area, though generally because of a shared interest through pets, children, planned long-term residence or sharing a language (discussed in section 8.4).

> *There's pockets of communities, so like there's different groups who know each other really well. […] If you don't [belong to a recognisable group] it's a lot harder. – Jessica, introvert renter 25-34*

8.3. How do CSTs Influence Experience?

This section presents the main experiences associated with CSTs at Bay Court, discussing how residents balance contact, levels of trust and associated favours, and the creation of a pleasant place to live through social interaction and a sense of belonging. These emergent properties also serve in many cases as motivations for (or against) developing CSTs.

Regulation of Contact

While some interviewees felt they would like to know people to a deeper level in the local area, many described careful maintenance of relationships at a more superficial level due to living so close to so many people. This enabled people to get on with their own lives, as well as a certain level of anonymity.

> *[People ask] mainly closed questions rather than open ended […] there'll be a statement or something like that rather than opening the way to have a full conversation. – Jessica, renter 25-34*

Another motivation for maintaining distance was the possibility of a relationship "going sour" (April, renter 25-34), which had happened to several interviewees in past residences, though not at Bay Court.

> *After I got my dog, she… she was pretty annoyed. […] because we had gotten to know each other, it was very personal. It turned very bad. – Ava, renter 18-24 about a previous residence*

Trust and Favours

A common motivation for getting to know people (especially on one's own floor) was the opportunity to exchange favours, as well as a feeling of trust.

> *I'd like to have a sort of personal interaction with them, share a bit about themselves, I share a bit about me, so we all, you know, trust each other – Rohit, male renter 25-34*

Some interviewees felt that acknowledgement ties were helpful in building the groundwork for later help.

> *I wouldn't feel bad or embarrassed knocking on the door because we'd recognise each other at least. I wouldn't be just a random or off the street. They'd know that I was part of the building. – April, extravert renter 25-34*

Others felt they needed a stronger connection to ask for help, especially for favours involving exchanging keys where the acquaintance would be able to enter the apartment. In some cases, this lack of stronger connections had caused difficulties.

> ***Natalie:*** *We buzzed all our neighbours to try and let us into the hall, so we could get in, and no one answered the intercom.*
> ***Greg:*** *If we knew someone we probably could have rung them.*
> *– Natalie, renter 25-34 & partner Greg, renter 35-44*

Several interviewees had exchanged help or favours with neighbours, however, ranging from letting each other in the building to moving in together when a roommate moved out (Rohit, renter 25-34).

> *There's been times when they've lost a phone somewhere, or something, and they can always come to me and ask to borrow a phone. That sort of thing. Exchange chocolate for Easter. – Ava, renter 18-24*

The good security in the complex, as well as self-sufficient lifestyles, meant that some interviewees did not feel the need to develop stronger connections.

> *Personally, I don't think it's that useful because […] we don't have kids, we don't have a pet, we're very self-sufficient and independent. And we don't need to have to rely on other people for that. – Jessica, introvert renter 25-34*

Social Interaction, Belonging, and Creating a Pleasant Place to Live

While many interviewees talked about chatting with neighbours being 'nice', they often found it difficult to pinpoint why, or express the value they got from this.

> *I keep saying that it does feel nice, but I can't really articulate why because I've never really reflected on that before. – Liz, extravert renter 25-34*

Some described how these relationships could "enrich your life generally" (Nicholas, introvert 25-34) through interesting, non-committal conversations, as well as provide a sense of belonging.

Relationships with staff at local cafés or shops could be a prominent source of this pleasant feeling (further discussed in 6.5.7). Local social interaction could be especially important for those who were more restricted to the local area, such as mothers of young children or the elderly.

> *When you get out, you meet a couple of those people just to reduce the sense of isolation. […] That all worked really well for me [here], even if it's just saying hi, your baby has grown. – Sara, owner 25-34*

8.4. Where are CSTs Developed & Maintained?

This section begins with a short overview of spaces cited in the survey, followed by discussion of the spaces in the complex and local area where residents developed and maintained CSTs, drawing upon the interviews and space analysis. I also consider key spaces where CST development was unlikely for various reasons.

8.4.1. Survey

From 71 usable responses, 31 respondents cited spaces they spoke to neighbours or acquaintances at least once a month, with the remaining 40 respondents indicating 'no spaces' (56%), much higher than in previous cases. Only six of these 40 respondents lack acknowledgement, chatting or friends/family ties in the area, however, so the survey may not reveal the full complement of spaces in which respondents spoke to neighbours or acquaintances.

Table 8.1 presents the types of spaces cited by survey respondents. The retail centre (which includes a supermarket, cafés and restaurants amongst other services) was most commonly cited, followed by parks (not further defined) and lifts, though the number of citations is small by this point (8%).

Table 8.1: Spaces survey respondents encounter contacts

Space type	# (%) Respondents citing
Retail Centre	14 (20%)
Park	9 (13%)
Lift	**6 (8%)**
Local paths/streets	4 (6%)
Café	3 (4%)
Lobby	**3 (4%)**
Pub	2 (3%)
Outside lobby/entrance	**2 (3%)**
Other local area spaces	3 (4%)
Other complex spaces	**2 (3%)**

8.4.2. Interviews, Fieldnotes and Photographic Documentation

Circulation Spaces: Lift, Corridors, Lobbies and Carpark

For most interviewees, the lift was the most common space in the complex or local area to interact, with interaction less likely in corridors or lobbies (Fig. 8.12) due to these being spaces to pass through rather than linger.

> *It's usually if you're in the lift together, they'll say hello because it's awkward cos you're like, right there [laughing]. – Natalie, renter 25-34*

> *[The lobby is] really just a walk-through. You know, you're walking to the lift like you've got a purpose. – Mark, owner 45-54*

Figure 8.15: Lobby and Corridor

An exception to this was children's use of the corridors to play, which was mentioned by several participants.

> *The daughter was always playing in the hallways. So actually, I saw her a lot. – Liz, renter 25-34*

While the lift was the most common space to interact, the short time spent in it restricted relationship development.

> *We often see each other at the lift, say hi, how was your day. But the lift ride is short, and that's pretty much a couple of seconds we have together, I don't even know their names. – Tanya, renter 25-34*

Several participants felt it was rare to see people at all in lobbies, corridors or lifts, and linked this to the relatively small number of apartments sharing one lift.

> *We just never ever see people. And there's also like, what is there, six apartments on our floor that use our lift, which isn't a lot. – Greg, renter 35-44*

Many interviewees did not use the carpark because they didn't own a car, and those that did (or regularly fetched things from storage cages) rarely saw people there.

> *More likely you'll meet people in the lift rather than in the carpark. The carpark always looks dark and empty. – Tanya, renter 25-34*

However, a few interviewees had developed relationships through carpark negotiations, for example renting out carparks or complaining about visitor parking abuses.

Note on Soft Edges: Ground-level Terraced Units & Apartments

While terraced units have 'soft edges', with residents able to spend time in their front garden if they wished, apartment residents used lifts, which facilitated incidental contact. Consequently, there was no firm consensus amongst interviewees on which would be more supportive of relationship development.

> *We're renting a terrace place, so we're on the street. So we do see some of our neighbours, we see them over the fence and stuff. – Scott, renter 45-54*

> *We were on the ground floor. Because we wouldn't use the lift, you don't meet many people. Now we're on the sixth floor, so we meet people in the lift all the time. – Sara, owner 25-34*

Courtyard Garden

The courtyard garden (Figure 8.16) is generally held to be a beautiful, well-maintained space, but is rarely used except as a shortcut or to walk dogs (which caused tension over failures to clean up). It is also split into upper and lower sections, cutting off north/south and east/west accessways (see Figure 8.2) and giving many residents "no reason" to walk through (Greg, renter 35-44). Residents tended to acknowledge each other here, however, possibly due to the rarity of seeing someone as well as confidence they live in the same complex (the courtyard is secure-access).

> *I was sitting there reading and a girl came up and she's like, "Oh, my god. It's amazing to see someone making use of the courtyard. Good for you." I was like, "Yeah. No, thanks. It's really nice, but actually I'm just locked out." [laughing] – Liz, extravert renter 25-34*

Figure 8.16: Courtyard Garden

There are a few scattered benches, however most interviewees felt there was nothing for them to do in the space, especially as the only open spaces are winding paths. The fact that extensive parklands are within five minutes' walk also has an impact, and concerns about being overlooked also prevented people from lingering.

> *We'd much rather walk down to the park down there and then sit under a tree. – Jessica, renter 25-34*

> *I wouldn't feel comfortable sitting and being surrounded by the apartments, and thinking that there are people looking at me. – Tanya, renter 25-34*

The courtyard is used for 'meet and greet' events several times a year (see section 6.5.6), when trestle tables are erected in the widest part of the path. Privacy was not such a concern for attendees, due to having a purpose and being part of a group. Noise does echo in the space, however, and several interviewees were therefore wary of using it with friends when, for instance, conversation is likely to be overheard. For some interviewees, this raised the question of whether a courtyard such as this should be more for quiet contemplation rather than a site for interaction, at least on an everyday basis.

> *Maybe the fact that the courtyard is quiet and you can't really do much is like, a good thing. Because we all can share the greenery and the serenity. – Ava, renter 18-24*

Library & Study

One building has large lobbies on each floor, with windows looking over the courtyard. One is fitted out as a library, and one as a study (Figure 8.17).

Figure 8.17: Library and Study Spaces

Few interviewees knew about the spaces, however, even those who lived in the same building on floors with empty lobbies.

> *That's my building. On level three and level four there's something? Really? […] That is insane. I've lived there for two years and I had no idea. I thought I could only swipe for my own level. I would never even try to swipe to three. – Liz, renter 25-34*

Even if people do know about it, they may not use it, due to feeling it did not offer them anything they wanted to do, or that studying or reading were better afforded elsewhere, especially as the space is "tiny" (Rohit, renter 25-34), not air-conditioned and the windows do not open. The placement of the space directly in front of the lift also led to users feeling awkward.

> *We tried to hold a couple of body corporate meetings there. You sit right in front of the lift, it opens and closes. And there's not enough chairs to hold a meeting. It's not good. – Jennifer, owner 55-64*

Li Wei (renter, 25-34) was the only other interviewee who had actively used one of the spaces, when she wanted to study and her roommate was noisy. While Li Wei had seen people on her floor passing, they had not interacted because, she felt, she looked busy. Liz, who lived on a floor with an empty lobby in the same building, would have used the fitted-out space for a similar reason had she known about it.

> *I never thought about actually using [empty lobby]. […] If [partner]'s watching TV […] it's only a small one bedroom. I would be like, "I have to get out of here." I'd feel like there was nowhere I can go. – Liz, renter 25-34*

While it did not appear to have facilitated direct interaction (except in the case of children playing, similarly to the corridors mentioned above), the space and its tables did afford more indirect connections and community feeling.

> *Sometimes neighbours left post cards, they left a note 'please take one', and that's nice. [S: you don't know who it is, but...] Yeah, I don't know, just that 'please take one', I wrote 'thank you' and took one. – Li Wei, introvert renter 25-34*

Retail Centre, Small Shops & Cafés

The retail centre was often mentioned as a space interviewees valued, due to its convenience, adaptive reuse of historic architecture, buzz and upmarket restaurants (which, conversely, meant that interviewees didn't often use the restaurants). Its status as a regional destination tended to work against its use as a community hub, however.

> *It doesn't feel like a local place. It still feels like outsiders come here, this is a place where you drive to as opposed to being your local ... I still love it, it's beautiful, really. As a space it's gorgeous, but yeah, I don't feel like it's my local place. – April, renter 25-34*

> *We would never recognise anyone there, would we. [S: too many people?] Yeah. And you don't know where they're from, they could be from anywhere. – Greg, renter 35-44*

Despite this, the atmosphere was enough to contribute to a feeling of community for some

interviewees, even if they might not interact with others.

> *You go there and it's like this big crowd of people and everyone's talking and laughing and it's just a really nice atmosphere. And I think that adds to the sense of community because we live so close to it. – Jessica, renter 25-34*

There is also a traditional local pub within five minutes' walk of Bay Court, however the mostly-young interviewees preferred the atmosphere at the retail centre, despite the more local character of the pub.

> *[The pub is] not flash, and it's not hipster, it's just kinda very functional. – Greg, renter 35-44*

> *I'd love to go [to the pub] but then you see some of the characters going in and out, and you're like, "Oh no, I'm going to give it a miss tonight." – April, renter 25-34*

Some interviewees used the smaller shops and supermarket often enough that they ran into acquaintances or recognised people, though Sara felt a few more 'everyday' shops such as a newsagent, post office or drycleaners would increase the chances of this. People also regularly walk through the centre to reach the transit stop. Young parents were likely to meet others in the well-equipped parents' room, interaction which was highly valued.

> *Another place that's good for meeting people is the parents' room. […] You just go there and then somebody will come in and you'll have a chat with them. – Sara, owner 25-34 with baby*

The retail centre also has a strong community focus, with children's activities such as Easter egg hunts and other events hosted by retail tenants who are required by their lease to 'give back' to the community in some way. One restaurant, for instance, gives cooking lessons, though these were seen as expensive.

> *The lessons that they do […] I think they should be giving it out for free to the locals. You have to give back, I want to go but don't want to pay, win-win situation. – April, renter 25-34*

While the retail centre is dominated by restaurants, there are a few smaller cafés, where interviewees often knew staff due to regular use. Knowing staff was more likely in cafés and shops independent of the retail centre, however.

> *They offer you a little more intimate exchanges as businesses. Whereas the [retail centre] is a bit more commercial – Jennifer, owner 55-64*

While interviewees might organise to meet a friend or acquaintance at a café, in most cases they were unlikely to strike up relationships here.

> *When you go to a cafe, you don't talk to people because you don't know where they're from. – Greg, renter 35-44*

PARKS

The regional parklands and waterfront pathway were also highly valued by interviewees, being within five minutes' walk, "vibrant" (Mark, owner 45-54) and with "lovely" scenery (Liz, renter 25-34). Dogs and children were key triangulators here, and interviewees who did not look after or interact with these were less likely to see people they knew, or strike up conversations with strangers.

> *The park is a place where people can meet each other and have conversations, especially if you have a dog or you have kids. But otherwise, maybe it's too big […] and too many different people from all around. – Liz, extravert renter 25-34*

It was also valued as a place to 'get away' from one's apartment complex.

> *You're somewhere different and you're not overlooked and you can relax, and you're still kind of connected […] but you're not right in the centre of everything. – Jessica, introvert renter 25-34*

However, Sheng felt that recognising a local resident was easier in the nearby closed park (further discussed in section 9.4.2), as users were likely to be locals.

> *It's much easier to get to know other people when the kids are playing there [than in regional park]. – Sheng, male renter 25-34 with young child*

There are also several pocket parks between the buildings in the wider development, which were regularly used by dog owners due to their proximity. This was a main site for interaction between dog owners, as well as for parents (in the pocket park where seating faced onto grass).

> *I took the baby there yesterday, met another few people that I had never met before, who had a little baby as well. Sat with them, and they had nuts which they offered me. – Sara, owner 25-34*

People without children or dogs tended not to use the pocket parks, due to use by dogs as a toilet, lack of anything to do apart from sit, the fact that the parks are overlooked by apartments, and the better options elsewhere.

> *If I go and lie on a towel [in larger park], it doesn't feel like I'm getting in the way. Whereas if I went on that little patch of grass out front I'd feel a little bit ooh... a bit much. It's not big enough for me. – April, renter 25-34*

OTHER COMMUNITY FACILITIES

The retail centre has a large, recently-opened local government-run community space on the upper floor, beside a main thoroughfare to public transport. Interviewees, if they had noticed it, were not sure how it might be used. The lack of staff also meant that people could not inquire.

> *I've never seen any activity in there, so I'm not quite sure if it's used at all. It's quite dark, even now. So yeah, I'm not too sure if that's for the community, or for private venues. – Tanya, renter 25-34*

8.5. Human Actants in the Production of CSTs

This section considers other actants that impacted on CST development and maintenance at Bay Court. These included a focus on separate lives (which tended to close down opportunities), the time needed to develop relationships, personality, pets and children, culture and language, events and activities, and staff.

8.5.1. Focus on Separate Lives

A common theme was a lack of motivation to get to know one's neighbours due to having a wider network of friends, or easily being able to find people who shared your interests elsewhere.

> *Being a big city you have other things to do and places to go, you're not so dependent on... [locals…]. We just do our own thing. – Natalie, renter 25-34*

In many cases, interviewees felt they had enough interaction at work or with friends, and wanted to "retreat" (Jennifer, owner 55-64) to their own space in their limited free time. This could be true even if they wanted more contact in the local area.

> *We battle all week in our work or our business or whatever, and when we come home, we just don't want to have to deal with anyone that we don't want to. – Scott, renter 45-54*

This general busyness led both to people avoiding extended interaction and an awareness of respecting others' boundaries, as touched upon in 6.3.2.

> *I do like knowing my neighbours, ideally. I'm not sure if it's mutual or not, and that's always... something that perhaps keeps me from doing more. – Daniel, introvert renter 25-34*

Breaking out of this standing pattern of civil inattention could be difficult, both because the interaction might not be wanted by the other person, and also because people were often otherwise engaged with smartphones or headphones.

> *A lot of people wear headphones. And then you have that awkward, like, "Oh sorry, did you say something? Pull my headphone out." – April, extravert 25-34*

The combination of having enough interaction elsewhere and this awkwardness meant that interviewees often did not pursue interaction or relationship development.

> *I still feel quite segregated, and a lot of it's my own doing, but I don't feel the need to [develop relationships with neighbours]. – Jessica, renter 25-34*

8.5.2. Time & Process

Relationships often developed over time through regular encounters between residents and locals, supported through similar schedules and past successful interactions. Regular encounters could

also provide the licence to break the pattern of civil inattention.

> *It's only about five or six people that I recognise and see regularly enough to be able to say hi. Stupid social nuances that we have to abide by. – April, extravert renter 25-34*

However, the size of the complex and differing schedules meant some interviewees were unlikely to regularly encounter others.

> *You would rarely run into the same people or you wouldn't run into them soon enough after the last time that you can really remember them. – Liz, renter 25-34*

The high level of residential mobility also affected willingness to develop a relationship, and interviewees tended to associate this mobility with tenants, as well as the nature of apartments in Australia. Residents who planned to be there long-term wanted to connect with other long-term residents (and had often succeeded).

> *It sounds really brutal, but […] because it's mainly flats, it is quite a transient population, so people come and go really quickly. So, you might build up a relationship with someone who lives on our floor, and then six months later they've gone. – Jessica, renter 25-34*

For those who did plan to move, motivation to develop relationships in the area was also reduced (though in several cases they were not averse to striking up a relationship should someone else take the initiative).

> *We might move in a year or two or three years' time. We more than likely will. So we're probably not going to invest a lot of time and effort making friends here. – Greg, renter 35-44*

8.5.3. Personality and Common Interests

Another strong theme concerned the extent to which a person was naturally outgoing or more reserved, which made them more or less likely to seek out interaction and attend events such as 'meet and greets' (further discussed in 6.5.6).

> *For me personally, I just like meeting people, so yeah, I would sometimes just blindly go meet strangers [laughing]. – Rohit, ambivert renter 25-34*

> *If you're quite a shy person you probably wouldn't go to [social events], but that doesn't mean you want to be excluded from the community. – Jessica, introvert renter 25-34*

Being extraverted was also associated with taking the initiative to introduce oneself, which was often seen as a key difference between those who had many relationships, and those who did not. Some introvert interviewees attributed their low number of CSTs to a hesitancy to take initiative.

> *I would have to just go up to people's doors and knock and say, "Hello," which I'm a pretty, like, I guess shy person, so that's not my first thing to do. – Nicholas, introvert renter 25-34*

The need for this strong sense of initiative was reduced when people had an indicator of a potential interest, something "that you can talk about as opposed to […] 'What's your name? What do you do?'" (April, renter 25-34). This could be a bike, a dog (see 6.5.5) or book, among other things.

> *I saw her recently and she was still reading the book [I'd been reading], and she said 'I'm still reading the book', and started this whole conversation with me. – Natalie, renter 25-34*

Conversely, a presumed lack of common interests could reduce the chances of relationships developing past a low-level CST.

> *I don't think I'd ever really make friends with people on my floor. I think our interests are too different. – Jessica, introvert renter 25-34*

8.5.4. Pets & Children

Pets and children frequently supported the development of relationships through providing a topic of conversation, as well as increasing the time residents were out in the local area. Parents regularly used spaces such as playgrounds and kindergartens, which meant they ran into other caregivers, and dog owners tended to use parks at similar times every day.

> *All the parents pick up kids together, and then we get to chat, and sometimes you find, you live near us […] so we get to know each other. – Sheng, renter 25-34 with young child*

While pets were more commonly mentioned, there are a small number of children in the complex, mostly below the age of five. Having small children could be a motivator to develop relationships with other parents, and children are also more willing to interact with strangers.

> *Our baby is quite social so he'll approach people. He'll wave at them. He'll steal their food. He's quite uninhibited so that helps. People also stop for babies because they're cute, or they have a baby the same age and they're asking questions. – Sara, owner 25-34*

Pets also tend not to follow social conventions, and this can spark interaction between owners or pet-less residents.

> *We know our immediate next-door neighbour because […] their cat tried to take over our whole place. – Scott, terraced-unit renter 45-54*

Due to this friendliness, pets could be easier to get to know than people.

> *I remember all the dogs' names. I don't know their owners'. – John, owner 65-74*

Those without pets or young children (or an interest in them) were at a disadvantage when finding a common topic of conversation.

> *I don't have any pets or any kids or anything so, there's not that sort of icebreaker or other reason to interact. – Liz, renter 25-34*

Despite the upsides to a pet-friendly complex, many interviewees were concerned about owners leaving dog poo in shared spaces, which could deter use of these spaces.

8.5.5. Culture & Language

According to the 2016 Census, around a third of the population in the complex hails from North-East Asia (see Figure 8.9), and several Australian-born interviewees commented on their lack of interaction with Asian residents.

> *It tends to be the more, like Caucasian Australians that will say [hello], and the Asian people less so. – Greg, renter 35-44, born Australia*

While on first consideration this could be attributed to a cultural tendency to engage in civil inattention, there are likely many more actants at play. Common understandings around accepted social behaviour increased the likelihood of interaction with someone of a similar ethnicity, especially for recent arrivals to Australia. This could be true even if they did not share a language.

> *It's a bit easier to relate to a group of our own, say, I'm from China, so it's easier to get to know Chinese people. Just say 'hi', 'how many years have you been here?', and 'what do you do?'. – Sheng, renter 25-34*

A lack of confidence speaking English could also prevent people from initiating or developing relationships, and even those relatively fluent in English found language was a barrier at times due to rapid speech or strong accents. Different common activities (such as alcohol-based versus tea-based social events) could also make relationship development less likely.

> *I think... for me, it's my English, it's not very well. – Li Wei, introvert renter 25-34*

Hearing one's own language in an English-speaking context could bring people together, however, and provide motivation for developing relationships further. Sara (owner 25-34, French-born), for instance, had found a French-speaking nanny by approaching French-speakers in the park, and described the small French-speaking population as "a functioning network". Tanya had struck up relationships upon hearing her language spoken in the lift.

> *I stay in touch with these two couples so I have a chance to speak my language and talk to people I can relate to in a different way. – Tanya, renter 25-34, Eastern European-born*

8.5.6. Events & Activities

Activation in the form of events and activities could also bring people together, though many interviewees suggested this based on past experience elsewhere, rather than in Bay Court. Events and activities provided a socially-accepted avenue for interaction and a common topic, as well as indicating people were locals or Bay Court residents.

> *You know that everyone there's gonna be in your building, so you might make a bit of an effort to talk to them. – Greg, renter 35-44*

While events and activities were a "nice" idea (Nicholas, renter 25-34), some interviewees were not sure they would attend due to a lack of interest or not feeling they would have enough in common with other attendees. Having a range of activities to cater to different people was therefore important, both to provide something to interest everyone (including non-alcoholic events) and to attract people with common interests. Many interviewees suggested potential low-cost, low-commitment activities or events, including daytrips to regional attractions, cooking groups, community gardens, tea and card games, walking or running groups, a monthly coffee cart in the courtyard, locally-relevant talks, a fire drill with barbecue, movie or sports-watching parties, as well as a 'traditional' pub visit.

Interestingly, events had been held in the complex courtyard at least twice a year since opening, however few interviewees knew that these had occurred more than once.[29] A lack of information about events and activities, both in the complex and the local area, meant residents had less chance to participate, even if they wanted to. Flyers in mailboxes were often missed or part of the general "noise" of junk mail (Nicholas, renter 25-34).

> *It's hard to find out what's happening in the area until after it's happened, you don't hear about it. – Natalie, renter 25-34*

A better, centrally-located community noticeboard was suggested by several interviewees (the current noticeboard is in a rarely-used corner of the carpark, and the small lift noticeboards are largely used for management or building issues). This could be in the local area, or within the complex, though it was noted that the six separate lobbies made finding a common space difficult. Online noticeboards were also suggested.

> *In Shanghai, almost in every neighbourhood, almost in every building, in the lift, there will be a [QR code for a WeChat[30] group]. – Sheng, renter 25-34*

Emailed newsletters were also suggested. However, the effort and resources involved in organisation of events and activities and information dissemination were high, and it was difficult to find people with the time or initiative to do it.

8.5.7. Staff

Finally, staff in the complex or in local businesses could be both acquaintances in themselves and "glue" (Jennifer, owner 55-64) between local people, introducing them to each other. In terms of

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[29] Those that had attended had developed a few CSTs.

[30] Most common social media app in China with 900 million daily users (Long, 2017).

knowing local business staff, regular use of the establishment was key, as well as friendly, long-serving staff with consistent shifts.

> *I get coffee from the same place all the time and they all know me there, by name. Make my coffee before I order it, which is really nice. They're really friendly and great. – Liz, renter 25-34*

Moving into the complex requires coordination with the building manager, and acts as an introduction to him. The manager makes regular rounds of the complex, chatting to residents along the way, and also met some for coffee at the retail centre. His assistance was highly valued ("the solver of all problems!" – Jennifer, owner 55-64) and for some interviewees filled the role of a neighbour who would look out for their unit while they were away (and so decreased the need to develop a relationship with an actual neighbour).

> *If I go away and the apartment's not attended to, I am quite reassured that I know that he's there and if anything happens, that will be okay. And because I've met him I trust him. – Jessica, renter 25-34*

8.6. SUMMARY

Most Bay Court participants have at least a few acknowledgement ties with regularly-seen people in their complex or local businesses. Stronger CSTs do exist, however residents with these are likely to have a strong common reason to interact, such as having dogs or children, sharing the same foreign language, or planning to be resident in the complex for the foreseeable future.

CSTs were valued for the sense of belonging, interaction and help they could provide, though self-sufficiency commonly reduced the perceived need for this help. Interaction was most likely in the lifts, leading to acknowledgement and sometimes chatting ties, as well as parks, especially through triangulation with children and dogs. The complex's central courtyard largely serves as a shortcut, but is highly valued for its lush vegetation. A small 'library' and 'study' space were rarely used, largely because most residents were unaware of them.

BAY PARK

185 units
8 Storeys + 2 Basement
Completed 2014

282 residents
255 adults
27 children
(Estimate, based on ABS Census 2016)

542 people/ha

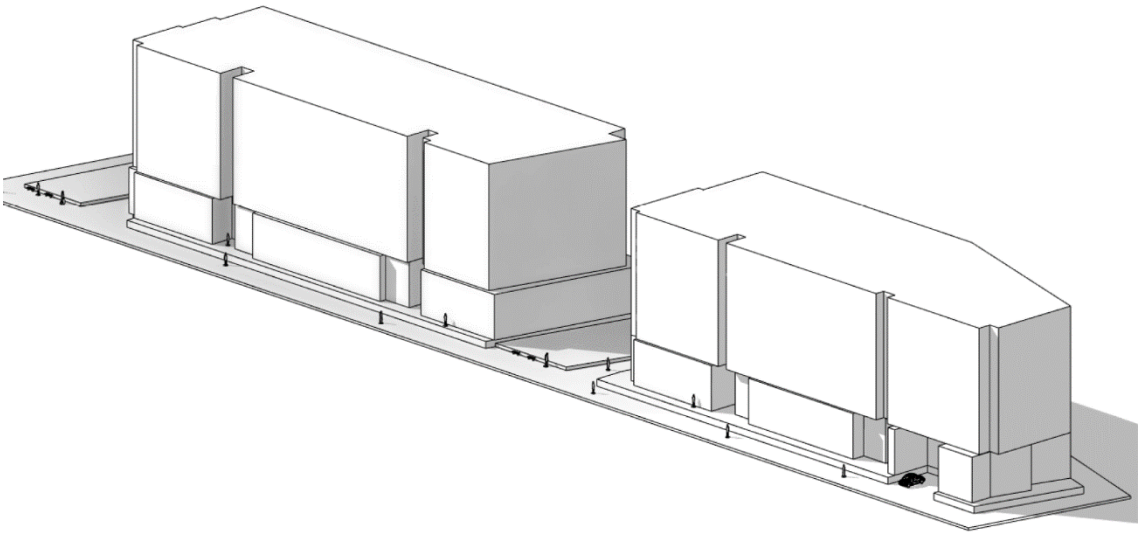


Figure 9.1: Indicative Model of Bay Park

9. CASE 4: 'BAY PARK'

This chapter presents the descriptive analysis for the fourth case, pseudonym 'Bay Park', which is located in the same local area as Bay Court.

9.1. THE APARTMENT COMPLEX, LOCAL AREA & RESIDENTS

9.1.1. The Apartment Complex & Local Area

Indicative plans and details for the complex and local area are found on the following pages.

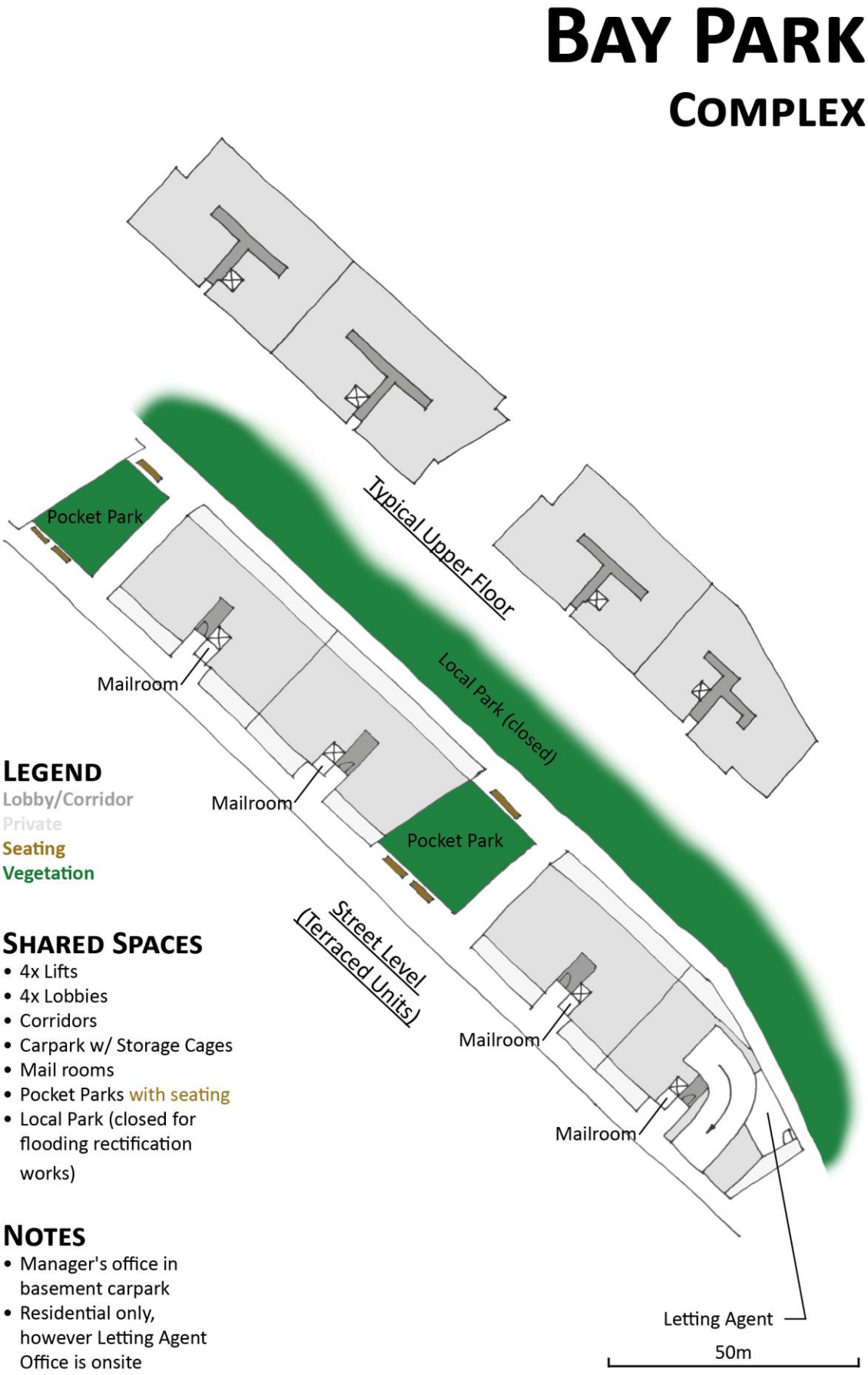
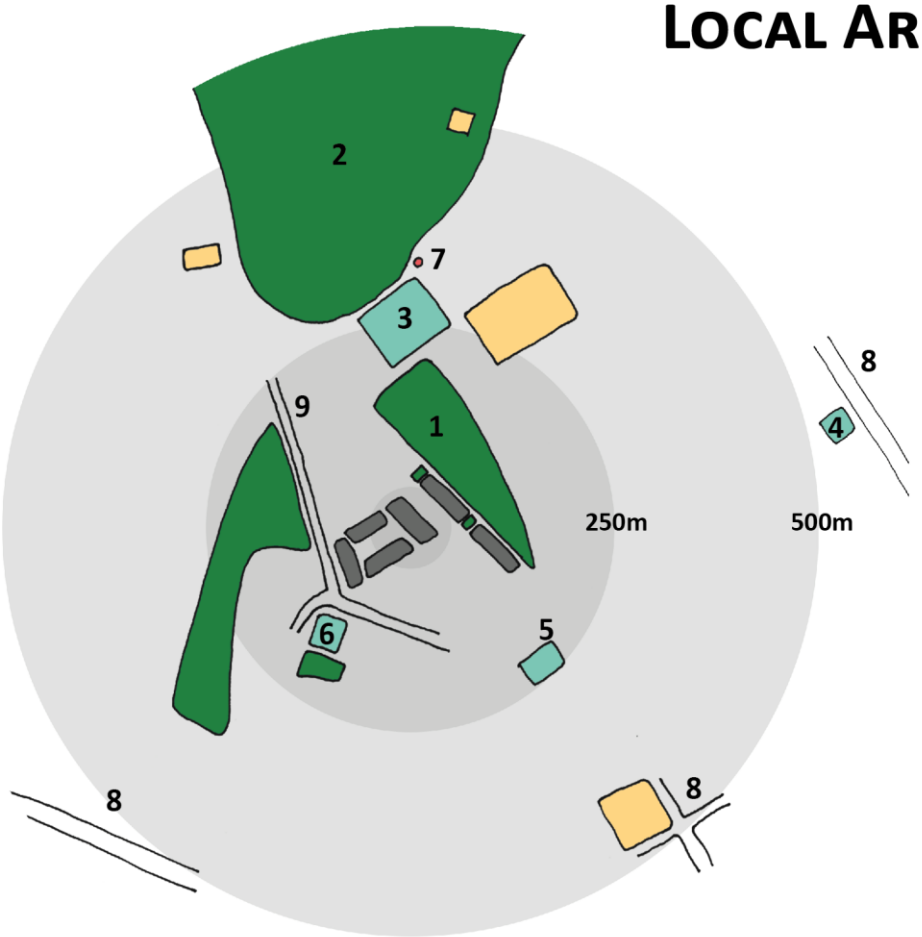


Figure 9.2: Complex Details for Bay Park

Bay Court & Bay Park

Local Area



Legend (key spaces mentioned by participants)

Kindergartens or Schools

Green space

1 Local Park (closed at time of fieldwork)

2 Regional Park

Community Amenities & Retail

3 Retail Centre (supermarket, restaurants, cafés, beauty, medical centre, recently-opened community centre)

4 Library

5 Pub

6 Youth Centre

7 Transit Stop

8 Local Shopping Streets

9 Busy Road

Location

- Sydney's Inner West, 30 min public transport to CBD
- Well-established inner suburb of Sydney
- Mix of heritage terraced/detached housing and more recent apartment complexes of varying sizes, including public housing
- University nearby
- Located within an urban renewal area and near a metropolitan centre (Greater Sydney Commission, 2018)

Population (ABS Census 2016):

- Top birthplaces: 52% Australia, 7% China, 5% England
- Median weekly personal income 40% above state average

Figure 9.3: Local Area Details for Bay Park and Bay Court

9.1.2. Comparisons of Bay Park Mesh Block Residents (ABS Census 2016), Resident Interviewees and Survey Respondents

The following figures show demographics for residents of Bay Park's Mesh Block, which had a population of 425 people in 2016 (18 months before fieldwork), in comparison with demographics of resident interviewees and survey respondents. Where the case complex is particularly different from other complexes, this is noted. These figures may be compared to those in other case chapters.

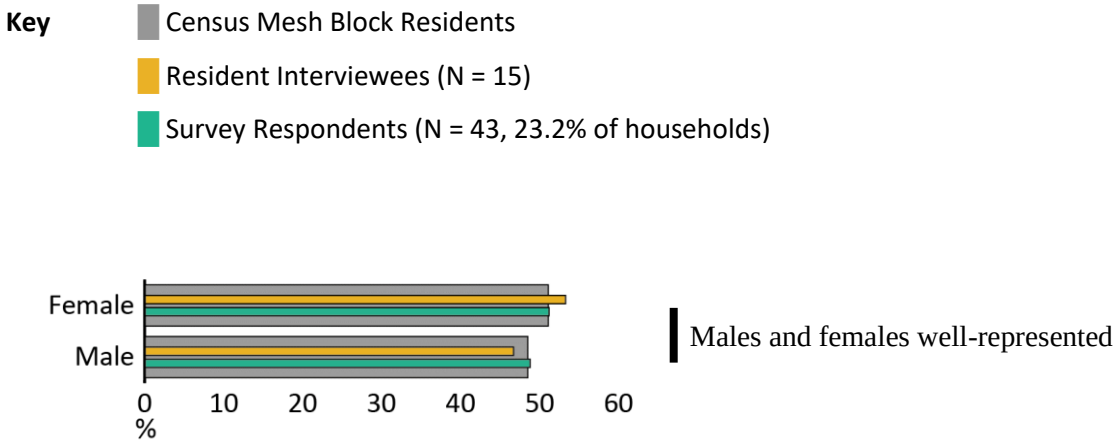


Figure 9.2: Gender

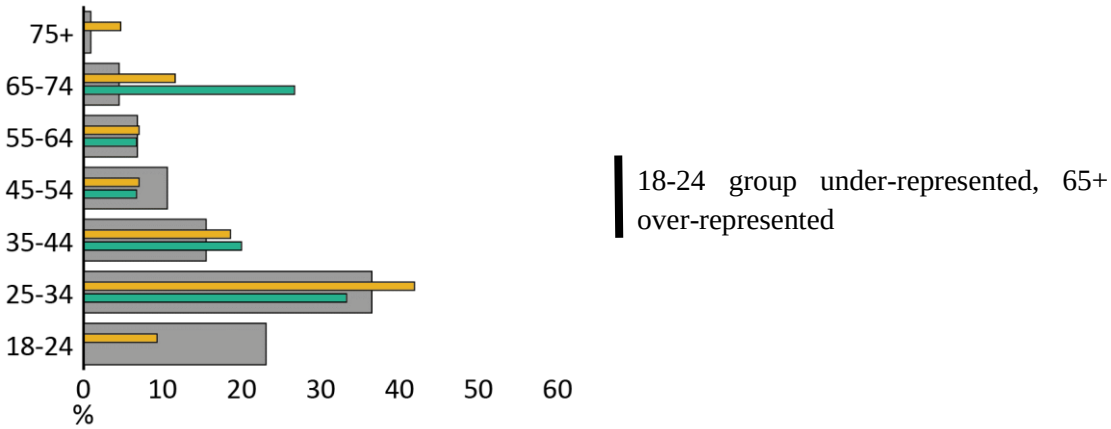


Figure 9.3: Age (Adults only)

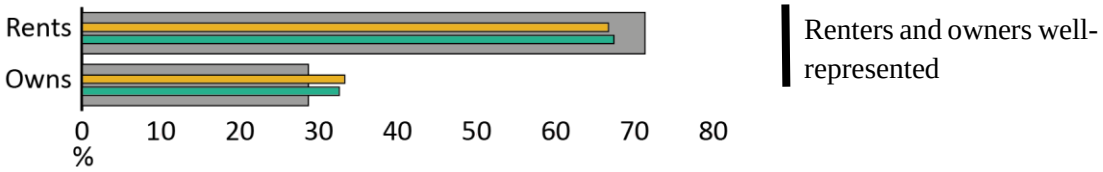


Figure 9.4: Tenure

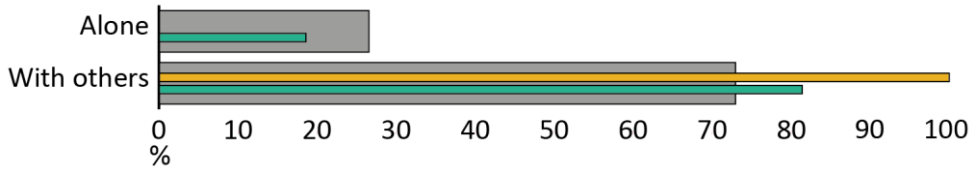


Figure 9.5: Living Alone

Residents living alone under-represented, especially in interviews

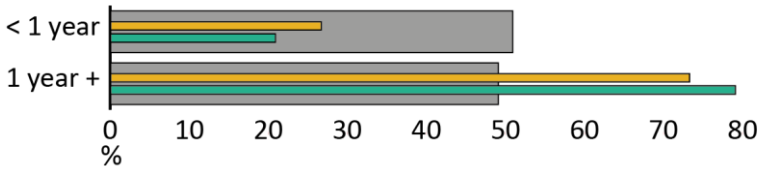


Figure 9.6: Length of Residence

Newer residents (<1 year) under-represented, however this potentially reflects a more-settled population 18 months after the 2016 Census, four years after completion

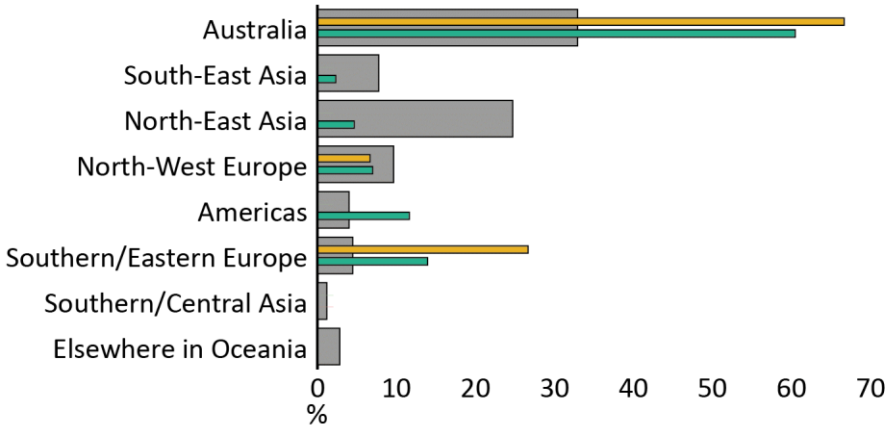
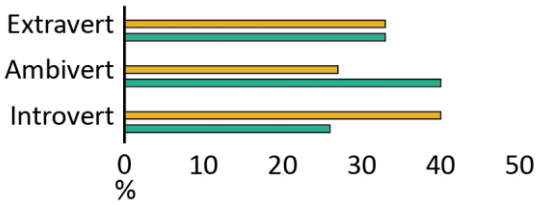


Figure 9.7: Country or Region of Birth

Australian-born and Southern/Eastern Europe-born residents heavily over-represented, despite attempts to recruit a more diverse range of participants (email, phone, pocket park). Asian-born residents under-represented, especially in interviews.



Highest proportion of introvert interviewees of all case complexes

Figure 9.8: Extraversion/Introversion

9.2. Describing the Social Assemblage

The following Figures show survey responses for social ties (Figures 9.11 and 9.12), satisfaction with local social connection (Figure 9.13), and social cohesion and irritation/intrusion (9.14) in the complex and local area. This is followed by qualitative description based on the interviews.

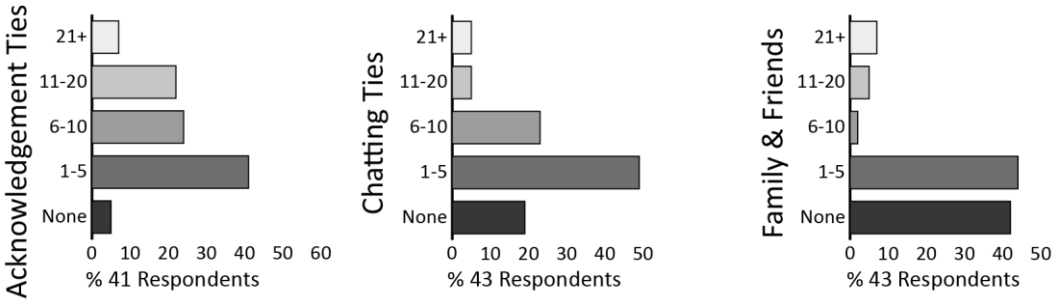


Figure 9.9: Quantity of CSTs and Family/Friends ties

All survey respondents except one knew at least a few people in the area. Half of respondents had 1-5 chatting ties, and more than half had family or friends in the area.

		Acknowledgement Ties		
		None	1-5	6+
Chatting Ties	None	2%	17%	0%
	1-5	2%	22%	22%
	6+	0%	2%	32%

Figure 9.10: Quantity of CST

Almost a third of respondents had 6+ ties of both types, though almost one in five had no chatting ties and few acknowledgement ties.

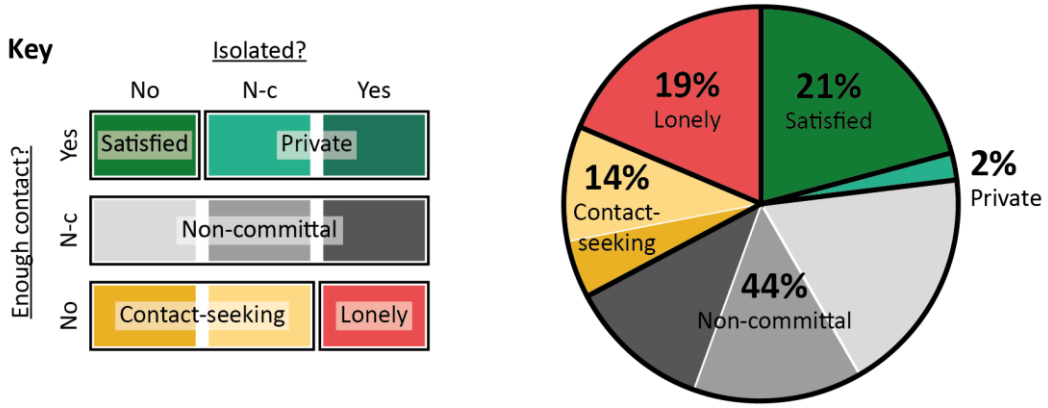


Figure 9.11: Satisfaction with Local Social Connection (N = 43)

> Bay Park had the largest proportion of lonely respondents of all cases (19%), the lowest proportion of respondents with enough contact (23%) as well as the smallest proportion of private respondents.

Figure 9.12: Social Cohesion (upper) and Intrusion/Irritation (lower) (N = 42-43)

> Many survey respondents believed their neighbours would help in an emergency and were willing to work with others to improve the area, but few exchanged favours or had neighbours to visit. Bay Park had the highest social cohesion mean, but also the widest range and standard deviation, suggesting divergent experiences.

Several interviewees at Bay Park were very satisfied with the friendly atmosphere of the area and how well they knew their neighbours. Notably, these interviewees were either long-term local residents or described themselves as especially extraverted.

> *I'm a reasonably social person so I do meet people quite easily, everybody says to me 'God, you know everybody!' – Dennis, extravert owner, 65-74*

> *[My new housemates have] commented on, just, how friendly people can be. Just in the simple things, they'll say hello when you get in the lift, and wish you a good day when you get out. – Amanda, ambivert renter 35-44, long-term resident of area*

This wasn't a universal experience, and this may have been because of differences between the standing patterns of behaviour in different parts of the complex based on who lived there. For example, Amanda shared a lift with a sociable, elderly woman who was known to more than a third of the interviewees (further discussed in 9.4.1: Personality), and this appeared to contribute to more-social standing patterns of behaviour in this part of the complex. However, two participants who lived in terraced units felt relatively disconnected from other locals.

> *[In previous apartment], it was very friendly and people said hello to each other in the street, so it's been a bit of an adjustment for me coming here. I think I would prefer a slightly less impersonal sort of living environment. – Timothy, ambivert owner 65-74*

Generally, interviewees maintained a few chatting ties and a greater number of acknowledgement ties in the complex and local area, and tended to describe this as knowing people "not that well" (Julia, ambivert renter, 25-34), though most did not mind this.

> *We know a few people. Not many, not many. You don't tend to see people. – Judith, introvert owner 65-74*

All survey respondents except one knew at least a few people in the area, though 17% had only acknowledgement ties.[31]

9.3. How do CSTs Influence Experience?

This section presents the main experiences associated with CSTs at Bay Park. These included: favours, security and trust; belonging and community; balancing interaction and privacy; and social interaction and isolation.

Favours, Security & Trust

Local CSTs were valued for their role in providing favours when needed, and several interviewees

[31] Number not shown in Fig. 9.8; some respondents had chatting ties or strong ties, but not acknowledgement ties.

related this to proximity; as George noted, "a good neighbour is worth ten good relatives" (renter 35-44). This helped people feel more comfortable and secure in the complex and area.

> *It's really important, even if you don't rely on other people, [to] feel like you have access to support immediately. – Tara, renter 25-34 with baby*

> *I think that knowing your neighbours makes you feel safer. – Evelyn, owner 65-74*

One older interviewee felt that knowing neighbours was important to open up communication in case of problems and avoiding misunderstandings. Below he speaks of being wrongfully accused of complaining about noise.

> *[Maybe they] just assumed I was a cranky old guy, and so they got really pissed off […] it made me realise when you don't know people really well, in a development like this, you have to be careful […] I don't necessarily want them to be my best friends, but I just like to know where I stand with people. – Timothy, owner 65-74*

CSTs could help with developing trust between people, but trust could also affect how willing people were to develop ties, in terms of feeling more relaxed and open to interact with strangers.

> *[People] feel happy in their environment [at Bay Park], so they're a bit more inclined to wish you well, without any worry. – Amanda, ambivert renter 35-44*

However, this was not true for everyone.

> *[It's] a bit hard to […] get people who are so, you know, scared of other people to put their trust into the community. – Tara, extravert renter, 25-34*

The high-quality complex and good management meant that many traditional favours such as "push[ing] bins out" for a holidaying neighbour were unneeded (Matthew, renter 25-34), however, and many residents were "very self-sufficient" (Judith, owner 65-74), reducing their motivation to develop ties.

Belonging & Community

A number of interviewees (both young and old) had lived in the local area for years or decades, and had purposefully moved into a complex in this area. Some longer-term residents noted that they felt that residents of this area tend to be socially-engaged with neighbours and shopkeepers.

> *Everybody just seems to be on that same mindset of, "I'm going to know my neighbour, I'm going to talk to them in the park, I'm going to know who my barista is", and be open to that relationship. – Amanda, renter 35-44, long-term resident of area*

These longer-term residents felt this had an effect on the atmosphere in the new apartment development, however several newcomer interviewees were more hesitant in describing the community as such (as covered in the previous section). Overall, however, interviewees generally agreed that the CSTs they maintained in the complex and local area contributed to a feeling of

belonging and comfort.

> *It makes you feel more comfortable with the people you see on a daily basis, makes you feel like you sort of belong a bit more. – Nastasia, renter 25-34*

Regulation of Contact

As in the other cases, interviewees spoke of negotiating interaction with those around them in an effort to strike a balance between developing ties and a friendly atmosphere, and not imposing.

> *It sort of depends what body language you get back. If someone's got music on or something and their headphones, you obviously don't say hello, you just kind of leave them alone. When the older lady [from] our floor gets in the lift, I say hello because I feel that would make her more comfortable […] She's getting in the lift with a smile on her face, and you want to be like, "Hello. Have a good day." – Joseph, renter 25-34*

Part of the motivation for keeping ties weak was a fear of the relationship going wrong, with several interviewees noting that this was less likely if ties were maintained at a more superficial level.

> *You'd have to really be getting to know them quite well to even make a fall out actually count for something […] [S: Do you think people kind of do that on purpose?] Keep a little bit at arm's length? Yeah, yep, I think so. – Tara, extravert renter 25-34*

Being mindful of one's own time and effort outlay was also a reason to restrict the depth of these relationships.

> *Sometimes people don't know where the boundaries lie, and they get too close and too invasive and too demanding of one's time. – David, ambivert renter 55-64*

Social Interaction & Isolation

CSTs were also valued by some Bay Park residents for the interest they brought to people's lives, and several interviewees mentioned the benefits of social interaction for mental health.

> *It's good to have people just to say hello to and make sure you're not just in a cave all the time. – Joseph, introvert renter 25-34*

The diversity and number of people living in the area meant that there was wide scope for meeting people different from oneself, which Tara noted could be embraced or feared.

> *I want to be able to teach my kids […] that it's important to be able to communicate and talk to people you don't necessarily know. They're not necessarily out to get you [laughing] – Tara, renter 25-34*

CSTs were also valued for the friendly atmosphere they provided, linking back to feelings of belonging. Even simple recognition could provide this.

> *You see them every couple of days or something, you know, not who they are, but that they exist and they're the same person you saw the other day, so... [it makes it] a little bit more comfortable. – Matthew, renter 25-34*

9.4. Where are CSTs Developed & Maintained?

This section begins with a short overview of spaces cited in survey responses, followed by discussion of the spaces in the complex and local area where residents developed and maintained CSTs drawing upon the interviews and space analysis. I also consider key spaces where CST development was unlikely for various reasons.

9.4.1. Survey

Out of 43 usable responses, 23 respondents cited spaces they spoke to neighbours or acquaintances at least once a month, with the remaining 20 respondents indicating 'no spaces' (47%). As in previous cases, the survey is unlikely to detail all relevant spaces (only one of these 20 respondents lacked acknowledgement, chatting or friends/family ties in the area).

Table 9.1: Spaces survey respondents encounter contacts

Space type	# (%) Respondents citing
Retail Centre	13 (30%)
Lift	**6 (14%)**
Park	4 (9%)
Café	3 (7%)
Corridor	**3 (7%)**
Pub	3 (7%)
Other local area spaces	7 (16%)
Other complex spaces	**4 (9%)**

Table 9.1 presents the types of spaces cited by survey respondents. The retail centre was most commonly cited, followed by lifts and parks. A variety of other spaces in the local area were cited once, including a library, men's shed and community garden.

9.4.2. Interviews, Fieldnotes & Photographic Documentation

Circulation Spaces: Lift, Corridors, Lobbies and Carpark

Interviewees agreed that most people greeted each other in the circulation spaces of the complex. In the lift, residents were likely to make brief small talk due to the close quarters.

> *You're stuck with the person in the lift. You cannot escape [laughing]. You're standing, you have nothing better to do, and sort of naturally it makes you say 'hi' and maybe a few more words. – Nastasia, extravert renter 25-34*

The short lift journey meant that there was not time to develop more meaningful conversation, however, and interaction was largely restricted to pleasantries rather than getting to know

someone at a deeper level.

> *As soon as they start, "I work at the hospital," it's like, "All right, see you." And you just walk off, you have to go to work. – Joseph, renter 25-34*

Many interviewees felt they should know neighbours on their floor (Fig. 9.11). Several had made an effort to connect with neighbours on their floor (see Tara below), while others noted that it was rare to see someone in the corridor, so difficult to know who else lived on the floor without taking the initiative to knock on doors.

> *I like that idea of knowing everyone in my floor. But I sort of sussed it out first. So you wave hi or whatever, and then you realise […] oh, they've gone into that apartment […] You try and figure it out a little bit first, and then you do the introduction. – Tara, extravert renter 25-34*

> *In a unit, once the door is shut you've got no idea. You really don't. Unless you hear a baby crying from behind a door or something. You don't know who's there. – Judith, owner 65-74*

Figure 9.15: Corridor

Barring a few exceptions for stronger chatting ties, interviewees felt that most residents were passing through corridors, the lobby and the carpark on their way elsewhere, and these were not spaces to strike up more extended conversation. Depending on schedules and how often interviewees went in and out, they may not even see anyone.

> *People get in the lift, and they go down. It's not a large space, there's no seating area of any kind. So unless you're in the lift, you don't run into anyone. And people downstairs as well, they're not loitering around downstairs to go up and go down, and then they disappear. – David, renter 55-64*

Figure 9.16: Lobby entrance and door to mail room, lobby

The four apartment cores each have their own locked mailroom beside the lobby (Figure 9.16). Terraced unit residents do not use this space, due to having their own street-fronting mailboxes, and several apartment respondents noted it was rare to meet anyone here.

Note on Lack of Dedicated Shared Spaces

Of all the cases, Bay Park is notable in having no complex shared spaces other than the circulation spaces and the publicly-accessible pocket parks. Several interviewees preferred this, due to the reduced need for maintenance and extra expense of common facilities, and felt that the local area had enough facilities to make up for the absence.

> *We have got enough, I believe, around us, and I think it's good to get out of your situation, and if you want to go and swim, go up here to [public pool]. – Dennis, owner 65-74*

> *I think, if you have a common area, some way or another you're going to [be] paying for that, whether it's higher rent or strata fees. – Joseph, renter 25-34*

However several interviewees pointed out that, while the local area provided good amenity, the number of people using it meant one rarely recognised a resident from one's building, or could tell who might be one. This case had the lowest proportion of respondents who felt they had enough local interaction (23%, vs. 31% at Bay Court, 35% at River and 39% at Shore, see Figures 6/7/8/9.13), and while an assemblage thinking approach warns against assuming simple causal relationships,[32] it is worth considering the impact of a lack of dedicated shared spaces.

> *There is no mutual space to congregate with people in this development other than [the retail centre], where you get people from a larger area, and you know, the context, so you sort of lose people, you get out of sight a bit in the masses. – David, renter 55-64*

Evelyn had invited the neighbours on her floor to drinks in the pocket park upon moving in (see

[32] Especially as the dedicated shared spaces at Bay Court appeared to be little-used (though management-run events were held here).

section 9.5.1), but had to move the gathering to her apartment due to rain, which she felt was not ideal. A weather-protected shared space would have provided a more suitable venue.

> *Particularly for overseas people, they may think that there are unknown rules about inviting people into your home. So meeting in a public space with people that you only have a nodding acquaintance with is probably an easy starting point. – Evelyn, extravert owner 65-74*

The lack of proximate play spaces could also cause problems.

> *We had [a fire alarm] a month ago because a couple of boys were down in the carpark, kicking a ball around. And they hit the sprinkler, and it went off. […] They used to go out here [to closed park]. – Dennis, owner 65-74*

It is notable that while the regional park is only a few minutes' walk away, these boys were not using it for this activity.

Retail Centre, Small Shops & Cafés

Bay Park participants highly valued the local retail centre for its hospitality offerings, supermarket and lively atmosphere.

> *[The retail centre is] a real meeting point, and [it's] a focal point. […] It really feels friendly, and people enjoying themselves. – James, owner 75+*

While some arranged to meet contacts at the retail centre or met them incidentally, many did not recognise anyone they knew. A number of participants felt it was very expensive and rarely used the restaurants or shops, though they might still walk through to access the transit stop.

> *To my memory, I've never bumped into someone from the building at the [retail centre]. Even if I did, I probably wouldn't recognise them. – Joseph, renter 25-34*

> *It's crazy expensive, it's like ridiculous actually. – Anika, renter 25-34*

Three interviewees mentioned the traditional local pub and its community events, though only one used it regularly. Clearly, the retail centre and the pub are catering to different audiences.

> *[The retail centre is] a little bit uppity, it's not that... great, I dunno. It's a nice place, but it feels a bit too... fancy, sometimes. […] The pub should get more love from people around here. – Matthew, renter 25-34, long-term resident of area*

This "uppity" character was also noted by Amanda, though she added that the retail centre had recently become more reflective of its local community. She enjoyed going to several restaurants in the centre, and had developed CSTs with the staff.

> *[At the retail centre] they all sort of came in with that initial, "We're too cool for school, we're the new thing." I think they realised pretty quickly that we're a community there, and if you're going to carry on like that, we're just going to go back to the other cafés. […] They learned pretty quick to be much more open and affable. – Amanda, renter 35-44, long-term resident of area*

Compared to the other cases, a greater proportion of interviewees at Bay Park had lived in the area before moving into their apartment, and used many of the small shops and cafés in the wider area, where they maintained CSTs with staff. The long-term staff and intimate size of the businesses appeared key.

> *Having a small business like that, where I know the people, […] it brings value to living here. – Matthew, renter 25-34*

Parks

A few interviewees regularly used the regional parklands to run and had developed acknowledgement ties with other runners, though these did not develop further due to the briefness of the encounters as well as the awkwardness of talking when exercising. This park was also valued as a place to enjoy people-watching.

> *I quite like going down there on the weekend […] You sit in the sun for an hour and watch some very average sports people playing sports. – Amanda, ambivert renter 35-44*

Figure 9.13: Local park closed for flooding rectification

Despite the close proximity of the regional parklands, many interviewees were frustrated they could not use the new local park that had been closed for two years due to flooding rectification works (Fig. 9.17).

This local park felt more their own, being directly beside the development, and was more easily accessible for those with young children.

> *It's our park [laughing]. It's our park, and we want to use it. – James, owner 75+*

> *If it's raining or we have a short window of time to use a park, then this would be great. – Tara, renter 25-34 with baby*

For a brief period just before fieldwork, people were breaking through the fences around the park. Several interviewees noted it had been well-used during this time, and that people bonded over their shared transgression.

> *The difference that made was huge, because groups of people were just coming together and hanging out down there. Chatting, and laughing about the fact that they removed the fence panel so they could walk their dog. – Amanda, renter 35-44*

> *I saw a lovely moment from my balcony when a woman I do know in another building, […] she walks with a walker, she's walking up to go into the park, and this big burly guy comes along and pulls the [fence] more open for her. – Evelyn, owner 65-74*

As at Bay Court, some participants were reluctant to use the small pocket parks due to over-use by dogs, which they felt had killed the grass and made one wary of sitting there (Figure 9.18).

> *They've been taken over by the dogs. The dog owners love it, but it's not really a very attractive place for non-dog owners – Timothy, owner 65-74*

Figure 9.14: Pocket Park

OTHER COMMUNITY FACILITIES

A few interviewees mentioned local community facilities such as a library, youth centre, men's shed, church and kindergarten (where parents met each other). The youth centre has a gym (which several interviewees believed was missing in the local area), yoga, basketball courts and runs children's gym classes, but only one participant used it despite its prominent position opposite the complex.

> *I told [youth centre staff member] where I lived, and he's like, "Yeah, we have no reach into these buildings at all." […] I reckon 80 percent of people who live in these apartments would have no idea what [it] does, or who they are […] It looks like a building that probably no one would want to go into […] All the Chinese community, or international people who live here wouldn't know what it is. – Tara, renter 25-34, grew up in the area and takes her child to gym classes at the youth centre.*

9.5. HUMAN ACTANTS IN THE PRODUCTION OF CSTS

This section considers other actants that impacted on CST development and maintenance at Bay Park. These included personality and initiative, time and process, other focuses, events, activities and problems, and children and dogs. Cultural background was not a particularly strong theme, unlike in the previous cases, and is therefore not covered.

9.5.1. Personality & Initiative

The importance of personality was a strong theme at Bay Park, and several interviewees demonstrated this through extraversion and a strong sense of initiative.

> *When I first moved in, I thought I'm gonna have to take some positive steps to get to know people, so after a month or two, I slipped a note under the door of all the people on the floor and said, "Would you be around just for drinks and a chat?" – Evelyn, extravert owner 65-74*

Some local residents and staff were especially friendly, and several interviewees maintained ties with these people. One very friendly elderly resident was mentioned by more than a third of

interviewees. This woman has a walker and a dog and takes daily walks in the area. She also connects other residents.

> *She said there's a lot of young Chinese women here, young married women with a baby who know nobody. She goes out of her way to meet them, talk to them, have coffee with them, to give them somebody to talk to. She's just lovely. – Judith, owner 65-74*

> *She would know most people in the building and have a conversation, because that's her, that's how she is. – Amanda, renter 35-44*

As noted in section 9.1, this case had the highest proportion of introvert interviewees. While introverts could be less likely to seek out contact, most of these interviewees felt they would not mind more connection, but were time-pressed or found enough interaction elsewhere (discussed in 9.4.3).

> ***George**: At work I have really good workmates, and I have a good environment, and really nice people, so... […] I would like to have more, but...*
>
> ***Anika, laughing**: you don't want to do anything to get it.*
>
> ***George**: Yeah. – George, introvert renter 35-44 and partner Anika*

Some also appeared more sensitive to disturbing others and following assumed social conventions.

> *I also haven't just gone and knocked on the doors of people. […] It probably would be a bit weird. […] [If you're a family] then it could be like, "Hey, we moved in, and this is our son," then that would make sense. But when you're just kind of a working professional that's moved in, maybe it's a bit harder to do that. – Joseph, introvert renter 25-34*

Having common interests was also important in developing relationships, especially if the common interest was visible and could be used to start a conversation. An assumed lack of common interests was a reason not to further develop a tie.

> *Sport is a big thing. And we normally talk about it with [neighbour], because […] my husband wears a hat with a Rabbitoh on it, so he knows he's a Rabbitoh. – Tara, renter 25-34*

> *[They] seem to be very nice people, but we don't have a huge amount of common interests together, so we don't socialise much, we just see each other coming and going. – James, owner 75+*

9.5.2. Time & Process

Repeated encounters with people were central to developing CSTs, and these repeated interactions were contingent on how often interviewees used the complex and local area, how likely they were to recognise a face in more or less busy spaces, and how long they had lived in the complex or

local area.

> *I am open to [making connections] but I don't see the same faces over and over again. It's not like a little community, it's busier here somehow [on the street]. – Susan, renter 45-54, terrace resident*

Daily schedules also played a part, with shift workers less likely to meet others. Differing schedules could mean people never ran into one another.

> *I'll be like, how long have you lived here, and they're like, two years, and I'm like, woah, I haven't seen you. You just don't cross paths with certain people. – Julia, renter 25-34*

The fact that there were few proximate spaces where people would naturally linger also reduced the likelihood of meeting people.

> *You're probably going to see people in the mornings [in the lift], but there's nothing really engineered about the building specifically that means you'll meet people any other way. – Joseph, renter 25-34*

> *Maybe a cafe just down here which spread out onto that little park there would have been good. And yeah, you walk past and 'come over for a coffee!' you know, 'come and sit down'. Have a chat or whatever. That'd work well. – Dennis, extravert owner 65-74*

Interviewees felt the complex and local area had a high turnover of residents, which affected motivation to connect. Expectations around future residence, both for those who expected to move and for those who would stay, were important.

> *People are moving. Like that neighbour moved, we have a new one there, that one moved. There's always someone moving. That was within the last 11 months. – Anika, renter 25-34*

> *When I was in [… a] short-term lease, I kind of didn't really mind not knowing the neighbours. – Joseph, renter 25-34*

Interviewees sometimes equated residential mobility and renting, but as Evelyn noted, this could be unfounded.

> *It depends almost entirely on whether they've been there for the long-term or not. It doesn't matter whether they're owners or tenants, because [two tenants I know on my floor], they've been there for quite a long time, they're permanent tenants. – Evelyn, owner 65-74*

9.5.3. Time: Other Focuses

Several extravert interviewees felt that, while they would like to know locals and neighbours to a greater extent, their commitments to existing relationships meant there was not time to further develop local relationships. They might also prefer to spend time on other interests.

> *I literally just run out [of] time at some point. […] I would like to clone myself but... we're not there just yet. – Nastasia, extravert renter 25-34*

> *It's time and priorities, and people who you want to spend time with. – Tara, extravert renter 25-34*

For those interviewees who did not feel a need for more connection in the local area, having other relationships elsewhere and being more focused on work reduced their motivation to develop local ties. It also reduced the amount of time they spent in the local area, and so the opportunities they had to meet others.

> *I guess if I didn't have all of those things going on, I probably would be a bit more open to striking up a longer conversation here and then possibly having some sort of regular contact. – David, ambivert renter 55-64*

9.5.4. Events, Activities & Problems

Some interviewees felt they had not met many people because the complex did not hold events, and events were a common suggestion for how to increase local social connection. Several interviewees suggested a regular complex barbecue in the park "when it's open" (Julia), and while this was generally agreed to be a good way to meet people based on past experience, they doubted it would attract the majority of residents.

> *If they're into that, I don't know. If they've got time. There's so many variables. I probably wouldn't always go, to be honest. I like napping [laughing]. – Julia, renter 25-34*

> *I wouldn't join anything if it was just to go and meet people […] I'd like something with a purpose. [An event], it's quite artificial. It's not very organic. But I am happy to meet people through a class. – Susan, introvert renter 45-54*

"Very very local" (Nastasia) activities were also suggested as channels to develop ties in the area, based on common interests and catering to people who may have limited "time and motivation" (Nastasia, renter 25-34). Several interviewees hoped the new community centre would offer classes including yoga, pottery, book clubs or cooking, however this needed someone with initiative to contact the local government to hire the space.

Even with determined organisers, activities could be hard to get off the ground. Three interviewees mentioned efforts to start a community garden in the local area, and Evelyn explained the difficulties involved. Evelyn had experience starting a community garden; her previous one had taken two years from instigation to opening.

> *[Local government] have said a flat no to having a community garden in the park on that side, so I wrote and attached a photo of the area out the front of the [retail centre], which is just a blank bit of nothing and said that I thought this would be an appropriate place, and it didn't have the problems which they mentioned with the*

> *other part. And the coordinator wrote back to say that she would suggest it, when the management plan was developed. That was a good six months ago. So I wrote again about a month ago and said, "Hey, what's happened to that management plan?" And I haven't got any reply, not even, "Thank you for your inquiry." However, I won't give up. – Evelyn, owner 65-74*

Problems including fire alarms, noise disturbance, the closed park and unexpected animals were also common reasons to interact and develop ties.

> *There was a snake found downstairs a month ago, and **everyone** was talking about the snake. And the sign, like, don't feed it. If you see it, call this guy. – Tara, renter 25-34*

While problems are very reliable ways to connect people, relying on them is probably not a good strategy for encouraging connection.

> *When there's a fire people start talking to each other. […] But maybe not setting fire to the buildings... [laughing]. [You'd have to be] committed to meeting people! – Nastasia, renter 25-34*

9.5.5. Children and Dogs

None of the interviewees owned dogs, though many spoke of the "subculture" of dog-owners in the local area (Timothy, owner, 65-74) and enjoyed interacting with dogs and their owners. Dogs provided a good icebreaker and common topic of conversation, and this was also true of children.

> *I've got one neighbour with kids who I'll chat to occasionally, the kid's really cute […] a little girl who's really friendly. – Julia, renter 25-34*

Dogs could help with recognition of neighbours in the street, as well as encouraging trust of others.

> *'Oh, your dog likes me, this is good. See? I'm good people.' – Amanda, renter 35-44*

Having children could also restrict local interaction, however. Tara felt that she was "prejudged" by some young-professional floor neighbours who had not returned her friendly overtures. This ties back to the importance of assumed common interests, covered in section 9.4.1.

> *We've got a different lifestyle. And I think they don't– there's no point in engaging because we're not gonna have any similarities, but… You'd be surprised! We still have lives, you know. – Tara, renter 25-34 with baby*

9.6. Summary

Participants at Bay Park tended to have several chatting ties and acknowledgement ties in the complex or local area, however few (23%) felt they had enough contact with local people. A number of interviewees had a high level of local social connection, however they tended to have lived in the local area for years or decades, or to be especially extraverted.

CSTs were seen to provide opportunities for favours to be exchanged, as well as supporting a sense of security and trust among neighbours, and increasing feelings of belonging. Interviewees tended towards maintaining relationships at a low level to accommodate other demands on their lives, and several spoke about the benefits of social interaction for well-being as well as its contribution to an enjoyable life. The lack of shared spaces in addition to circulation spaces was seen to reduce opportunities for incidental interaction, and the adjacent closed park was often discussed as a space to meet in future, being close enough to the complex to reliably recognise the same people.

10. Statistical Analyses: Actants Contributing to CSTs & Experiences

This chapter details statistical analyses and descriptive statistics from the resident survey. Analyses were run with the survey data from all case complexes (N=202) to consider associations between actants (such as having a dog or age), CSTs and two emergent qualities: social cohesion (relevant from a societal-level point of view) and satisfaction with social interaction (relevant from an individual-level point of view). These analyses sought to triangulate findings with the qualitative analysis of the case complexes, and help inform answers to RQ3 *How do human and built/natural environment factors interact to produce CSTs* and RQ1 *How do CSTs influence the experiences of apartment residents*. While assemblage thinking necessitates a more complex view of causality than can be provided by statistical analysis, statistical exploration as detailed here can suggest how actants may interact and indicate influences on outcomes.

10.1. Social Cohesion: Hierarchical Multiple Regression

The aim of this analysis was to consider the relative influences of a range of different actants on social cohesion scale scores, and their influences once the contributions of local relationships with family and friends, as well as local CSTs, were taken into account. The addition of CSTs in the final model also illustrates the extent of their influence, once other actants are considered and controlled for.

The ties (F/F ties and CSTs) were expected to be correlated with social cohesion[33] as well as several other included actants, in some cases mediating the influence of other actants on social cohesion. A mediation analysis or structural equation modelling (SEM) could be appropriate here, however these shift the focus to direct causal pathways rather than being open to potential complex interrelationships. For this reason, the analysis focuses on relative influences of many actants, the change in their influence once ties are added to the model, and the influence of ties themselves, shedding light on stronger or weaker associations rather than creating a predictive model.

10.1.1. Test of Reliability for Social Cohesion Scale

A Cronbach's alpha test was run to determine the internal consistency of the social cohesion scale. The eight items (including a reverse-coded item 7) had a relatively high level of internal

[33] In the final model, social cohesion was significantly correlated with family/friends ties, $r(189) = .592$, $p < .001$, chatting ties, $r(189) = .552$, $p < .001$ and nodding ties, $r(189) = .332$, $p < .001$

consistency, with a Cronbach's alpha of 0.772. The removal of two items resulted in a higher Cronbach's alpha ("I would be willing to work together with others on something to improve my local area", resulting in 0.779, and "I believe my neighbours would help in an emergency", resulting in 0.775), however it was decided to use the full scale established by Fone et al. (2006) to allow comparisons. Fone and colleagues' (2006) reported Cronbach's alpha for the social cohesion (sub)scale was 0.802.

10.1.2. Hierarchical Multiple Regression Analysis

A hierarchical multiple regression was run with bootstrapping to determine the relative impact of 12 actants on social cohesion scores (based on each actant's contribution to the regression model), and the change in impact when quantity of family/friends ties (Model 2) and CSTs (Model 3) were added. The choice of the 12 actants was based on the interview findings, and restricted to 12 due to considerations of sample size, following Green's (1991) formula $N > 50 + 8m$: including all independent variables (18 once ties are included), this conservatively implies a sample size of at least 194. The included actants were:

- gender
- dog ownership
- age (treated as continuous)
- length of residence (continuous)
- combined area, complex, unit satisfaction score (treated as continuous, see below)
- extraversion (treated as continuous)
- tenure
- living alone
- living with own children
- being born in Australia, Oceania, the Americas or Europe (see below)
- time pressure (dichotomised)
- case complex (see below)

The averaged score for satisfaction was derived through averaging the scores for satisfaction with local area, complex and unit. This combined score had high internal consistency, with a Cronbach's alpha of 0.744, so was used as a variable indicating general satisfaction with living environment.

The 'born in Australia, Oceania, the Americas or Europe' variable was based loosely on birth in Western and Non-Western countries, included due to indications in the resident interviews that there may be differences between Australian-born and foreign-born participants. A preliminary ANOVA showed no significant differences between Australian/foreign-born participants on

social cohesion ($F(1, 194) = 0.067$, $p = .797$), however an exploratory grouping based on largely Western regions following Hofstede's (1983) observations on collectivist/individualist societies (Australia, Oceania, Europe, Americas vs Asia, Middle East, Africa) showed a significant difference ($F(1, 194) = 7.674$, $p < .01$), therefore this was entered into the model. Similarly, speaking English at home was also considered, however there was no significant difference between those who did or did not speak English at home ($F(1, 195) = 1.718$, $p = .192$).

Case complexes were included as three dichotomous dummy variables, in relation to the fourth complex (Bay Court), which had the lowest average social cohesion score. The inclusion of the case complexes in the regression aimed to control for potential differences between the complexes and their populations.

Table 10.1 shows regression coefficients, standard errors, t-values and significance level for actants in all three models, with actants ordered by standardised coefficient Beta. All assumptions were met (Laerd Statistics, 2018, see Appendix I, see Appendix I, see Appendix I, see Appendix I). A higher placing in the table (within each model) means greater impact on social cohesion scores, and darker shading indicates a significant effect (p > 0.05). In Models 2 and 3, light shading is used to indicate actants that lose significance once quantities of ties are added to the model.

Table 10.1: Summary of Hierarchical Multiple Regression Analysis

Variable	*B*	SE_B	β	*t*	*p*
Model 1					
Intercept	13.745	3.480		3.949	0.000
Extraversion	**0.832**	0.241	**0.234**	3.454	**0.001**
Case: Bay Park	**3.056**	1.045	**0.227**	2.925	**0.004**
Area, Complex, Unit satisfaction combined score	**1.138**	0.414	**0.188**	2.750	**0.007**
Being born in Australia, Oceania, Americas, or Europe	**-2.085**	0.894	**-0.182**	-2.332	**0.021**
Age (decades)	**0.595**	0.275	**0.163**	2.162	**0.032**
Living with own children	**1.593**	0.939	**0.125**	1.697	**0.092**
Case: Shore	**1.405**	1.031	**0.109**	1.362	**0.175**
Having a dog	**1.734**	1.183	**0.102**	1.466	**0.145**
Case: River	**1.096**	1.068	**0.088**	1.026	**0.306**
Perceived High Time Pressure	**-0.628**	0.739	**-0.058**	-0.850	**0.397**
Being an owner	**-0.728**	0.873	**-0.064**	-0.834	**0.405**
Length of residence	**0.102**	0.282	**0.027**	0.360	**0.719**
Living alone	**0.333**	0.997	**0.024**	0.334	**0.739**
Being male	**0.126**	0.711	**0.012**	0.177	**0.859**
Model 2 (With Family & Friends Ties)					
Intercept	14.627	2.988		4.895	0.000

Variable	*B*	SE_B	β	*t*	*p*
Family & Friends Ties (none, 1-5, 6+)	**3.759**	0.472	**0.502**	7.959	**0.000**
Case: Bay Park	**2.481**	0.899	**0.185**	2.759	**0.006**
Age (decades)	**0.536**	0.236	**0.146**	2.267	**0.025**
Area, Complex, Unit satisfaction combined score	**0.789**	0.358	**0.130**	2.206	**0.029**
Living with own children	**1.488**	0.806	**0.117**	1.846	**0.067**
Being born in Australia, Oceania, Americas, or Europe	**-1.215**	0.775	**-0.106**	-1.569	**0.119**
Extraversion	**0.279**	0.218	**0.079**	1.279	**0.203**
Length of residence	**0.188**	0.242	**0.049**	0.776	**0.439**
Case: River	**0.571**	0.918	**0.046**	0.622	**0.535**
Having a dog	**0.599**	1.025	**0.035**	0.585	**0.559**
Case: Shore	**0.452**	0.893	**0.035**	0.507	**0.613**
Perceived High Time Pressure	**-0.300**	0.635	**-0.028**	-0.472	**0.638**
Being male	**-0.166**	0.611	**-0.015**	-0.271	**0.786**
Being an owner	**-0.097**	0.753	**-0.008**	-0.128	**0.898**
Living alone	**-0.090**	0.857	**-0.007**	-0.104	**0.917**
Model 3 (With All Ties)					
Intercept	13.958	2.903		4.809	0.000
Family & Friends Ties (none, 1-5, 6+)	**2.835**	0.531	**0.378**	5.340	**0.000**
Chatting Ties (none, 1-5, 6+)	**1.983**	0.665	**0.256**	2.983	**0.003**
Age (decades)	**0.556**	0.230	**0.152**	2.415	**0.017**
Area, Complex, Unit satisfaction combined score	**0.734**	0.350	**0.121**	2.100	**0.037**
Case: Bay Park	**1.608**	0.904	**0.120**	1.778	**0.077**
Being born in Australia, Oceania, Americas, or Europe	**-1.281**	0.750	**-0.112**	-1.707	**0.090**
Living with own children	**1.095**	0.789	**0.086**	1.387	**0.167**
Extraversion	**0.178**	0.214	**0.050**	0.831	**0.407**
Perceived High Time Pressure	**-0.509**	0.618	**-0.047**	-0.824	**0.411**
Being an owner	**0.423**	0.751	**0.037**	0.563	**0.574**
Acknowledgement Ties (none, 1-5, 6+)	**0.234**	0.574	**0.029**	0.407	**0.684**
Being male	**-0.251**	0.598	**-0.023**	-0.421	**0.675**
Case: Shore	**-0.283**	0.888	**-0.022**	-0.319	**0.750**
Having a dog	**-0.289**	1.022	**-0.017**	-0.283	**0.778**
Length of residence	**0.054**	0.239	**0.014**	0.227	**0.821**
Living alone	**-0.150**	0.830	**-0.011**	-0.181	**0.857**
Case: River	**0.138**	0.899	**0.011**	0.154	**0.878**

All three models statistically significantly predicted social cohesion scores, $F(14, 174) = 4.362$, $p < .001$, adj $R^2 = .260$ (Model 1), $F(15, 173) = 9.753$, $p < .001$, adj $R^2 = .411$ (Model 2 including family/friends), and $F(17, 171) = 9.974$, $p < .001$, adj $R^2 = .448$ (Model 3 including CSTs), i.e.

Model 3 explains 44.8% of the variance within social cohesion scores. The addition of family/friends ties to Model 1 led to a statistically significant increase in R^2 of .198, $F(1, 173) = 63.346$, $p < .001$, while adding CSTs led to a small (but statistically significant) increase in R^2 of .040, $F(2, 171) = 6.76$, $p = .001$. See Appendix J for full SPSS regression output.

10.1.3. Discussion of Hierarchical Multiple Regression Analysis

According to the final model, having more ties with family and friends in the area is associated with the largest increase in social cohesion when all other variables are controlled for, followed by having more chatting ties. Having more acknowledgement ties, however, is not significantly associated with an increase in social cohesion score. This implies that chatting ties are useful in increasing social cohesion, but not acknowledgement ties. While extraversion was the most significant predictor of social cohesion scores in Model 1, its impact was much reduced in Models 2 and 3, implying that extraverts have higher social cohesion scores mainly due to having more ties.

Being born in Australia, Oceania, the Americas or Europe lost significance once family and friends ties were added to the model, implying that respondents born in Asia, the Middle East or Africa had higher social cohesion scores because they have (on average) more family and friends ties locally. Case: Bay Park was another variable that lost significance, this time with the addition of CSTs, indicating that the higher numbers of CSTs for respondents at this case contributed to a higher mean for social cohesion.

Variables that consistently predicted social cohesion between the models were age and satisfaction. Higher satisfaction with living environment (local area, complex, unit) is associated with higher social cohesion, though the direction of causality is not apparent. Older participants tended to have higher social cohesion scores than younger participants.

The later variables in the table are potentially illuminating due to their lack of significance. From the literature and based on the interviews, we might expect that time pressure, tenure, having children, dog ownership and length of residence would be associated with social cohesion in some way; length of residence is particularly surprising. First, the size of the dataset may be an issue; due to the theoretical framework of assemblage, many variables have been included in the model, and some groups are small, for instance participants with dogs (11%), or children (22%).

Second, length of residence is only based on residence in the complex, and limited by the opening date of the complex. Respondents may have been living in the local area for longer. Significance (from a very low base) also decreased when all ties were added to the model, indicating that any association with length of residence might be due largely to longstanding residents having more

ties. Third, there may be a more complex relationship between variables; multiple regression only considers linear relationships (though of course, due to the non-continuous nature of some of my variables e.g. quantity of ties, the linearity of the relationship is already in question).

Finally, these variables may simply not be significantly associated with social cohesion, once other variables are controlled for. This has implications for considering different groups: owners are not significantly more likely to have higher social cohesion than renters when other variables are held constant, and even those with perceived high time pressure may have high social cohesion (though perhaps in some cases their high time pressure is due to their strong community involvement). Having a dog, while not statistically significant in any model, appears to have some influence on social cohesion through its association with higher quantities of ties, due to decreasing significance in Models 2 and 3.

10.2. Casual Social Ties & Satisfaction with Interaction

At an individual level, satisfaction with local interaction can be measured through two items in the survey: *I have enough contact with people in my local area* and *I feel isolated in my local area*. The combination of these two items is necessary due to the possibility that respondents may feel isolated, but satisfied with their contact. The following subsections present diagrams based on a cross-tabulation of these items, with responses split into five groups:

- Satisfied: (strongly) agree ‘enough contact’, (strongly) disagree ‘isolated’
- Contact-seeking: (strongly) disagree ‘enough contact’, (strongly) disagree/non-committal ‘isolated’
- Lonely: (strongly) disagree ‘enough contact’, (strongly) agree ‘isolated’
- Private: (strongly) agree ‘enough contact’, (strongly) disagree/non-committal ‘isolated’
- Non-committal: non-committal ‘enough contact’

First, responses for the entire dataset are presented. This is followed by responses according to quantities of CSTs to indicate how CSTs are associated with satisfaction with interaction. See the previous case chapters (Chapters 6-9) for diagrams covering each case.

10.2.1. Overall

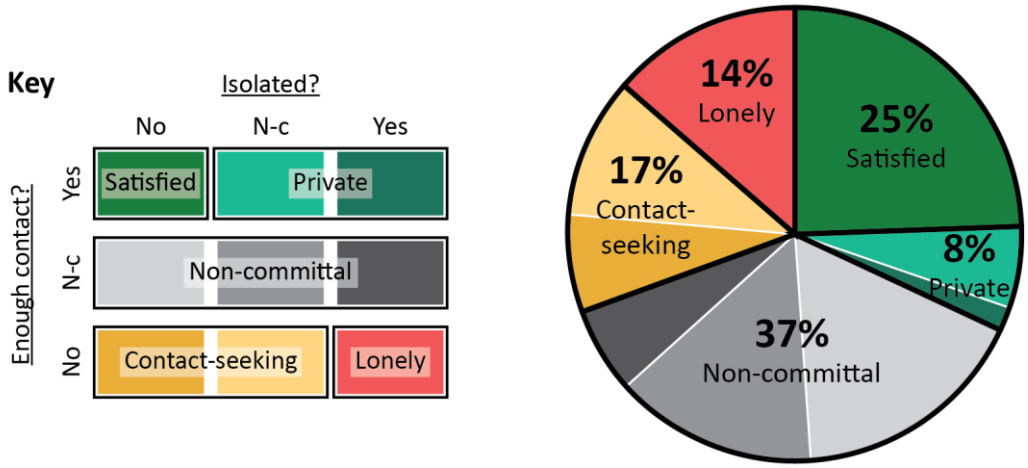


Figure 10.1: Satisfaction with Interaction, all respondents (N=200)

Based on an estimated total population of 1406 (adult population of the complexes combined), confidence intervals for the five groups were calculated using The Survey System (2012). With a confidence level of 95%, the proportion of case complex residents falling into each category is likely to be within 6.22% for the non-committal group, within 5.52% for the satisfied group, within 4.82% for the contact-seeking group, within 4.39% for the lonely group and within 3.38% for the private group.

One quarter of respondents were satisfied with their interaction, with a further third non-committal on whether they had enough contact. One in seven respondents felt isolated and wanted more contact, while approximately one in six were contact-seeking (despite not being isolated). A last group (8%) felt they had enough contact, but did not indicate they were unisolated.

This demonstrates that there is scope and desire for increased interaction in the case complexes and their local areas. Drawing on the interview findings presented in the preceding chapters, it is likely that the non-committal respondents were either open to interaction with particular people (e.g. those with whom they shared common interests), were open to interaction if it involved minimal effort, or local interaction was not a focus in their lives.

10.2.2. Satisfaction with Interaction by Quantity of CSTs

This section presents diagrams according to quantity of CSTs, with CST responses split into three relatively equal groups of 'none', '1-5' and '6+' (acknowledgement ties: 22, 93, 94; chatting ties: 44, 105, 50) and combined to appraise different combinations of acknowledgement and chatting ties. While statistical significance is difficult to determine due to the small numbers of respondents

in some groups, these diagrams can give some indication of how quantity of ties is associated with satisfaction with interaction. However, caution should be taken in extrapolating these diagrams to the wider population, especially where groups are small, and respondent self-selection may create a bias. It should also be noted that the diagrams do not take into account ties with friends and family – a respondent may have no CSTs, but have friends or family in the local area. Diagrams are not presented where there were five or fewer responses fitting a particular quantity-of-ties category.

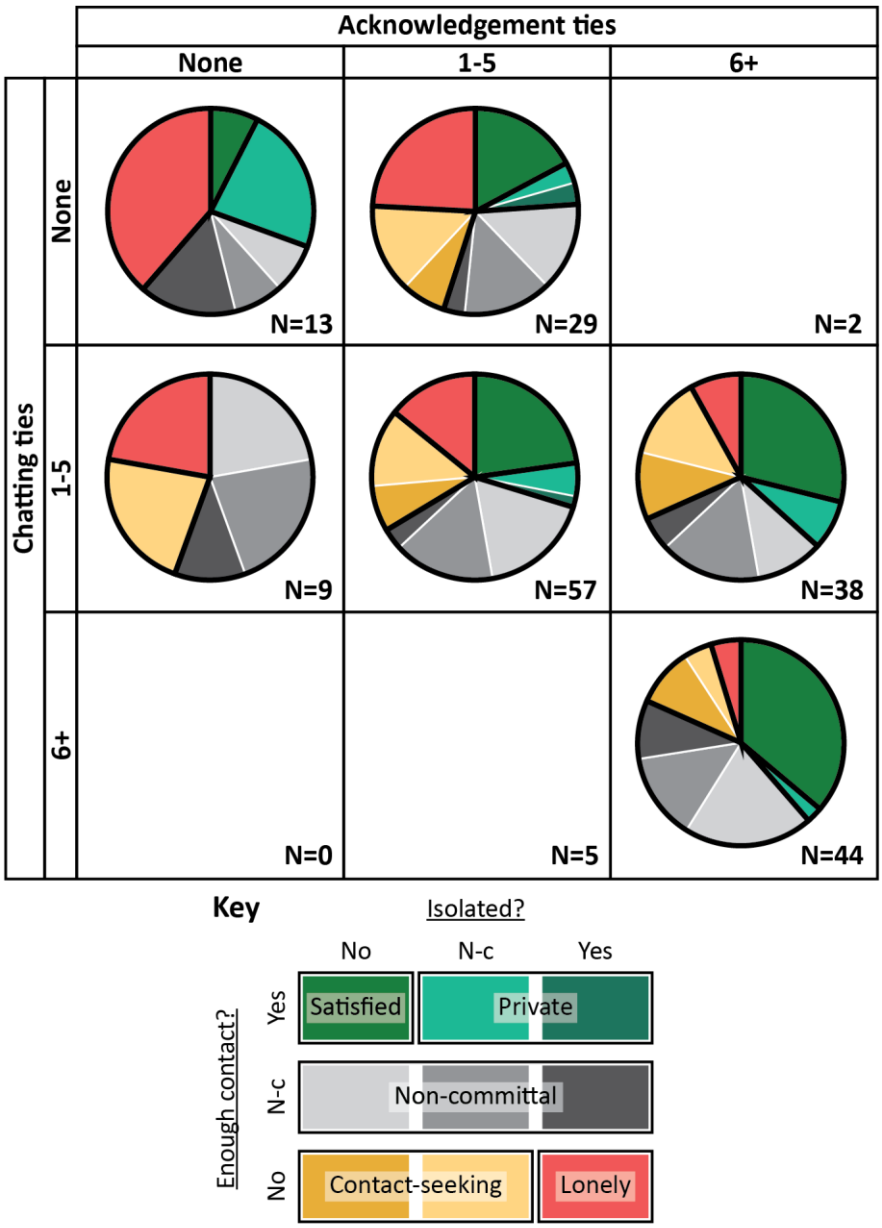


Figure 10.2: Satisfaction with Interaction, Different Quantities of CST

Most (72%) respondents maintain at least one chatting tie and at least one acknowledgement tie, while 6.5% have no CSTs in the local area. From visual inspection, quantity of chatting ties and

quantity of acknowledgement ties are correlated, with people likely to have many or few of both types of tie.

The proportion of lonely respondents is smaller in the groups with larger quantities of CSTs, and the proportion of satisfied respondents is larger. There are clearly different levels of desire for CSTs, shown by the fact that some respondents with relatively high quantities of CSTs feel lonely or are contact-seeking while some with relatively low quantities are satisfied (though they may have friends or family). From this, it appears that having at least a few CSTs of both types is desirable for most respondents.

10.3. Satisfaction with Interaction & Other Actants

The following subsections consider satisfaction with interaction according to the other actants considered in the social cohesion hierarchical multiple regression, giving an indication of which groups may be more successful in reaching their preferred level of interaction. Satisfaction with interaction is used rather than quantity of CSTs to focus on positive experience, rather than quantity of ties (experience of which is different for different people, as shown above). Key points of interest are noted below each set of diagrams.

10.3.1. Perceived Time Pressure

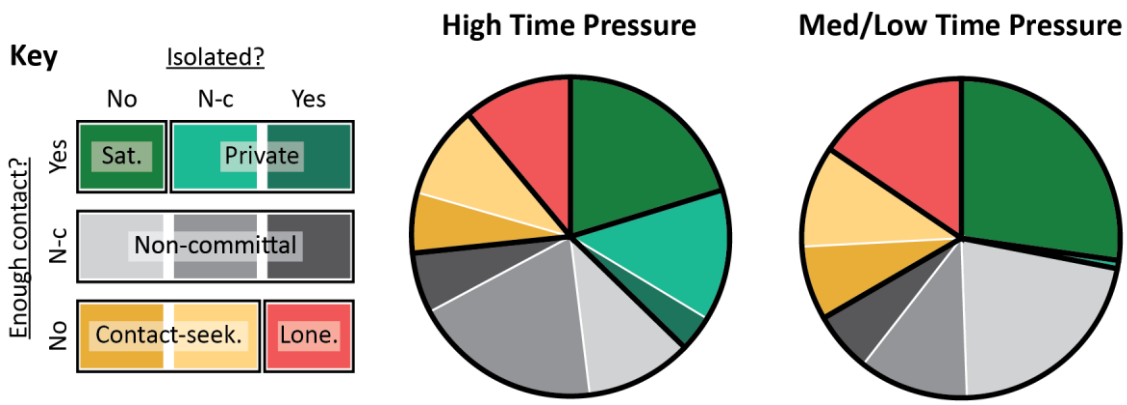


Figure 10.3: Perceived High Time Pressure (N=83) and Perceived Medium/Low Time Pressure (N=117)

The majority of respondents in the 'private' group perceived they were under high time pressure (answering 'often' or 'almost always' to 'how often do you feel rushed or pressed for time?'). Little desire for contact, despite potential isolation, is therefore likely to be associated with the time perceived available.

10.3.2. Tenure

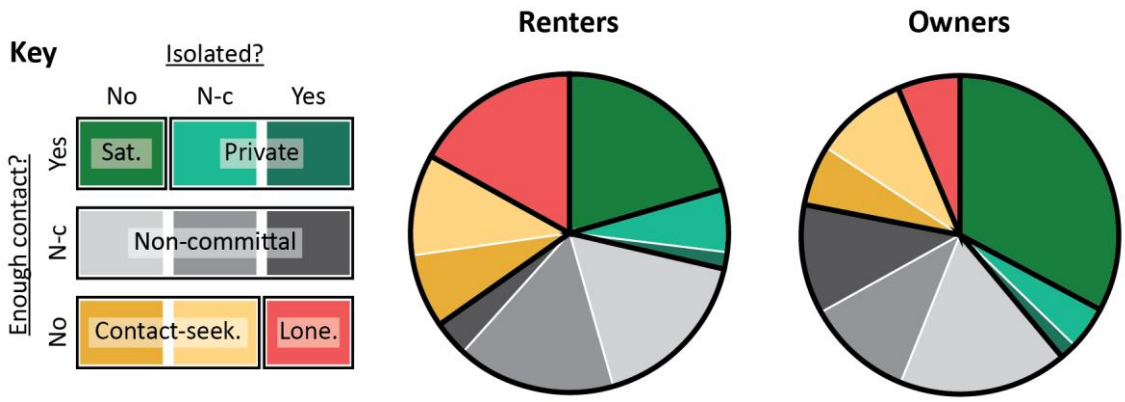


Figure 10.4: Renters (N=136) and Owners (N=64)

A greater proportion of renters were lonely compared to owners (17% vs 6%), and a greater proportion of owners were satisfied (one third vs. one fifth of renters). While renting may be confounded with length of residence (see below), it is clear that renting respondents were more likely to desire more contact (35%) than owner respondents (22%). This is contrary to perceptions amongst some management and resident participants (largely owners, but some renters) that renters would be less interested in local connection.

10.3.3. Length of Residence

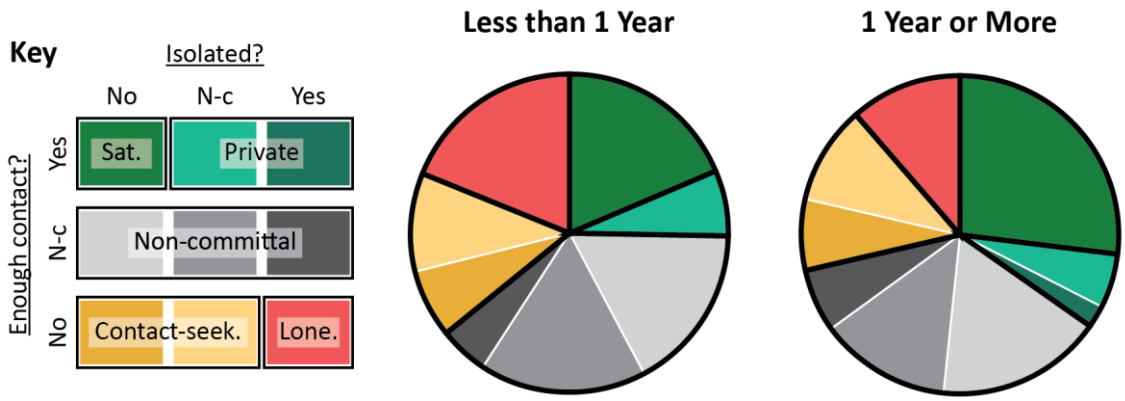


Figure 10.5: Living in complex less than 1 year (N=59) or one year or more (N=141)

The proportion of lonely residents is smaller for long-term residents, and the proportion of satisfied residents larger. This is logical: the longer a person lives in a complex, the more chances they have to develop ties.

10.3.4. Extraversion

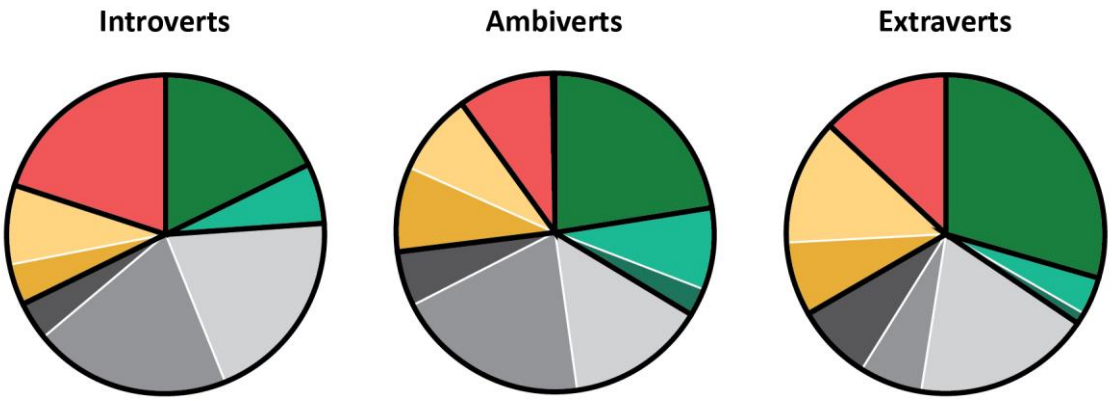


Figure 10.6: Introverts (N=50), Ambiverts (N=71) and Extraverts (N=78)

The proportion of satisfied respondents is larger for groups higher on the scale of extraversion, and a smaller proportion of extraverted respondents are non-committal. As expected, a smaller proportion of introverts are contact-seeking, though a larger proportion are lonely.

10.3.5. Having a dog

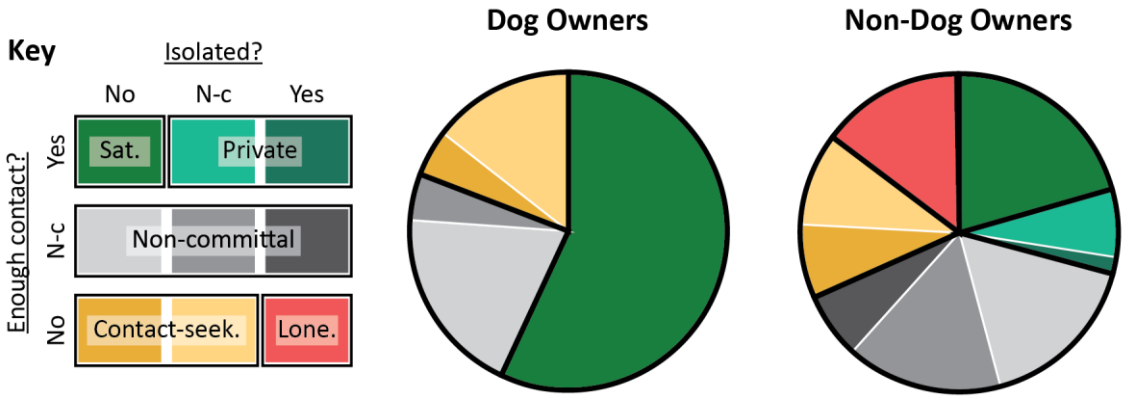


Figure 10.7: Dog owners (N=21) and Other Respondents (N=178)

While the number of dog owners is low (only 11% of respondents), more than half were satisfied, and none were lonely. This might be because dog owners have more opportunities to reach their preferred level of interaction in their local area, or because dogs ameliorate loneliness in and of themselves.

10.3.6. Living with Own Children

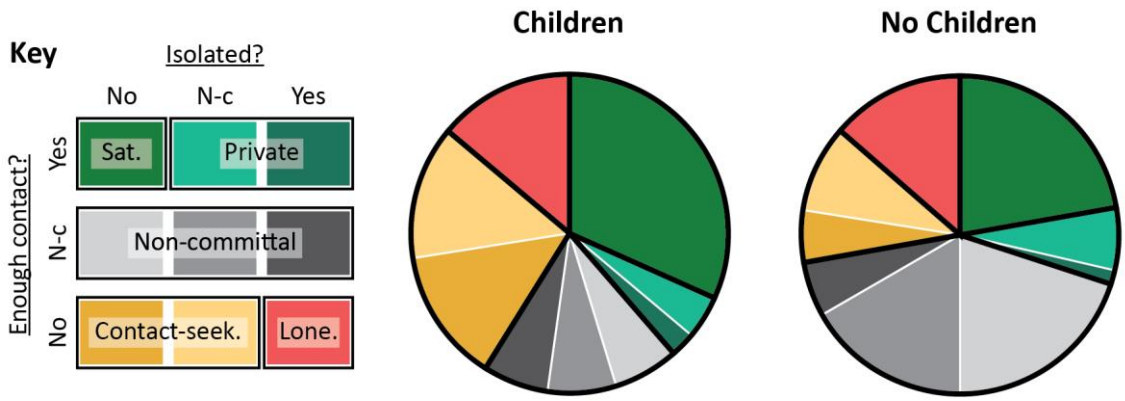


Figure 10.8: Children (N=44), No Children (N=156)

'Living with own children' covers respondents who indicated they lived with their own children (31 with children aged under 15, 14 with children aged 15 or older). A much smaller proportion of respondents living with (their own) children were non-committal about whether they had enough contact (20% vs. 42%).

10.3.7. Age

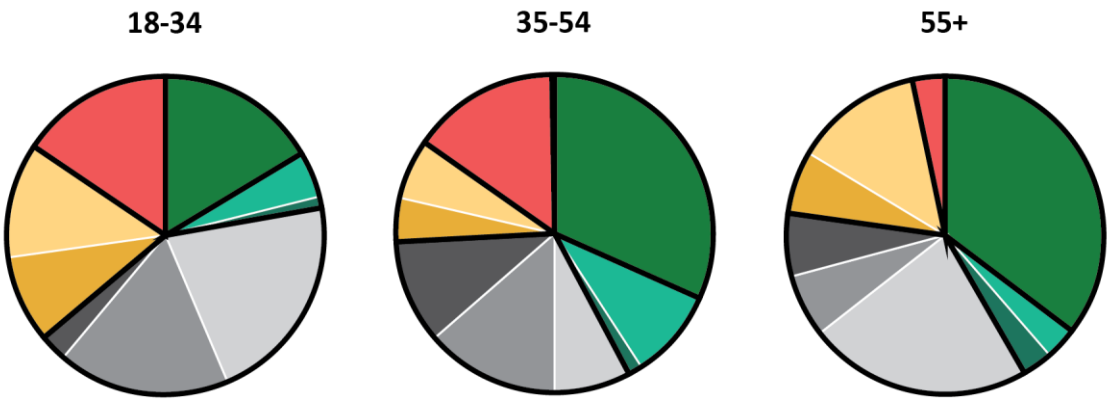


Figure 10.9: 18-34 year olds (N=103), 35-54 year olds (N=66), 55+ year olds (N=31)

A greater proportion of older respondents were satisfied, with few lonely.

10.3.8. Birthplace

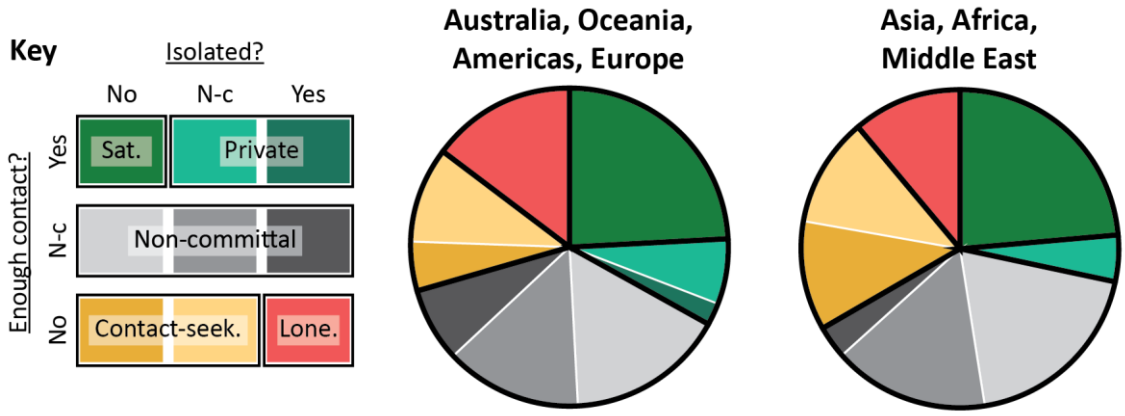


Figure 10.10: Australia, Oceania, Americas or Europe (N=136); Asia, Africa or the Middle East (N=63)

As in the social cohesion analysis, birthplace was split into two groups: respondents born in Western countries (Australia, Oceania, Americas, Europe) and those born in other countries (Asia, Africa, Middle East). A greater proportion of respondents born in non-Western countries were contact-seeking (22% vs 15%), however the differences between the other groups (non-committal/satisfied/contact-seeking/lonely/private) were relatively small.

10.3.9. Living Alone

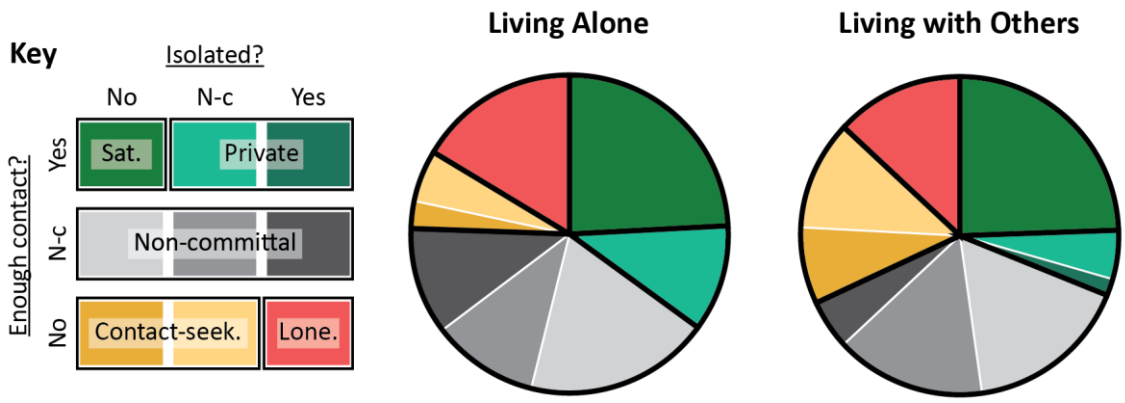


Figure 10.11: Living alone (N=37) and Living with others (N=163)

A smaller proportion of respondents living alone were contact-seeking (8% vs. 15% living with other people), and contrary to expectations, there was little difference in the proportion of satisfied respondents and minimal difference in the proportion of lonely respondents (16% vs. 13%), though a greater proportion of people living alone were isolated/non-committal (dark grey).

It was expected that a greater proportion of those living alone would be open to interaction or lonely, however these results do not support this. It may be that people living alone have gone out of their way to develop CSTs (making them satisfied) or are happy with little interaction (making

them private). This is speculation, however, and further research into the social interaction needs and desires of those living alone would be illuminating.

10.3.10. Gender

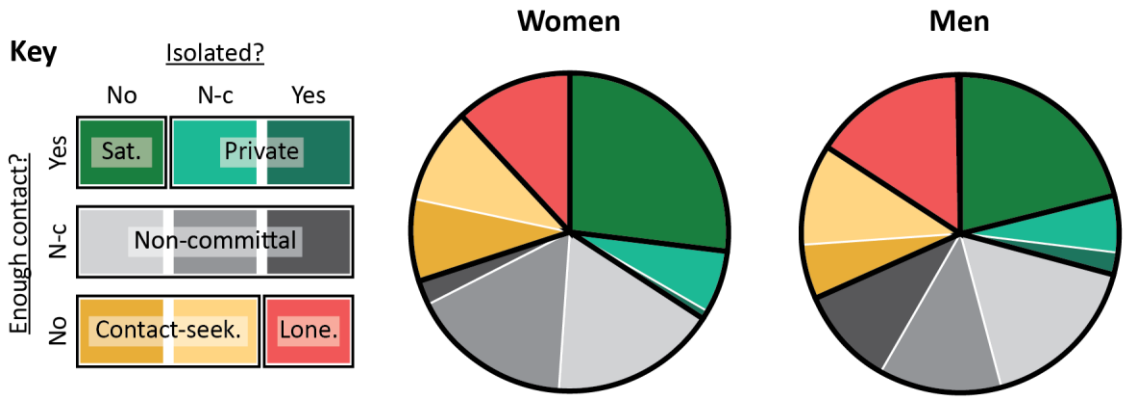


Figure 10.12: Women (N=111) and Men (N=89)

Notably, almost twice the proportion of men as women felt isolated in the local area (28% vs. 15%), however a third of these (10% of all male respondents) were non-committal on whether they had enough contact.

10.4. Summary

This analysis of survey responses adds to the qualitative findings in the previous case chapters, considering the influence of particular actants on social cohesion as well as satisfaction with social interaction. The analysis indicates that ties with family and friends have the largest influence on social cohesion, but chatting ties also significantly influence it. Acknowledgement ties do not show much influence. Satisfaction with living environment was also significantly associated with social cohesion, as was age. While other actants lost significance once quantities of ties were added to the model, in many cases this indicates they are related to quantity of ties – living with own children appeared to be associated with both family/friends ties and chatting ties, as did having a dog and being extraverted.

People with at least a few of both chatting ties and acknowledgement ties tended to be most satisfied with their interaction in the apartment complex and local area. Overall, a quarter of survey respondents were 'satisfied' with their local social interaction (see Figure 10.1), with 14% lonely, 17% unisolated but desiring more interaction and 8% private. Over a third of respondents were non-committal about whether they had enough interaction, and the interview findings indicate that this may be due to being open to interaction under certain circumstances or if it involved minimal effort, or because they were not particularly concerned about it. Perceived time

pressure appears to be associated with being 'private', and renters were more likely to seek contact and more likely to be 'lonely' than owners. Over half of dog-owning respondents were satisfied with their interaction, and men were more likely to feel isolated, however also more likely to feel non-committal about this situation.

The next chapter now turns to a synthesis of findings from the cases and statistical analysis, presenting a model of actants that interact to produce CSTs in large apartment complexes and their local areas.

11. Synthesis: How Actants Open Up & Close Down Possibilities

11.1. Introduction

This chapter discusses the actants that can help open up, or close down, possibilities for developing and maintaining CSTs in large apartment complexes and their local areas. It brings together the findings from the four case study complexes (Chapters 6-9), the statistical analysis (Chapter 10) and interviews with local government stakeholders, and considers the links between these and existing literature (discussed in Chapters 2 and 3). In so doing the chapter addresses the third research question on how human and built/natural environment factors interact to produce CSTs. Residents' desire for CSTs is first briefly discussed to providing grounding and context for the remainder of the chapter. Next, the basic processes of tie development are described, and a model of actants is presented that guides subsequent discussion. Section 11.2 discusses human actants, section 11.3 examines built/natural environment actants, and section 11.4 discusses actants relating to management.

The model of actants provides a comprehensive framework of different actants that influence CST development and maintenance in large apartment complexes and their local areas. It adds to the existing literature in this space, contributes to theory on relationship development in this context, and provides indications of how CSTs might be supported through policy, design and management. It should also be noted that different actants will be important in different assemblages. Very broadly, CSTs at Shore largely arose from interactions with staff, particularly extraverted people or pets, while CSTs at River resulted largely from negative incidents, the presence of children, use of the pool/gym or extraversion. The CSTs at Bay Court could broadly be traced to extraversion and use of parks with pets or children. Bay Court was also the largest complex, and this may have influenced its lower social cohesion score due to more prevalent civil inattention (see 11.3.1) – though it is difficult to be sure of this, because each 'core' of the complex acted as a separate, smaller building servicing fewer people. Extraversion and long-term residence appeared to play a large role at Bay Park, and the lack of dedicated shared spaces may have contributed to a low proportion of participants feeling they had enough local social interaction. Lack of time (day-to-day or in terms of length of residence) was a common negatively-influencing actant across all cases.

11.1.1. Desire for Interaction and Casual Social Ties

Generally, interview participants across all case studies felt it was desirable to know at least a few

neighbours in case of emergencies (particularly on their floor), to know management staff in case they needed assistance, a few staff members in nearby businesses for interaction and a feeling of belonging, and potentially a few people with common interests within the complex or local area in order to socialise or exchange small talk. This is supported by the survey results reported in 10.2, which showed that those with six or more acknowledgement ties and at least a few chatting ties had a greater chance of being satisfied with interaction, and were less likely to feel isolated. Almost one third of survey respondents felt they did not have enough contact with people in their local area, with a further 37% non-committal – suggesting they were not particularly driven to acquire CSTs. Many enjoyed the brief acknowledgments and small talk between residents, but also wanted the option of civil inattention and anonymity. This is comparable to findings on CSTs in other contexts, including studies by Jacobs (1961), Abu-Ghazzeh (1999) and Reid (2015). These benefits and disadvantages will be further discussed in section 11.2.2.

Table 11.1 provides a brief overview of typical positive and negative views and experiences of two common standing patterns of behaviour mentioned in interviews (civil inattention and cordiality) and four types of relationship interviewees maintained or desired in the complex or local area (acknowledgement ties, chatting ties, friendships and ties with staff). This illustrates the wide range of experiences, advantages and motivations associated with CSTs in this context. Ties with staff were different to other relationships in that they were more easily developed, maintained more regularly as well as being more predictable and controlled: with the exception of building managers, one can easily avoid a disliked staff member.

Participants often noted both positive and negative aspects to standing patterns of behaviour and relationships, and negative experiences were more often associated with lack of interaction than too much. Few were overly concerned by negative experiences of CSTs, though they may have contributed to reticence in developing CSTs (see section 11.2.2).

Table 11.1: Standing Patterns of Behaviour, CSTs and Friends: Positive and Negative Experiences. ***For negative experiences, bold text indicates a desire for a stronger interaction/tie, and italics indicates desire for a weaker interaction/tie.***

	Positive experiences & goals	Negative experiences & perceptions
Civil Inattention	It suits me if I'm feeling very introverted on a particular occasion. – Liz (Bay Court, 25-34) I like not knowing really anybody, because I can just zone out and be in my own space – Alexander (Shore, 25-34)	**People aren't that friendly in this building. […] They're not rude, but most people don't really say much. – Greg (Bay Court, 35-44)** **I would prefer a slightly less impersonal sort of living environment. – Timothy (Bay Park, 65-74)**
Cordiality (Strangers)	You make some sort of contact and I think that's important. It's a human thing to do. – Judith (Bay Park, 65-74) It creates a nice atmosphere next time when you see the same people. – Tanya (Bay Court, 25-34)	*If you don't really care about the strangers you just met once in a lift […] just keep quiet. You don't need to ask. – Panit (Shore, M, 35-44)* *Oftentimes, if you're stressed you're not going to be wanting to interact with anybody. – Kavya (River, F, 25-34)*
Acknowledgement ties	[S: What would you like?] Just a familiar face, just saying hello. – Susan (Bay Park, 45-54) You don't know them that well so you don't have to be overly friendly. – Alexander (Shore, 25-34) I think it's just touching base sometimes, so if there is a problem later on […] you can knock on the door "Oh hi," and they know who you are. – Teresa (River, 25-34)	**I wouldn't say I feel reassured with them living there or anything like that. It's more just to be polite. – Jessica (Bay Court, 25-34)** **You smile, and you just say hello, but never actually have a conversation with anybody, an actual conversation. – Kavya (River, F, 25-34)** **[To benefit] you'd have to develop those relationships a little bit more. – Jason (Shore, 25-34)**
Chatting ties	They're easy. Uncomplicated, there's no expectations either side, I guess it's just feeling part of a community. – Margaret (River, 75+) You know a little bit about them, but you also, you can step back, you don't have to be friends with them. – Yu (Shore, 55-64)	*I've had neighbours where they got too friendly and they thought they could get away with loud music all the time. – Natalie (Bay Court, 25-34)* *I don't really... need that sort of contact much. – Tanya (Bay Court, 25-34)* *[It could be difficult] if one of those people turns out to […] become needy. – Amanda (Bay Park, 35-44)*

	Positive experiences & goals	Negative experiences & perceptions
Friends	It'd be nice to be able to call up someone really close and be like, what are you doing today? Do you want to have coffee? – Ava (Bay Court, 18-24) I'd love to have a friend in the building, that would be fantastic [but there's] no one I've met who I've gone, oh, hey, I'd hang out with you. – Laura (River, 25-34)	*In some ways, I like not being best friends with your neighbours, […] particularly if you're living in a really confined environment and you're kind of on top of each other, and a very thin wall, it's kind of good, just having a bit of privacy that way. – Alexander (Shore, 25-34)* *I'm very, very, very careful in keeping any sort of relationship especially in my neighbourhood except for hi, hello. Because I had a very bad experience [with a friend's husband's harassment]. – Riya (River, 35-44)*
Ties with Staff	It brings value to living here, because I go there and I feel happy that I know these people. – Matthew (Bay Park, 25-34) I know [the manager's] there and if anything happens, that will be okay. And because I've met him I trust him. – Jessica (Bay Court, 25-34) [You] feel like you're part of their life and you're part of their business and you're part of their extended family. – Steven (Shore, 35-44)	**Here, I see no building manager. I don't know who he is. […] You feel like you're living on your own. – Riya (River, F, 35-44)** *I'm like, dude, I don't want to know what everyone else's life is like. I just want to come here and have coffee. Because she was just too full on, I stopped going there. – Rose (River, 25-34)*

11.1.2. Basic Processes of Tie Development: Repeated Encounters and Interaction Catalysts

As discussed in chapter 3, relationships develop from repeated interactions (Festinger et al., 1950; Forrest & Kearns, 2001; Painter, 2012). It is useful to examine these repeated interactions through their component actants:[34] repeated encounters (however they may come about) and a catalyst that prompts interaction (territorialising possibilities towards interaction). Triangulation (Whyte 1980) is an example of this, but catalysts can also come in the form of a fire alarm, the distinctive appearance of a resident or a commercial exchange. These two types of actants (repeated encounters, catalysts) are the basis of CST development and maintenance, and, as will be shown over the course of this chapter, other actants affect CST development through **increasing**

[34] Actants are more comparable to 'factors' than 'actors': Latour (1996, p. 373) notes that "an actant can literally be anything provided it is granted to be the source of an action." Therefore, people, organisations, discourses and the thickness of walls (Power, 2015) can be actants, and the emphasis is on how one thing *affects* another rather than on a thing's ontological status.

receptivity to catalysts, directly **catalysing interaction** and/or **increasing the chances of repeated encounters** (see Figure 11.1).

While assemblage thinking views phenomena as messy and complex (Anderson et al., 2012b), for the purposes of describing the processes of tie development it is necessary to break an assemblage into more manageable, interconnected topics. The remainder of the chapter is therefore split into three sections. First, human actants are discussed, focusing on how they relate to catalysis and repeated encounters. Within this section, perceptions and experiences of CSTs (RQ2) are considered and framed as motivations for developing CSTs – people are argued to develop CSTs based on their perceptions of the value of these relationships. Second, built/natural environment actants are examined, with reference to the actants and processes outlined in the human actant section. Finally, management concerns are discussed, that is, the human action on, and interaction with, the environment. Figure 11.1 provides a visual representation of the socio-spatial assemblage, outlining key actants that open up or close down CST possibilities, and providing a broad structure for the chapter. With the exception of the section on motivations in 11.2.2, actants are not presented in an order of importance, recognising that the importance of these actants will differ depending on context and the particular person. Red indicates a negative influence, yellow a catalyst, green is receptivity to catalysts and blue is increasing encounters. Several actants are characterised as two ends of a continuum (e.g. circulation space < destination space), with one end having a stronger or more positive influence. Some actants fall into more than one category, therefore colours overlap. Costs and priorities influence many other actants, especially built environment actants, therefore these are separated into their own category.

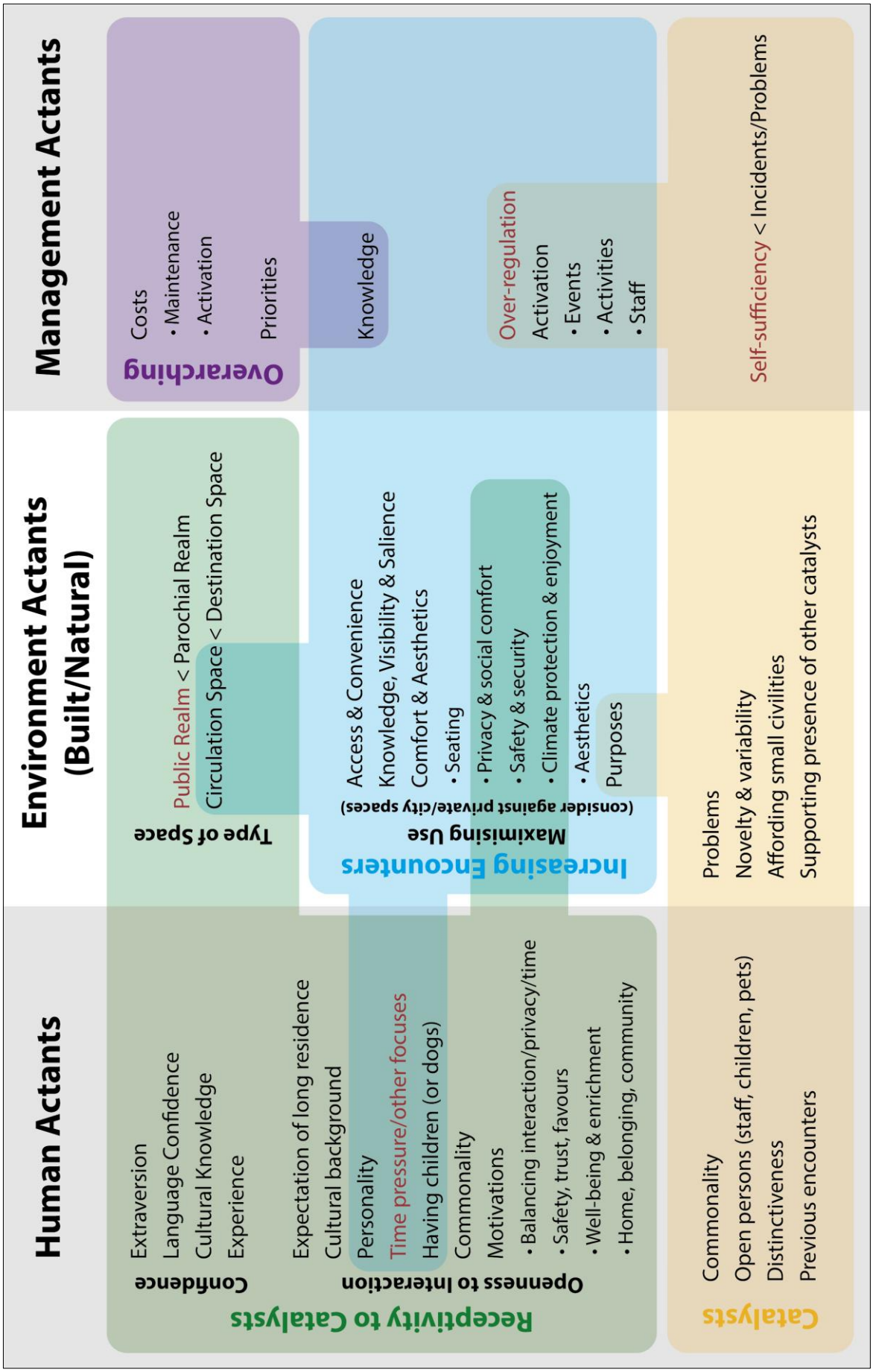


Figure 11.1: Human, Environment and Management Actants: Guide to Chapter. Red indicates negative influence

11.2. Human Actants

At the level of the individual, actants can increase confidence or openness to interaction (increasing receptivity to catalysts) or directly catalyse interaction. Several actants also increase the chances that an individual will spend time in the local area, increasing the chances of encounter.

11.2.1. Confidence

Results of both the interviews and surveys demonstrated that personality has a large influence on tie development, with extraverts developing more ties and expressing fewer reservations about getting to know people. Language confidence and cultural knowledge were also mentioned by participants, largely by those who had experienced difficulties with these. Participants generally felt it was easier to interact with those of a similar background, especially when one is new to a culture, and "there might be complicated conventions going on that are hard to quite specify" (Evelyn, Bay Park, owner 65-74). This resonates with findings around tacit social norms in public spaces (Goffman, 1971; Bissell, 2010; Wilson, 2011), where the breaking of these norms can produce conflict and signify a "lack of common values" (Wilson, 2011, p. 641) between differing cultures.

> *Nobody has my background, I don't have their background. What's their nature? All of those self-conscious thoughts just keep passing. – Aziz, Shore, renter 25-34*

Prior experience of interacting with people from different cultural backgrounds is likely to play some part in this (Sennett, 2012; Laurence, 2017). Experience with interaction more generally can also improve confidence, as exemplified by Rohit (Bay Court, renter 25-34), who attributed his confidence interacting with strangers to his experience as a mentor in a university residence hall.

11.2.2. Openness to Interaction

Personality

In addition to confidence, personality influenced how open someone was to developing ties. Personality could be moderated by many other actants, however, including having many friends elsewhere (other focuses/time pressure), or introverts committing to a more extraverted pattern of behaviour when motivated (as noted by Costa Jr and McCrae (1994)). Newcomers could be more open to developing ties than someone who already had extensive networks in Sydney.

Cultural Background

Cultural background also played a part, especially for participants from small towns (who were accustomed to more openness) or recent arrivals to Australia. Several Indian participants spoke of the more open attitude to social connection in India (cf. Bunawardi et al., 2016; Nguyen, 2017), and the work involved in determining and adjusting to local customs in Australia (supporting research by Molinsky (2007) on challenges for people working internationally). There was a common perception amongst Australian-born participants of European descent that Asian residents (and in the following case, Indian residents) were less likely to interact with their neighbours.

> *Generally, and I'm not being racist, other cultures, they don't say hi. Asians and the Indians. The Australians here always do. So, it might be a culture thing, that they don't interact. Or they think it's rude to talk to you while you're on your way. – Victoria, Shore, renter 25-34*

This suggests a predisposition towards civil inattention in some cultures, however it is difficult to tease out stereotypes and other actants. Are Asian (or Indian) residents genuinely more likely to engage in civil inattention, or are other factors at play, such as perceived homogeneity? While non-Asian participants often mentioned the reticence of Chinese neighbours, two discussions with Chinese participants attributed this to language and cultural confidence (Sheng, Bay Court, male renter 25-34) or to the commonly-large buildings in some Chinese cities (Jason, Shore, renter 25-34, further discussed in 12.3). In these buildings, the large population and greater number of strangers meant shared spaces felt more public, and civil inattention was “normal” (Jason). The ‘Asian’ stereotype is also reductive: there is likely wide divergence across cultures from this region. For example, Nguyen (2017) observed a relatively high level of interaction in public spaces around large apartment complexes in Vietnam in comparison to similar spaces in Taiwan (Huang, 2006). In summary, cultural background is complex, with actants such as cultural confidence, ethnic homogeneity, stereotypes and the nature of past experience of living at density all playing a role.

Lifestage: Residence Expectations, Time Pressure, Other Focuses & Children

Lifestage was also a common theme, closely intertwined with the possibility of long-term residence, time pressure and having children. Young professionals were seen as likely to move on at some point, especially if they were renting, and so less committed to the community of the apartment complex (though some participants refuted this). Young professionals might also be focused on social lives elsewhere.

> *I think the type of people that live here, young, career-driven, most of the time they will generally keep to themselves because they have their own work friends. – Matthew, Bay Park, renter 25-34*

At River, where residents had a range of incomes, several interviewees felt that young people were forced to work long hours to afford housing, and this limited time for interaction. Older retired residents, on the other hand, had more available time and perhaps more motivation to seek out interaction.

> *When you get to retirement age, you're possibly open to more [interaction], because otherwise it can be a lonely life. – Paula, Shore owner 55-64*

Parents of young children looked to find local playmates for their children, as well as exchange common experiences with other parents. As noted by Williams and Pocock (2010), having children also means people tend to spend more time out and about in the local area. Young families might be expected to put down roots in a place, however, there were few older children living in the case complexes. Whether this was due to societal expectations of moving 'to the suburbs' before children reached school age (Randolph, 2006), to the newness of the apartments, to insufficient amenities for children or the limited apartment sizes suggested by Jennifer (Bay Court, owner 55-64), or combinations of these, is unclear.

COMMONALITIES

Perceived common or divergent experiences also affected openness to interaction (cf. Forrest et al., 2002), especially when developing stronger ties. Despite several participants enjoying interaction with a range of people in their complex and local area, many felt they needed something in common for a relationship to be worth developing, and this affected motivation to interact. Commonalities included language, culture, lifestage, children and dogs, as well as common interests such as gardening.

> *He mentioned that he keeps bees, and I keep bees. And we clicked instantly. – renter 25-34, name withheld to retain anonymity*

Several participants noted they would like to develop relationships with other long-term residents, supporting Völker and Flap (2001) who argue that a common future is vital for the development of ties. However, high rates of residential mobility worked against this and contributed to a general lack of motivation to interact, with low chances that another resident would stay long enough to make interaction worthwhile.[35]

However, simply having a shared future as residents was rarely enough of a commonality to develop a stronger tie (also noted by Scanlon et al. (2018)).

> *You do swap information and so on, but basically you have to have some broader kind of interest rather than just being neighbours. – Evelyn, Bay Park, owner 65-74*

[35] The perception of what is 'worthwhile' is discussed in 12.1.

Modern urbanites have almost-unlimited choice in how they spend their time, and who they spend it with (Amin & Thrift, 2002). They would rather get to know someone with whom they share an interest or a background than work at a relationship with someone with whom they may have few shared topics of conversation. This has implications for the utility of CSTs in crossing groups, a main advantage according to Granovetter (1983), and this will be discussed in 12.4.

Openness to interaction is, of course, also affected by people's motivations for connection, as shown in the examples of lifestage above. The remainder of this section therefore considers CSTs' perceived value, as well as competing motivations for privacy and time/other focuses.

Motivations: The influence of CSTs on the Experiences of Apartment Residents

Across the cases, three main themes were identified around positively oriented motivations for CSTs: most prominently safety/trust/favours; secondly the value of social interaction for well-being and enrichment; and finally a sense of home, belonging and community. A fourth theme covered balancing interaction, privacy and time, however this could guide people towards both CSTs and social disengagement. This more complex theme is considered first.

Balancing Interaction, Privacy and Time

As covered in Chapter 2, CSTs are argued to be well-suited to high-density living due to their low demands, support of sociability and aid, and enabling of privacy. Like residents in research by Reid (2015), some participants noted conscious intentions to develop and maintain ties while respecting boundaries. For example, Jessica (Bay Court, renter 25-34) observed that small-talk in lifts was "mainly closed questions rather than open ended", and Steven took care not to impose on a floor neighbour.

> *He lives four doors from where I am, but I never go and knock on his door and say, "Hey, do you feel like going for a [cycle] ride"? I'll send him a text message. – Steven, Shore, renter 35-44*

However, past negative experiences,[36] concerns for privacy and protecting one's time often appeared to result in simply not pursuing relationships. In answer to my question on why participants did not know more people, time was very frequently cited, as well as being satisficed[37] with one's local relationships or one's wider social network. This lends some support to the "liberated" hypothesis, where people no longer need or desire local ties (Wellman, 1979), further discussed in 12.5.

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[36] Though several participants felt that a relationship going wrong was not particularly concerning in large complexes such as these, where you might rarely meet the unfriendly neighbour.

[37] "reaching a minimum acceptable level" rather than "satisfied".

Additionally, people have other focuses in their lives such as work and maintaining existing strong ties with friends and family. One's apartment was often seen as a space to retire to, away from the stress of daily life.

> *We probably won't go out of our way to necessarily cause interactions. We do a lot of that at work. We need to get some of our own personal space back. – Jennifer, Bay Court, owner 55-64*

The freedom of anonymity (when someone "does not expect to be personally identified and held to the full rules of behavior and role that would [otherwise] operate" (Westin, 1970, p. 31)) was also an advantage to not knowing neighbours. Some residents felt more comfortable walking about the area due to anonymity and valued the lack of obligation to talk with others, especially if they were "having a bad day" (Nicholas, Bay Court, renter 25-34). This was also found in Scanlon and colleagues' (2018, p. 28) London research, where one participant noted "I like anonymity so the lack of community feel is a positive to me. I have no desire to know my neighbours." Clearly, there are times and places where people do not want to deal with Mackay's (2014, p. 173) "blizzard of social expectations", and for some their residential complex and local area is one of these. Care should therefore be taken not to preclude anonymity.

Safety, Trust & Favours

> *Neighbours will come first. If you need help, they're closer. – Sanjana, Shore, renter 65-74*

Increased safety, trust and favours were the most widely-cited benefits of CSTs. Supporting the 'stress-buffering model' (Cohen & Wills, 1985; Kawachi & Berkman, 2001), the value of relationships was often connected to their ability to provide large or small favours in time of need, reducing stress even if these favours were not often exchanged, and providing a better sense of security. However, the necessity of developing ties for these outcomes was debated, especially in the more-secure, higher income complexes where managers were readily available to attend to any issues (see 11.4.2). Childless young professionals were also less likely to feel a need for them, except in emergencies, potentially explaining other findings on these residents' minimal engagement (Forrest et al., 2002; Scanlon et al., 2018).

> *We've got a building manager plus we've got all the security, so I don't really feel I need to lean on neighbours like that. – Alexander, Shore, renter 25-34*

In emergencies, however, even very superficial ties were deemed useful. Notably, in the social cohesion scale survey responses, the item 'I believe my neighbours would help in an emergency' was the most commonly agreed with, though many respondents did not maintain anything more than acknowledgement ties in their building or the local area.[38]

[38] This is not unexpected: Fone et al. (2006) similarly found that this item was the highest rated in the scale.

> *You know that they'll help you or they'll open the door if something's going terribly pear-shaped. – Scott, Bay Court, renter 45-54*

Older participants and those with young children were more likely to feel the need for smaller or more personal favours such as minding children or checking up on each other's health. These favours tended to be more regular and were associated with stronger ties. Several participants worried that this sort of exchange of favours could get intrusive and overly-dependent, and preferred to maintain a greater distance and autonomy to avoid this. Exchanging information about the complex and the local area was a form of small favour that was valued and welcomed by several participants, and related especially to newcomers.

> *Because I've been here a little while now and I see people coming in, it's like 'I've been here before you. I can reach out to you and tell you things that are in the community that I'm aware of.' – Joseph, Bay Park, renter 25-34*

Finally, as one older participant pointed out, if you know and are known to other residents, you can each be more certain about the other's motivations and behaviour. Timothy (Bay Park, owner 65-74) was falsely-accused of a noise complaint, and felt this would not have happened if his neighbours had known and trusted him.

Social interaction for Well-Being and Enrichment

CSTs (and cordial encounters with strangers) were also valued for their contribution to well-being through enjoyable social interaction and the creation of a friendly atmosphere (the 'main effect model' (Cohen & Wills, 1985; Kawachi & Berkman, 2001)). A number of interviewees invoked the idea of humans as social animals, and the threat of isolation, suggesting that CSTs can ameliorate loneliness to some extent.

> *Because I'm a pretty introverted person, I feel like, if I was left alone, I would get even worse. [If you chat to someone] at least you had a 30-second conversation and you haven't just not spoken to someone for a week. – Joseph, Bay Park, renter 25-34*

Several participants wanted to develop stronger CSTs with people in the area with similar interests, so they could meet at short notice for coffee or "Saturday-Sunday stuff" (Jason, Shore). Even when participants did not desire this interaction, however, most still appreciated a friendly atmosphere of acknowledgement.

A smaller, but still noteworthy, number of participants spoke of the value of CSTs in broadening horizons and enriching their lives, enabling interaction with people they might not have the time or inclination to develop stronger relationships with. These relationships did not need to be with other residents, and were in many cases with staff.

> *I definitely want to make new friends in different countries. […] I'm glad that I'm able to make friends like this couple from Israel, […] one from Pakistan. – Aziz, River, renter 25-34, born in India*

This broadening of horizons is an example of what Sennett (2012) calls diologic interaction and Granovetter (1983) notes as a benefit of weak ties. Sennett (2012) and Granovetter (1983) argue that this contributes to breaking down stereotypes and bridging different groups, but it is unclear how common this was in the research (further discussed in 12.4). River, being the most culturally diverse complex, appeared to support these bridging ties for many participants, while they were less commonly mentioned in other complexes.

Home, Belonging & Community

CSTs or even simple "happy […] leisure" activity on the street (James, Bay Park, owner 75+), could contribute to a sense of comfort and belonging to the area, similarly to Henning & Lieberg's (1996) 'feeling of home'.

> *If you don't have those really low-level relationships, you don't feel connected to a place, […] whereas having those small chats and things like that, it does make you feel like you belong here. – Jessica, Bay Court, renter 25-34*

This feeling of belonging could contribute to stake in, and attachment to, the area (as Lewicka (2011) notes). The CSTs that supported feelings of belonging and attachment could also be drawn upon to fix problems.

> *You feel like you know the surroundings and you start owning the place. So, a sense of ownership comes when you see similar faces. – Riya, River, renter 35-44*

> *Sometimes people band together around particular issues, […] get together and do something about it. – David, Bay Park, renter 55-64*

Building management staff and local business staff are especially important for this feeling of belonging, often being the most consistent interactions people have in a local area. Similar findings have been found in literature on third places (Rosenbaum, Ward, Walker, & Ostrom, 2007).

> *She said, 'oh, cappuccino, right?' And I said '...yeah'. And it wasn't what I wanted [laughing]. […] I was even happy to have a coffee that I didn't want, just because I was so happy that I'd been recognised. – Greg, Bay Court, renter 35-44*

Influence of Motivations

Despite these motivations, a great number of participants did not feel an overwhelming need to develop local CSTs, having not thought about it particularly or being unwilling to exert the effort needed. Most were not averse to more social interaction, but felt there should be minimal effort involved.

> *I'm not saying it wouldn't be a good thing if there was more social interaction, but it's not something I'm actively looking for. – David, Bay Park, renter 55-64*

Many participants felt that their wider social network was sufficient for their needs, reducing their desire to develop CSTs near home (again, supporting Wellman's (1979) 'liberated' hypothesis). This applies less to those who are more restricted in their daily movements, such as children, the elderly, those who work from home or do not work (Guest & Wierzbicki, 1999). Motivation could also be reduced due to time pressure, uncertainty of staying in the area and having other focuses such as work, solitary leisure activities, or a second home outside Sydney.

11.2.3. Catalysts

Several personal attributes act as interaction catalysts. A distinctive choice of clothing or personal appearance can imply commonalities, providing both a topic of conversation and motivation to develop a tie for those with similar interests (though it can also highlight differences and affect openness to interaction). A common language, especially in an unexpected context, was reason enough to pursue a tie. Supporting Williams' (2005) findings on the effects of diversity on social interaction, language or culture could also provide a common topic of conversation in a context where the majority of residents hail from outside Australia. This suggests that the influence of homogeneity is more complex than is often captured in research (e.g. Snow et al., 1981; Forrest et al., 2002; Farida, 2013).

> *A lot of nationalities will start to talk, oh, what is your background, […] where does your accent come from, it's not rude, people just want to communicate with you. – Manager, River*

Most prominently, having children or pets (especially dogs) was closely associated with CST development, providing an easy topic of conversation. Children and pets are good examples of catalysts for several reasons. First, as above, they provide a conversation topic. Second, they indicate potential common interests, leveraging the homophily effect (McPherson et al., 2001) and they increase the time spent out and about (providing a purpose to be out). Finally, they are what Lofland (1998) would call 'open persons': it is more socially acceptable to interact with them, especially if they initiate the interaction (see section 3.1). Several studies have found that households with children are far more likely to know other locals (Grannis, 2009; Scanlon et al., 2018).

> *Her baby gets along really well with my dog […] While the baby's throwing a ball, my dog's trying to get it, we have time to have a conversation. – Ava, Bay Court, renter 18-24*

Another example of open persons is staff, whether of the apartment complex or in local businesses. Their role in the behaviour setting of an apartment complex and a local area is to serve

residents or customers, and repeated commerce- or aid-based interactions in many cases led to CSTs. When a staff member had an especially open personality, they could also connect other locals and residents, acting as a 'local character' (Jacobs, 1961; Oh & Kilduff, 2008).

> *Maybe because it's just the position of him as a building manager, maybe it's easier to break the ice […] he has to care for us living in the building, and then we actually do care about him. "Hey, what are you up to? We've got this and that." So, small chat is easier. – Panit, Shore, male renter 25-34*

Finally, a previous relationship or encounter was also a catalyst, implying that people are likely to have a common future (Völker & Flap, 2001) and engaging in interaction may lead to an ongoing relationship, as well as providing a potential topic of conversation. The success of a past interaction was also related to the likelihood of a new one.

> *If I see them somewhere, say in the Blue Mountains or somewhere outside, "Oh, I know you. We stay in the same apartment. We've talked to each other." – Arjun, Shore, renter 25-34*

However, the impact of previous encounters relies on people recognising each other, which may be difficult given the number of people living in and using these spaces, the often-brief encounters as well as differing individual powers of recognition. Distinctiveness of appearance, having a dog or children all increased the chances of a person being recognised.

11.3. Built/ Natural Environment Actants

This section considers the materiality of spaces, outlining how built/natural environment actants guide and support the development and maintenance of CSTs in concert with human actants. It presents principles for how spaces increase encounters and receptivity to catalysts, as well as directly catalyse interaction. This adds to the literature reviewed in section 3.2, and suggests explanations for the relatively-common finding that dedicated communal spaces are not well-used (Cho & Lee, 2011; Lette, 2011; Bunawardi et al., 2016; Scanlon et al., 2018). Specific implications for the design and planning of large apartment complexes and their local areas are discussed in section 13.4.

11.3.1. Civil Inattention in the Public Realm; Cordiality in the Parochial Realm

A theme that arose repeatedly in the resident interviews was the role of access and implied belonging in guiding standing patterns of behaviour. Participants acknowledged or chatted to people in the lift or the lobby because they were most probably residents of the building, implying both a commonality and a shared future. They spoke to people in Bay Court's private courtyard (though the courtyard was rarely used for any length of time), but not in River's public plaza

(which was most often used by non-residents). They felt it would be easier to get to know other residents in Bay Park's adjacent closed park than in the nearby regional park, and they acknowledged or spoke to other residents on Shore's roof terrace.

> *In the general building, [interacting is] just accepted. You walk past a stranger but here you both know you live in the building so it makes that element of pressure [to interact]. – Sean, Shore, renter 25-34*

This recalls Lofland's (1998) conception of public, parochial and private realms: life in the public realm generally consists of interactions with biographical strangers, whereas life in the parochial realm consists of interactions with acquaintances and people known to you. Shared spaces within an apartment complex and its local area each fall on a different point of the continuum between the public and parochial realms, with standing patterns of interaction becoming more common at the parochial end, and civil inattention more common at the public end. Jason's large apartment buildings in Hong Kong (see 11.2.2) may be perceived as more public, and so civil inattention is prevalent.

Whether a space is perceived as more parochial realm or more public realm is influenced by a complex variety of actants including the number of people normally using the space or having access to it (its exclusivity), a sense of ownership that appeared to be based partly on distance from the building or a resident's unit, and the expected likelihood of seeing a person again (which may be moderated by rates of residential mobility). While people are likely to interact with strangers in a parochial realm-evoking space in any case, the fact that recognition is easier within a complex also contributes to higher rates of interaction.

> *She says hi to me. And I was, like, "I don't know who you actually ..." "I'm your neighbour." I was, like, "Oh. Sorry. Because you're out of context, that's why I don't remember." – Tara, Bay Park, renter 25-34*

Oldenburg's (1999) third places (see section 3.1) may also be seen as parochial realm, with interaction-leaning standing patterns of behaviour. Foci (Feld, 1981) such as schools or coffee shops can have a similar effect, with people likely to see each other again and having a common regularly-used space. The commercial centre near the Bay cases is a regional attraction, and while participants largely valued it and felt it contributed to the 'buzz' and life of the local area, the number of non-local people using it meant it felt like public realm to most, and therefore largely a place for civil inattention (see sections 8.3.2 and 9.3.2).

11.3.2. Circulation Spaces Support and Maintain Weaker CSTs, but Destination Spaces Further Develop CSTs

A second major contribution to standing patterns of behaviour is time pressure while using the space, specifically whether a user is on their way elsewhere. This suggests perceived time pressure

was an influence in studies where only brief interaction was noted in circulation spaces (Snow et al., 1981; Huang, 2006; Lette, 2011; Reid, 2015). Circulation spaces such as corridors and lobbies may support regular encounters and brief interaction, but this interaction is likely to only maintain, rather than further develop, CSTs. Even lifts, where residents are forced to pause in close proximity to each other, can sustain only brief interactions due to a reluctance to delay others or to be delayed oneself, and close down opportunities to develop a tie through more lengthy interaction.

> *We just say hello while we are going out somewhere […] we may not have the time to just stop by and talk. Even if I have, other people may not have the time. – Arjun, Shore, ambivert renter 25-34*

Even spaces not intended to be circulation spaces may be perceived as such, if there is nothing to attract use as a destination. Shore's courtyard and River's plaza are examples of this, with residents generally passing through rather than lingering. Spaces that are perceived as destinations, on the other hand, provide scope for more extended interaction; Reid (2015, p. 445) notes "common property facilities are the key public space […] where social interaction could occur". While users may still be aware of not disturbing others, people are likely to be using the space for a greater length of time, and may be more open to interacting. Destination spaces are also likely to have a particular purpose or activity associated with them, which can act as a catalyst (further discussed below).

> *[In a pool area] you've just got that time to sit and just talk, as opposed to […] oh, I've got to get out of the lift, got to get out the door. Yeah, it's just nice to be able to sit there and actually that's when you start to get proper conversations going. – April, Bay Court, renter 25-34*

11.3.3. Maximising Time and Visibility in Parochial Realm Spaces

Given the above two principles, acknowledgement ties are likely to develop in spaces perceived as parochial realm[39] where encounters are often repeated, and chatting ties in parochial realm spaces with reduced time pressure (i.e. destination spaces). Most residents will use circulation spaces by default, with the time spent in them relating to the length of the path from an apartment to the street, potentially via a carpark, as well as to functional spaces such as garbage rooms or leisure spaces such as roof terraces. Destination spaces, unless they have a necessary function (such as garbage rooms), involve more intention to use, and their use is therefore more reliant on certain qualities of the space.

This section considers the qualities of parochial realm spaces that maximise time spent in them

[39] Based on exclusivity, likelihood of seeing users again and distance from unit/complex. Hereafter 'parochial realm spaces'.

(or in spaces visible from parochial realm spaces, such as Gehl's (1986) 'soft edges'), increasing the chances of repeated encounters where people are more receptive to catalysts. It begins with a consideration of the attractiveness of spaces *other* than local parochial realm spaces, and then considers how parochial realm spaces (especially destination spaces) might better afford use in this wider context. This includes paying attention to purpose and the range of activities afforded when designing a space, properly leveraging access and convenience, increasing salience and visibility of these spaces, and ensuring the space is sufficiently pleasant.

Attractiveness of Other Spaces: Private Apartments & Wider City

Some destination spaces within the complexes studied are rarely used. This is largely due to residents preferring their own apartments, as well as spaces in the local area and the wider city. These destination spaces, from the perspective of participants, do not offer sufficient attractions to outweigh the privacy and comfort enjoyed in one's own apartment, and their physical convenience does not outweigh the greater attractions available outside the complex.

> *I'm not sure why I would go down there to read a book when I could just read one here. – Greg, Bay Court, renter 35-44*

> *There's a dog park down the road, there's Parramatta Lake […] I'd much rather do that, than hang around on a treadmill and just go nowhere. – Laura, River, owner 25-34*

If people are using local area spaces such as parks or shops, there is still an increased chance that they will run into someone they recognise, especially if they are using a more parochial realm space like Laura's favourite café. However, some participants felt they spent little time in the area due to time pressure, focuses elsewhere such as work and friends, or favoured food or leisure activities.

> *My son's gone to [school in Eastern Suburbs] from age 5, so I'm always basically spending my time in the Eastern Suburbs. – David, Bay Park, renter 45-54*

Purpose

Commercial spaces generally have a clear purpose which draws customers to use them, however the purpose of apartment complex shared spaces is often less clear. Participants often felt there was nothing they cared to do in spaces, and no good reason to use them. This feeling appeared to have two parts to it: first, the lack of a 'drawcard' to the space, and secondly, the social acceptability of spending time in a space without an obvious purpose. Programs of standing patterns of behaviour rarely included simply 'hanging around' (or loitering).

> *I think a person would feel embarrassed to sit in a seat in the lobby or… Because, why would you be doing that? – Evelyn, Bay Park, owner 65-74*

A clear purpose or set of affordances for a space, for example River's pool, makes people feel

more comfortable using it, and also increases its salience in daily life; if you consider a particular activity, such as swimming, then you are likely to think of the pool, whereas if a space does not have a clear purpose, you must remember the space's existence and further consider what you might use it for. Mehta (2014) stresses the importance of "symbolically and culturally meaningful" activities for spaces, linking them to increased place attachment and satisfaction of basic and more complex needs including entertainment, debate, eating and display.

While a pool is a particularly clear example of a purpose, there are many others, such as a community garden, pleasant reading space or area for small gatherings. The facilities and affordances in the space must sufficiently support the purpose(s), making it attractive enough to be worth using, especially when the particular purpose (such as reading) is easily afforded in a private apartment or elsewhere. Gyms, for example, need to be well-maintained and provide sufficient equipment to compete with commercial gyms in the local area – something that is difficult to achieve (further discussed in 11.4.3). Spaces may also serve a useful function, such as the bicycle repair/dog wash space suggested by The Happy City (n.d.).

At this point Dovey's (2016) warnings against over-determination and Sennett's (2012) ideas on incomplete specification are important to keep in mind. A space with one clear purpose and little flexibility reduces users' agency as well as the number of people likely to use it; even when spaces had a purpose, some participants felt that the purposes did not interest them, such as River's pool or Shore's rooftop garden. The more complementary purposes are afforded in one space, the more often residents are likely to use it (Foth & Sanders, 2005), opening up possibilities for repeated encounters. Purposes also provide catalysts, both through an obvious conversation topic and potentially implying common interests above and beyond residence in the same building.

Notably, children are more adept at perceiving purposes for spaces than adults, and will tend to use spaces that would otherwise go unused or use them in novel ways for which they were not intended (Jacobs, 1961; Whyte, 1980; Cooper Marcus & Francis, 1998; Bishop & Corkery, 2017). Children, along with dogs, also provide adult residents with a reason to linger in a particular space such as a park, courtyard or residential corridor, and so increase the chances of repeated encounters and provide catalysts.

Access & Convenience

An advantage of local shared spaces is their convenience compared to spaces in the wider city. However, inconveniences in access[40] meant that some rarely used them while others simply could

[40] Such as descending to Basement 3 at River, finding the correct lift across the carpark and ascending to the roof facilities on Level 6.

not find them. As in Appleyard and Lintel's classic (1972) study, large roads dissuaded participants from using spaces on the other side, such as the park across the road from River (section 7.4.2). Awkward access could also hamper desire to use the spaces, as was similarly found by Hadi, Heath, and Oldfield (2017) in relation to sky gardens in Singapore. At Shore, several participants felt the potentially-long wait for the sole available lift and the lack of toilet facilities prevented them from entertaining guests on the roof terrace.

Abu-Ghazzeh (1999) notes that residents of units opening directly onto shared space were likely to treat this shared space as an extension of their living space. The corresponding shared spaces in the case apartment complexes are the residential corridors. In some cases, such as River's pool building corridors, residents did use the spaces like this, leaving their front doors open (as did several participants in Forrest and colleagues' (2002) research in Hong Kong). This behaviour is, of course, related to the trust and relationships people have with their immediate neighbours.

Proximity to home may also affect how well a space is used. In River's public plaza, the seating and greenery appeared to be sufficiently attractive for visitors and workers to sit and linger, but not for resident participants who could easily sit and linger at home (cf. Zhang & Lawson, 2009).

> *Do I ever sit [in the plaza]? Mmm, no, because it's near home, so I just feel like I'd much rather go home. – Kavya, River, renter 25-34*

Access control was also regularly mentioned by participants as a restriction on knowing one's neighbours. Scanlon et al. (2018, p. 47) found a similar effect in London, noting "a trade-off between high levels of security and a sense of community" due to reduced chances of incidental encounters. It also necessitated more formal dealings over nuisance issues (as McGuirk and Dowling (2011) and (Power, 2015) warn); residents cannot simply knock on the door of an apartment elsewhere in the complex and ask neighbours to keep the noise down.

> *Everything becomes really conflict based, because you actually have to contact the building manager, who then raises a tip whenever he can. Then it becomes a much bigger thing than just saying, "Hey guys, could you just keep it down?" – Sara, Bay Court, owner 25-34*

However, all those who spoke about this preferred this higher level of security, feeling it outweighed the negatives.

Knowledge, Visibility & Salience

Closely related to the principle of convenience is knowing that spaces exist, that you have access to them, and how to get there. More visible spaces are also more salient, more often reminding people to use them, as Reid (2015) noted in relation to a building with facilities visible from the entrance. Kavya, who had never found the pool at River, knew of a similar building.

> *[In a friend's building] when you walk towards the lift you can actually see the gym and the pool area, […] so you know where it is and you're bound to go there. – Kavya, River, renter 25-34*

Additionally, if you can see activity in the space, you may gauge whether you want to enter the space as well as recognise acquaintances.

Figure 11.2: Front balconies at LiSA, Seestadt, Vienna (own photo)

Many participants spoke of the difficulty of knowing who else lived on their floor, as well as the rarity of running into another person. The lack of soft edges in apartment corridors contributes to this. Traditional soft edges (Gehl, 1986) at once provide a semi-private space in which a resident can linger (increasing visibility and encounters), and display that resident's identity (as in Figure 11.2). Displays of identity provide a catalyst for interaction, and may imply commonalities between residents.

Pleasantness: Comfort & Aesthetics

A shared space, whether in the complex or the local area, should be pleasant and provide sufficient comfort to its users (Gehl, 2010; Mehta, 2014), especially when compared to the comfort of a user's own apartment. Several themes within this principle arose across the cases: sufficient seating, feeling socially comfortable, safety and security (especially with regards to children), climate protection and amenity, and enjoyment of an aesthetically-pleasing space.

Seating

A greater quantity of comfortable seating was desired in several spaces, such as River's roof facilities, Shore's roof terrace and Bay Court's courtyard (where a grassed area was seen as preferable to the existing benches).

Calls for sufficient seating have been common in public space research for several decades (Whyte, 1980; Cooper Marcus & Francis, 1998; Gehl, 2010), but this research shows there are additional considerations in apartment complex shared spaces. Hard seats such as benches work if people are waiting for someone, supervising children or attending an event, but do not invite people to seek out the space, or pause to sit when they are so close to home. Insufficient seating means multiple groups cannot comfortably use the space or be certain of finding a spot to sit.

Finally, moveable seating means seating configurations can be changed to best suit the size of a group, as well as best enjoy sun or shade (Whyte, 1980; Cooper Marcus & Francis, 1998).

Privacy and Feeling Socially Comfortable

Lang and Marshall (2016, p. 73) note that "potential visitors to a square scan the environment to see whether their desire for privacy, as individuals or as a group, […] can be met." The same can be said of spaces within apartment complexes and their local areas, and participants were aware of maintaining their privacy (and that of others) through physical or social distance/civil inattention. This also related to a concern for imposition on others, for instance a reluctance to use Bay Court's courtyard due to potential noise disturbance, as well as the potential for others to impose in terms of time, energy, overlooking and noise. These concerns are closely tied to the built environment: Power (2015) notes that building materiality affects perceptions of 'good' or 'bad' neighbours through how noise is carried.

Despite its sometimes-negative reputation (e.g. Simmel (1903 [2002]), Wirth (1938), and several research participants), civil inattention is a key method of regulating privacy, especially in crowded situations or at high density (Hirschauer, 2005; Wilson, 2011; Wesselmann, Cardoso, Slater, & Williams, 2012). It was prevalent across the case complexes, often supported through technology such as earbuds and smartphones, and allowed people to manage their level of interaction with others, enabling control and comfort (Bull, 2005). While civil inattention does not directly support the development of CSTs, it allows people to feel more comfortable when using spaces with others, and affords people-watching without requiring engagement. Recognition can occur, and people may choose to interact if they desire, potentially reducing need to withdraw (Williams, 2005).

Spaces can make civil inattention more difficult by requiring strangers to directly confront each other, as in a lift or Bay Court's small study/library spaces, where the lift doors could open at any time to reveal a stranger (especially if one did not live on the floor). Lifts are special cases, where users expect to encounter others and standing patterns of behaviour are relatively clear (civil inattention or brief acknowledgement), however the uncertainty of confrontation in other spaces can discourage use. Spaces should therefore support civil inattention through affording indirect, rather than direct, confrontation, where civil inattention or a brief acknowledgement is possible. This will be further discussed in 13.4.2.

Safety and Security

Perceived safety and security are closely related to feeling socially comfortable, with resident heterogeneity and stereotypes (rightly or wrongly) playing some part in this. Mozingo (1989, p.

47) points out that this is especially important to women, and linked to "the degree of spatial control they feel: the maintenance of territoriality, lack of crowding, and degree of group control". In an example of this, Laura was put off using River's gym due to the awkwardness she felt when using it with one or two unknown male residents. While it was not mentioned by participants in this research, it is also worth considering how gender affects one's acceptance in particular places, and confidence to interact with others, especially children. Cattell et al. (2008) mention one man who felt unwelcome in parks due to the possibility of others feeling "menaced". Gender may also influence built form and management; Kern (2010) notes the influence of assumptions about women's fears on the securitisation of condominiums. Further investigation of the specific influence of gender on CST development in apartment complexes would be useful.

Feeling safe is especially important in one's own neighbourhood, and a real or perceived lack of safety can have a strong impact on mental health and well-being (Guite, Clark, & Ackrill, 2006; Thompson & Kent, 2014). Shore and the two Bay cases benefited from their position in relatively safe areas, however River's local area is less so and participants avoided some local spaces at night for safety reasons, including the public plaza and the well-maintained local park.

Parents of young children were particularly aware of safety in a space, and preferred spaces that had some enclosure. River's pool building corridors and Bay Court's courtyard were both discussed as potential enclosed play spaces, though in the case of the courtyard the lack of open space reduced its attraction. Larger parks with good separation from traffic were also valued.

Climate Protection and Amenity

Lack of climate protection was a key reason participants did not use Shore's roof terrace, and several exposed parks at the Bay cases and River's plaza.

> *In summertime it's blistering hot [in the plaza], so you need more shade. – Teresa, River, owner 25-34*

This concurs with many studies of behaviour in public spaces (Whyte, 1980; Marcus & Francis, 1997; Gehl, 2010; Sendra, 2013; Mehta, 2014), with Gehl (2001) noting that optional and social activities are far less likely to occur where people are insufficiently protected from weather, be it rain, wind or sun. Lack of ventilation or air conditioning was also a concern for interior spaces, including Bay Court's study and library spaces and River's corridors, while a lack of sun made Shore's courtyard unattractive to many residents. Clearly, people are unlikely to venture into a space or linger there if they can find a more pleasant climate elsewhere (see also Fard, Sharif, & Yunos, 2015). Conversely, a pleasant climate such as sun in winter or a breeze in summer could draw people into a space, especially if not adequately available in a resident's apartment (cf. Nikolopoulou, Baker, & Steemers, 2001).

Aesthetic Qualities

Finally, participants appreciated and sought out attractive aesthetic qualities – this was, for instance, the sole reason participants used Shore's roof terrace, and many spoke of their enjoyment of green spaces and the adaptively-reused heritage commercial centre near the Bay cases. Cattell et al. (2008, p. 551) found a similar effect, though caution that aesthetic perceptions differ and that vitality and busy-ness can reduce their importance. Nasar (1998) notes that people tend to find naturalness, good upkeep, openness, historical significance and order attractive. This may explain the liking for the heritage commercial centre (which has all of these).

Notably, spaces such as Bay Court's courtyard may be highly valued for their beauty, relating to passive viewing rather than lingering in the space. While this does not much contribute to CST development, it contributes to a positive experience in apartment complexes, and shared feelings of ownership.

> *Maybe the fact that the courtyard is quiet and you can't really do much is a good thing, because we all can share the greenery and the serenity. – Ava, Bay Court, renter 18-24*

11.3.4. Catalysts

As covered in 11.3.1, awareness of common residence through use of a space can catalyse interaction. Purposes can also provide catalysts, through activities that invite comment and an implication of common interests. Incidents and problems were a common catalyst, though more related to management and therefore detailed in the following section. There are other ways the built environment can catalyse interaction, however, best embodied in Whyte's (1980) concept of triangulation. Bikes, shopping or parcels were sources of triangulation in this research, and the natural environment (especially the weather) was a common topic of conversation. These afford interaction while reducing imposition on others' privacy.

> *It was finding that thing that you could talk about. So it was the dogs, it was the bike, it was something between you that you can talk at as opposed to having this conversation directly. "Oh, how are you? What's your name? What do you do?" – April, Bay Court, renter 25-34*

A need to open doors or hold lifts could catalyse small civilities (cf. Laurier & Philo, 2006), and thus the design of doors or the provision of moveable chairs (see Whyte, 1980) can affect CST development. The built environment (in conjunction with enabling rules) also indirectly affected triangulation by supporting the presence of pets, children, bikes, car washing, and good views. In addition, accessible and visible management offices supported encounters with management staff. Without support for these catalysts, opportunities for interaction are greatly diminished.

11.4. MANAGEMENT ACTANTS

This section considers actants relating to the interplay of affects between humans and the built/natural environment. It covers direct or indirect human impacts (for example maintaining facilities or developing codes of conduct respectively) as well as interactions between humans and the environment, for example when building problems occur. These include knowledge, incidents and problems, over-regulation and activation of spaces (as catalysts and influencing use of space). Costs and priorities have an overarching influence on many of these actants, and will be discussed in the final two sections.

As discussed in section 4.2.1, the scope of this research is restricted to post-occupancy, however there are many actants that affect built environment outcomes before a complex is occupied, such as design guidance policies (NSW Department of Planning and Environment, 2015), planning approval processes, architects' ideas and developer goals. These are mentioned where relevant and it should be remembered that they have ongoing effects, however the focus here is on affects once these pre-occupancy actants have produced the environment.

11.4.1. Knowledge

As covered in the previous section, the built environment can support knowledge and salience of spaces, but management also has a part to play in knowledge dissemination. A number of participants felt they did not know what local facilities or events/activities were on offer, and wanted more reliable communication of these. Sheng (male renter 25-34) described social media-based organisation of apartment complex activities in China, some of which appeared to be resident-led.

Awareness of the importance of local social connection is also likely to have an impact, affecting motivations in decision-making (discussed in section 11.4.6). Knowing how best to support local social connection will also contribute, following theory on self-efficacy (Bandura, 1977).

11.4.2. Incidents and Problems

Some of the most common catalysts for interaction were incidents and problems such as fire alarms, break-ins and defects rectification. These relate to the original design and construction of the complex, as well as on-going maintenance and human actions such as burning food. All provide a common annoyance and topics of conversation, and in many cases prompt people to pass along information to improve the safety or integrity of the complex.

> *There's a lot of things we can talk about and then […] tell our strata manager, and see whether they can do better. [Things] changed and improved. – Hua, River, female owner 45-54*

A smoothly-running apartment complex and associated self-sufficiency, on the other hand, decreased opportunities and motivation to develop CSTs. As discussed in section 11.3.2, help in case of emergency was a prominent motivation to develop CSTs, and for some it was the only motivation. Problems and incidents provide these emergencies, and are therefore both motivations and catalysts for ties. For those who see CSTs more in the abstract, problems and incidents may make them reflect on the need for ties.

A question arises here: if emergency events can themselves catalyse ties, do ties need to be developed *before* these events? Survey participants generally felt their neighbours would help in emergencies, even when they knew few people, and literature on 'swift trust' demonstrates that effective emergency networks can quickly form when needed (Meyerson, Weick, & Kramer, 1996; Majchrzak, Jarvenpaa, & Hollingshead, 2007). These emergency networks are not helpful for immediate basic information, however, such as whether everyone who lives on a floor has made it out in a fire alarm, and, as discussed in Chapter 3, social connection can greatly reduce mortality in disasters (Klinenberg, 1999; Vandentorren et al., 2006; Bouchama et al., 2007).

While incidents and problems are very effective interaction catalysts, it is of course preferable that they do not happen. At River, dealing with defects and security was a major drain on the manager's time and energy, preventing her from organising events and doing regular 'rounds' – reducing the number of residents she could develop relationships with.

Finally, problems and uncertainty around maintenance and cleaning reduced residents' confidence and comfort in using spaces, especially River's gym, sauna and pool and Shore's rooftop. Similarly, Williams (2005) found that poor cleaning and maintenance of shared spaces reduced resident use and interaction. Several participants in the present research spoke about the behaviour-modelling provided by well-kept spaces, the more positive side to Wilson and Kelling's (1982) broken windows theory (Aiyer, Zimmerman, Morrel-Samuels, & Reischl, 2015). Tara felt that good maintenance encouraged people to use spaces.

> *If you just throw it in there because you have to have it, or because it's expected, and then you don't do anything about the upkeep, you don't take pride in it, then people aren't gonna give a shit about it either. – Tara, Bay Park, renter 25-34*

11.4.3. Over-Regulation and Excessive Coding

On the other hand, excessive attention to maintenance and other rules could restrict use of spaces (cf. Lofland, 1998; Lette, 2011).

> *There seems to be gardeners there six days a week, […] it's just ridiculous. But it sort of gives that feeling that it's a 'look and don't touch' [space]. – Scott, Bay Court, renter 45-54*

Shore's rooftop in particular was a victim of this excessive coding. Due to previous problems, management had banned glass and alcohol, greatly reducing the range of activities available.

> *By saying it's a non-alcoholic space, you can't take drinks up there, it makes it seem very rigid and not a relaxed environment. People aren't going to go up there to socialise. – Sean, Shore, renter 25-34*

In Hadi and colleagues' (2017) study of sky gardens in Singapore, residents highly resented the management restrictions imposed, and Scanlon et al. (2018) identify restrictions on use as one reason residents did not use roof terraces in London. Spaces such as roof terraces are often highly-coded, heavily restricting affordances and reducing enjoyment of these spaces and hence motivation to use them.

Some problems do require attention from building managers, such as littering, misuse of parking and noise. Putting aside the question of the necessity of particular by-laws and rules, communicating these rules to residents was often difficult. Several owner participants confessed they had not read the by-laws, while several tenant participants had never seen them. Investigation into creative ways of encouraging positive norms would be useful and CSTs might help where documentation does not (as found by Festinger et al. (1950), though participants felt this was optimistic when I suggested it).

> *The trouble is, I think, the tenants couldn't give a bugger. Oh, they don't even read it. […] And the owners who live in Timbuktu or wherever it might be, they couldn't give a bugger either. […] The tenants that move in aren't properly advised. There's not enough notices behind the door. – John, Bay Court, owner 65-74*

Another drawback with an overly-bureaucratic, legalistic approach to management is that it may dissuade attempts by community-minded individuals to develop groups and activities in the complex and the local area. The attempt to start a community garden near the Bay cases is a good example of this, with the negotiations still ongoing at time of writing. Strong initiative, time and dogged determination is needed to succeed, all of which Evelyn (Bay Park, owner 65-74) has and was willing to give – but many people would admit defeat. This suggests that local governments and building management should be aware of (and encourage) grass-roots attempts to develop community gardens and other activities, removing barriers to use of spaces and suggesting possibilities to support individual or small group initiatives. In every complex and local area, there are likely to be people with at least some of Evelyn's initiative, and through their efforts they can greatly increase opportunities for encounters and interaction.

11.4.4. Activation of spaces

Space activation can be led by professional management at the complex or local government level, by residents themselves or by commercial businesses. Events were resident and management participants' most commonly-suggested method of increasing CSTs, and indeed may be an effective way to get to know one's neighbours, providing a strong interaction catalyst (Williams, 2005; Cho & Lee, 2011). Events furnish spaces with clearer, more interaction-oriented standing patterns of behaviour, however they may attract only those with relatively strong motivation to develop ties, as well as those who happen to be free at the time of the event. Some participants also felt there was 'no point' to traditional barbecue or drinks-and-nibbles style events, and that their rarity reduced their usefulness for tie development.

> *You don't want to just meet somebody just for Christmas, say hello, I'll meet you next year. […] No, I can't be bothered. – Rehan, Shore, male owner 75+*

Several participants had developed CSTs at local gym classes, dance classes and library groups. These activities occur more regularly, have a more specific purpose that can attract people and catalyse interaction, and attendees are likely to meet each other again. Staff of local small businesses also provide valuable activation (cf. Jacobs, 1961) – with the additional advantage that residents are likely to regularly use these spaces.

11.4.5. Costs

An overarching moderator for many of these actants is their cost. It takes money to provide shared spaces, a cost which may reduce a developer's profits, and be difficult for local governments to negotiate (Local Government interviews). It can reduce local governments' spending on other items and/or be passed onto owners when they buy, as well as renters (which can contribute to high residential turnover). Local businesses that act as low-cost third places may not be commercially viable (Thompson, 2018), while commercial units in new complexes are often difficult to fill (Foord, 2010). The shared spaces within the complex then require expenditure to maintain at a level attractive enough to be used (such as for Shore's rooftop and River's pool, spa and barbecue), which is paid for by the owners through their strata levies. Several Bay Park residents preferred having few 'extra' shared spaces because it reduced levies. This concurs with a report by Planning Victoria, which noted some owners were "concerned about maintenance costs, particularly for swimming pools" (DELWP Victoria, 2015, p. 46).

The activation described in the previous subsection also comes at a cost – to pay for managers' time in organising (and potentially an extra part-time social manager if managers are too busy with their many other duties), to pay for insurances, and to pay for food, gardening supplies or other necessaries. Any resident-led activation is invaluable and should be encouraged and aided,

though costs are still incurred for materials and insurances (and much of the volunteer burden may fall to older residents (Easthope, 2015)). Developers and owners may not be willing to cover these costs, especially if the benefits of increased social connection are unclear to them (further discussed in section 12.6).

On the other hand, a focus on aesthetics (often to maintain the complex's attractiveness to investors, reflecting neo-liberal discourses about value (Sager, 2011)) can result in 'look, don't touch' spaces (Lofland, 1998), with this form of over-regulation reducing lingering and CST development. Similarly, producing high-end activation (as was the case in the Bay cases' commercial centre) might be profitable and attract people from all over the city, but in accordance with Oldenburg's (1999) ideas on third places, it is less likely to promote local community and CSTs. This is due to both the non-localness of attendees and financial barriers that mean only a subset of local residents consider it an attractive way to spend their money. This has implications for the types of commercial and public spaces provided.

> *You need something that's non-commercial. To be able to get people to feel they can go there and relax and not have to worry about incurring a cost. – John, owner 65-74*

11.4.6. Priorities

This leads into the question of priorities and differing interests at many stages of decision-making. These include initial development of state government design guidance and its application by designers, negotiation between government, developers and existing local residents (Davison & Legacy, 2014), as well as marketing to owners. By-laws and rules affect residents' daily lives, and are influenced by state government (legislation), developers (upon scheme registration), strata management, strata committee members and annual general meeting voters, and applied by day-to-day building management. The need to agree on priorities and the governance processes to produce agreement may slow or prevent change (Altmann, 2015). Furthermore, the influence of international design trends, designer creativity, the identification of market niches,[41] the influence of academic research,[42] and volunteers and DIY urbanists (Talen, 2015; Dovey, 2016) at the scale of the local area and apartment complex are also important.

As actualised through strata by-laws,[43] strata committee members and building managers, priorities identified in these case complexes included ensuring the structural integrity and safety

[41] For example Nightingale Housing's cohousing niche in Australia (Nightingale Housing, 2018)

[42] Moderated by the effectiveness of dissemination (Taylor & Hurley, 2016)

[43] These are not straightforward to amend, requiring a motion by 75% of voting owners at a general meeting ("*Strata Schemes Management Act 2015* (NSW),").

of the building, managing resident disagreements and maintaining a specific aesthetic, often related to perceptions of potential buyers and therefore property value. Notably, between 60% and 70% of units across the case complexes were investor-owned and investors are likely to prioritise property value over day-to-day residential quality of life (Randolph, 2006). Many participants were aware of the value of social connection, but this was either swallowed up by the time spent on other more pressing priorities, or participants felt that others were in a better position to prioritise the social aspects of the complex.

> *It's not really my role to make sure that they get on even though it makes it easier for myself. – Anonymous Manager*[44]

If social concerns were to be prioritised, the time and money spent on them would need to be justified to owners and strata committee members. Currently, the value of outcomes may be unclear. Knowledge about how best to run events and activities may help here, as well as awareness of short and long-term benefits (further discussed in sections 12.1 and 12.6).

> *We had thought of having a barbecue or something, but then we were told we'd run into all sorts of insurance problems, and it's just too hard […] and would they bother coming? – Margaret, owner 75+*

Several local governments in Australia have strong social mandates, prioritising connections between residents and social cohesion (e.g. City of Melbourne, 2016; City of Sydney, 2016a). They may be better-placed to provide or facilitate local events and activities, especially given the professional experience of their staff. Local government priorities may also influence built environment quality through design guidelines and acceptance or refusal of development applications.

11.5. CONCLUSION

This chapter has presented a model of an apartment complex socio-spatial assemblage in relation to emergent CSTs, addressing RQ1: *how do human and built/natural environment factors interact to produce CSTs.* It contributes to knowledge on the range of actants influencing relationship development in large apartment complexes and their local areas, extending existing literature on relationship development in this context. To aid in comprehension, the actants were split into three groups (human, environment and management), however it is important to note that these actants interrelate and interact to produce particular outcomes (as per assemblage thinking (Deleuze & Guattari, 1980/1987; Dovey, 2010; DeLanda, 2016a)).

The range of human actants affects the development and maintenance of CSTs through increasing

[44] Manager of case complex; requested anonymity for this comment.

confidence and openness to interaction, increasing time spent locally, and providing interaction catalysts. While personality was most often mentioned, language, experience and cultural knowledge can affect confidence and openness to interaction, while people at particular stages in their lives and those with more time are more likely to be open to local connection. People have more motivation to connect with those who they perceive they have something in common with, and also pursue relationships for favours, feelings of safety, trust, well-being, and a sense of home, community and belonging (though these motivations may not be particularly salient).

In relation to the environment, possibilities for CST development are greatest in destination spaces perceived as parochial realm: spaces where people linger and feel they have commonalities with other users. Circulation spaces can support the maintenance of CSTs through regular encounters, with the assistance of catalysts and residents' confidence and openness to interaction. Residents may prefer to spend their time in private apartments and spaces outside the area than destination spaces, however. Destination spaces should therefore offer clear purposes for using them (which may double as interaction catalysts), be easily accessible and easy to find, visible, comfortable and/or aesthetically pleasing. The more of these principles a destination space fulfils, and the more adaptable and supportive it is to residents' purposes, the more likely residents will linger in it and repeatedly encounter one another.

Management actants can catalyse interaction through specific incidents, ongoing problems and activation, while under-maintenance or over-regulation can reduce residents' desire to use spaces, reducing encounters. Effective knowledge dissemination detailing available spaces and current events can open up possibilities for encounter and CST development, while competing priorities and limited resources can reduce possibilities. The next chapter considers the wider implications of the research for social experience in apartments and the role of the built environment. It also discusses how living in diverse high density areas with high rates of residential mobility, where profit is prioritised, might influence social sustainability in the short and long term.

12. DISCUSSION

The previous chapter synthesised the research findings in relation to actants contributing to the production of casual social ties, focusing particularly on the third research question (how factors interact to produce CSTs). The purpose of this chapter is to reflect more broadly on the findings as they relate to six framing concepts: sociability, materiality, density, diversity, mobility and social/financial viability. In this, it develops and critiques wider theoretical and societal issues.

Sociability (12.1) discusses the social experience perceived and desired in large apartment complexes, relating to RQ1: *How do CSTs influence the experiences of apartment residents?* and considering findings in relation to the literature reviewed in Chapter 2. Materiality (12.2) discusses the role of the built environment in contributing to this experience through CST development, relating to RQ2: *Where are CSTs developed and maintained?* and RQ3: *How do human and built environment factors interact to produce CSTs?* and considering arguments on environmental determinism discussed in sections 2.1, 3.2 and 4.2 as well as the conceptual framework. Sections 12.3 and 12.4 consider questions of context: how increasing density may influence social experience, and how a diversity of residents in apartment complexes may support cosmopolitanism as well as influence CST development. Sections 12.5 and 12.6 consider mobility and social/financial viability as actants that appear to strongly influence the development of CSTs in the Sydney context, and reflect on these in relation to relevant literature.

12.1. SOCIABILITY

Apartment residents in this research generally thought it was desirable to have a few low-level CSTs with other residents in their complex (particularly on their floor), a few CSTs with local staff (building management or small businesses) and a few stronger CSTs in the complex or local area based around common interests. Many also valued a degree of anonymity, and found it through civil inattention or carefully-superficial interactions. While a 'community liberated' approach (Wellman, 1979) was often apparent in regards to strong ties, in most cases this did not preclude some desire for local CSTs. However, many participants did not desire local CSTs enough to make the effort to develop them, and desires for control over time and privacy took precedence.

This last point concurs with findings from several studies (Forrest et al., 2002; Buys et al., 2007; Maller & Nicholls, 2014). For example, in London Scanlon et al. (2018, p. 28) note that "respondents from a range of schemes [complexes] said it mattered little to them whether or not there was a sense of community within their development, as they were members of other, non-place-based communities across London". However, the results of the present research suggest

that these studies may not be capturing the full picture of social connection in large apartment complexes.

Interviewees often felt they "hardly kn[e]w anyone" (Rose, River, owner 25-34), but then proceeded to list a number of chatting ties with, for example, shop staff and gym users, or acknowledgement ties with neighbours. CSTs, especially acknowledgement ties, are therefore not equated with 'knowing people' in many cases. This may be because they do not match with a *gemeinschaft* ideal of community or the relationships people feel they *should* have with their neighbours or other locals, and are therefore not seen as 'worthwhile' interaction.

As demonstrated in Chapters 6-11, these CSTs do have value and are worthwhile, even if people might struggle to put this value into words. They supported feelings of safety, trust, home and belonging, opened avenues for favours, and increased well-being through enjoyable interaction in the local area. The unexamined nature of CSTs mirrors the situation in research; Granovetter (1983) and Wellman (1996) note that CSTs have often been overlooked in research studies in favour of more traditional *gemeinschaft* community. The image of village-based community is pervasive and often seen as the pinnacle of community life (Gans, 1962; Putnam, 1995), or else critiqued for its nostalgia (Amin & Thrift, 2002; Sandercock, 2003; Arneil, 2006) or resisted due to its lack of privacy and anonymity. However, these debates have left little room for the idea of looser connections and their value.

The strong-community ideal is often reflected in the literature on social connection in apartment complexes and at high residential densities (e.g. Huang, 2006; Zhang & Lawson, 2009; Cho & Lee, 2011; Farida, 2013; Fard et al., 2015; Bee & Im, 2016; Muhuri & Basu, 2018). Interviewees in my research often admitted that while they liked this ideal of community in the abstract, it was not something they desired or saw as practical in their current situation. They tended to prefer the types of CSTs described by Jacobs (1961), Henning and Lieberg (1996), Abu-Ghazzeh (1999) and Power (2015, p. 247), "balancing community togetherness and support with an 'appropriate' social distance". Despite this, some expressed feelings of guilt that they did not make enough effort to develop *gemeinschaft* relations, and held nostalgia for previous situations in which they had experienced something approaching *gemeinschaft* in their local areas.[45]

> *People live so close to you. It might be just a general reluctance to […] have people even closer to you again. […] There's a tension there sort of with my other, 'oh, but community, and friends!'. It's a hard balance. – April, Bay Court, renter 25-34*

[45] These examples were largely from rural areas, childhood or particular situations of high homogeneity, for example George's parents moving into a new apartment complex in Soviet Eastern Europe with a host of their peers, with the expectation they would live there for decades.

Clearly, there is a mismatch between what is practical and desirable in the close quarters of an apartment complex and a commonly-held ideal of community, especially when residents already possess widely-dispersed networks of strong ties. The fact that this ideal is, in most cases, unwanted, may demotivate residents to connect with their neighbours, when they are (sometimes justifiably) concerned with the spectre of the over-friendly or intrusive neighbour and guarding their own time, energy and privacy.

This raises the question of what level of social connection might be 'socially sustainable' in large apartment complexes and their surroundings. As noted in Chapter 1, this research sought to better understand comfortable, sustainable social connection in this context, looking specifically at individual well-being (based on both the inherent benefits of social interaction and the associated possibility of aid) and social cohesion. Having strong ties or chatting ties with the majority of complex residents appears to be unsustainable for most people, due to the large outlay of time and energy and difficulties with privacy. Maintaining a few of these ties, in addition to a larger number of acknowledgement ties and respectful distance, appears to be easier and more comfortable to sustain over the long-term, while providing some measure of social cohesion and interaction/aid – though not as much as might be envisioned in *gemeinschaft* ideals. This balances long-term viability with societal health and functioning, following Dempsey and colleagues' (2011) definition of sustainability of community.

A specific difficulty with the current reliance on *gemeinschaft* ideals and the forgotten or overlooked nature of CSTs is that developers and policy strategists may assume that, if 'community' is not wanted or is a low priority (Scanlon et al., 2018), social relations are not worth considering. Current focuses on community and communal spaces (Maller & Nicholls, 2014; City of Sydney, 2016a; Parker, 2017) may wane if outcomes are not those envisaged. As Amin and Thrift (2002, p. 45) argue, we need to consider "the growth of *new forms of human sociality*, […] which extend social relations in new ways". A simple *gesellschaft/gemeinschaft* distinction is insufficient; connection "need not be construed in starkly binary terms as a choice between the promise of fully reciprocal community and sturdily autonomous privacy" (Painter, 2012, p. 525).

My concept of casual social ties draws attention to and valorises some of these often-overlooked weak relationships, however wider changes in discourses around urban community are needed to support comfortable, sustainable connection in large apartment complexes: a deterritorialisation or expansion of the ideal to include more forms of relationship, being aware of different preferences around cordiality, civil inattention and developing ties (as reviewed in Table 11.1). The image of sociability promoted by top-down actors (government, building management, not-for-profits, developers) could be shifted to include not just traditional *gemeinschaft* ideas of community, but more specific examples of loose connections and their value. These include

recognising people on your floor in case of emergencies, swapping information with others in your complex and knowing local shop staff. The importance of polite distance in an apartment complex should also be acknowledged. As Steven (Shore, extravert renter 35-44) noted, "there's a certain level of privacy, […] of anonymity living in a building like this. […] I kind of don't mind that." This shift would raise residents' awareness of loose CSTs, and underline privacy as well as the low time and effort needed to develop ties – lessening residents' concerns over these factors and increasing openness to interaction (see section 11.2.2). Secondly, 'opportunity structures' (Baum & Palmer, 2002) could be put in place to reduce barriers to CSTs, capturing those residents who are open to interaction but unlikely to put much effort into pursuing it, as well as more socially-active residents. Opportunity structures include design and management factors to increase encounters and provide catalysts such as events and activities (see sections 11.3 and 11.4). These implications for policy and practice are further discussed in the conclusion chapter (section 13.4).

12.2. MATERIALITY

Many thinkers and researchers over the past century have spoken to the idea that we are losing community, social capital or social connection in part due to the nature of the built environment (Simmel, 1903 [2002]; Oldenburg, 1999; Duany et al., 2000; Gifford, 2007). As the previous chapter demonstrates, there are many actants involved in the development and maintenance of CSTs, and only a minority are built environment actants under the control of designers, planners and later managers. However, as is the nature of assemblages, these actants affect other actants and can be leveraged to increase and decrease the social possibilities of the assemblage (Anderson et al., 2012b; DeLanda, 2016a; Buchanan, 2017), and reify the emergent properties of CSTs and a cordial atmosphere.

This research has shown that the environment mediates the amount of time residents spend in shared spaces where they can encounter other residents, and the visibility of other residents' interests (and so potential motivations to connect). It also restricts access to non-residents, or best affords use by particular groups of people with common interests, contributing to a perceived parochial realm in these spaces – in concert with the size of the complex and the number of residents using particular spaces. The parochial realm implies common interests and a common future and therefore a basis for tie development (Völker & Flap, 2001). In partnership with the fast pace of modern urban life and the need to have a justifiable purpose for any activity, spaces associated with transit (circulation spaces) restrict standing patterns of behaviour to civil inattention or brief conversation. Some spaces less-associated with transit are overlooked by residents due to difficulty of access and lack of facilities and features to suit their purposes.

Visibility of these spaces is likely to increase salience and use (cf. Reid, 2015), while ensuring spaces are flexible and adaptable to many purposes would afford more frequent use by a greater number of residents. The "happy […] leisure time" activities (James, Bay Park, owner 75+) that contribute to a friendly atmosphere, comfort and belonging need spaces in which to occur, such as local businesses, green spaces and community facilities such as libraries.

This is not to say that without a supportive built and natural environment CSTs cannot and do not emerge: the same outcomes can derive from different means and different outcomes can derive from the same means (DeLanda, 2016a). CSTs can develop through adversity (defects rectification, burglary), especially extroverted and community-minded residents and staff, children and dogs. However, without consideration of materiality, tie development becomes harder and opportunities are much reduced. If a person has no children, no pets, and lives in a large, well-built complex with few spaces to comfortably linger, if this complex is in a busy local area with spaces for lingering available only by payment, they will likely find it very difficult to connect to other residents and locals.

> *For those without young kids or without a dog, where have they got to go to get a conversation going? – Scott, Bay Court, renter 45-54*

On the other hand, simply providing a supportive environment without attending to the management of that environment (whether it be professional or resident management) is unlikely to produce many CSTs. This research has underlined the importance of considering how a range of actants produce particular emergent qualities through their interactions – which cannot be fully understood when these actants are considered alone, as in a physically determinist perspective (Talen, 1999) or a phenomenological approach (Di Masso & Dixon, 2015). For example, providing seating will not produce social interaction in isolation and participants' reports of CST development often privilege human factors such as personality (cf. Dovey & Wood, 2015). A CST-supporting socio-spatial assemblage emerges from the interplay of human (individual and management) and built/natural environment actants, and an integrated approach is necessary to support CST development and maintenance. Causality must also be viewed as nonlinear and catalytic (Anderson et al., 2012b), with outcomes made more or less likely by the interaction of factors, rather than determined. However supportive the social environment, management and built environment, there will always be people who do not develop CSTs – the challenge is to work towards a situation where this is through choice rather than lack of opportunity.

A limitation of these findings is the rarity of evidence on the effectiveness of apartment complex destination spaces in developing and maintaining CSTs. Theoretically, the more time residents spend outside their unit (or the more time they spend in publicly-visible parts of their unit), the more opportunities they have to develop CSTs (Gehl, 1986; Zhang & Lawson, 2009; Reid, 2015).

Destination spaces within the complex have the advantage of affording lingering (and therefore greater opportunities to encounter another resident, and greater openness to interaction due to lack of time pressure), as well as implying users are residents (therefore having something in common and a shared future). However, in many cases they appear to be rarely used, or perceived as circulation spaces rather than destination spaces. I have much evidence on why participants *did not* use spaces, but fixing these problems does not mean people will use them, and that they will consequently develop CSTs. I did, however, uncover a small number of examples of participants developing CSTs in destination spaces (specifically Shore's roof terrace and River's pool and gym). This, I suggest, indicates that destination spaces do have 'latent capacities' for use and affording social connection that need discovering and drawing out through further research.

12.3. Density

I turn now to context, specifically the impact of dwelling and population density on social experience. Large apartment complexes are the future of many parts of our cities, and already house a great number of people (OECD, 2012; Australian Bureau of Statistics, 2016). As discussed in sections 2.1 and 3.2, there have been mixed findings on the social sustainability of large apartment complexes, suggesting that the impact of density (whether net or gross, dwelling or population density) is complex and influenced by many other variables. However, the research findings suggest two clear associations: between civil inattention and number of people using a space, and between opportunities for interaction and the types of affordances provided by the built form.

Living at density often appears to necessitate civil inattention, as Simmel (1903 [2002]) noted early last century. In a study of high rise living in Hong Kong, Forrest et al. (2002, p. 230) find that most residents tended to keep to their own affairs, and that this "sense of distance was seen as innate either to Chinese culture or to Hong Kong as a large and busy metropolis." Newman (1976) argued that high numbers of people sharing the same space leads to anonymity and makes neighbour recognition more difficult, while in my research, Jason (Shore) felt that Hong Kong's culture of civil inattention was due to the size of the buildings. Civil inattention restricts interaction and therefore opportunities for CST development. My findings indicate that the key to reducing the need for civil inattention is providing spaces more constitutive of the parochial realm, with fewer people likely to access them and a greater chance that one will repeatedly encounter the same users.[46]

There is a danger, however, that restricting access to spaces can also reduce the diversity, novelty

[46] This is similar to CPTED guidance (Cozens et al., 2005), see section 3.2.

and unexpectedness of experience. Access restricted by security rather than choice creates gated communities (Rosen & Walks, 2013). By encouraging people to spend more time within controlled, access-restricted environments, we might work against cosmopolitanism – ironically in a drive to better develop ties between heterogeneous neighbours (the role of diversity is further discussed in the following section). Lofland (1998) suggests that there may be a causal circle between privatism and fear of the public realm: fear leads to more time spent in private space, with the consequence of further fear of the unknown public realm. She is critical of neutralised, overly-sanitised spaces or 'counter-locales' (Relph, 1976), arguing that they "prevent the development of a robust psychological immunity to the rough-and-tumble reality of locales and, thus, increase in Americans a revulsion for such a reality should they ever come across it" (Lofland, 1998, p. 221). Similarly Brill (2001), in considering New Urbanist developments, argues that their public spaces are designed for life with people one knows, if only loosely, rather than public life with strangers, and notes a general ambivalence (if not antipathy) towards public life in the United States. Care must therefore be taken to balance CSTs within the apartment complex with integration in the local area, a deficiency identified by Ognibene (2016) in her study of community development in a gentrifying neighbourhood in Washington D.C. In Ognibene's cases, apartment complex management focused on developing relationships between apartment residents (providing onsite gyms, workspaces, and a resident dog tenants could take for walks), but the complexes remained disconnected from the surrounding (poorer) neighbourhood.

Secondly, the affordances of densely-built environments play a role in mediating social relations. It is useful to compare these to the affordances of a lower density environment. In Burrell's (2016, p. 1613) examination of neighbourliness in a 'high-churn' terraced-house neighbourhood, she identifies "affordances of the built and natural environment – […] facing terraced windows, roads to park on and walk down, bins in side passages" as key to maintaining neighbourliness. These affordances support continuing neighbouring practices such as bringing in the bin for a neighbour, even when the actors change. In high-churn, large apartment complexes of the type studied in this research, these affordances of habit and practice are qualitatively different. Residents may meet in the lift or the lobby and exchange small civilities such as opening doors or holding lifts, but relationships may not develop beyond a generalised cordiality to all residents due to the brevity of interactions and their everchanging participants. Even if apartment windows face each other, it may be difficult to determine if their occupants are the same people leaving the building entrance later that day or walking along the street, whereas in terraced houses this association is made more easily because front doors are located close to windows and are used by only one set of residents. Roads surrounding apartment complexes are likely to be perceived as more public realm than parochial realm due to the greater numbers of people using them, bins do not need bringing in, and there may not be 'soft edges' (Gehl, 1986) where people can garden or people-

watch. This reduces the number of encounters with intrinsic opportunities for deeper interaction. Large apartment complexes need to better afford neighbouring practices and encounters to support slightly stronger, less superficial ties. Section 13.4.2 will suggest ways to accomplish this.

12.4. DIVERSITY

A second question relating to context is the impact of diversity on social experience. As Painter (2012, p. 524) notes, "the initially unknown neighbour is potentially a destabilising and ambiguous figure, which encompasses difference and allows for radical otherness." From the perspective of theorists such as Sennett (2012), Sandercock (2003), Mackay (2014) and Amin (2013), the diversity of cultures, ages, interests and tenures found in large apartment complexes[47] is an opportunity for people to "become confident that they can live with others who differ" (Sennett, 2018, p. 202), though there is also the potential for misunderstandings and tension (Forrest & Kearns, 2001; Kusenbach, 2006). Indeed, the socio-spatial assemblage is likely to incorporate both positive and negative experiences at the same time. It is hoped, however, that through encounter (Fincher & Iveson, 2008) and common goals provided by a common residence (Allport, 1954; Lofland, 1998; Sennett, 2012), the more positive experiences prevail, and residents become more confident, prosocial (Nai, Narayanan, Hernandez, & Savani, 2018) and open to difference (Laurence, 2017).

Residents of my case complexes are not heterogeneous in all these ways; though there are some differences in wealth between renters and owners, they are generally from similar socio-economic backgrounds. They also tend to be young students or professionals, or older downsizers, with the exception of River, which had a greater proportion of families with children.

Somewhat surprisingly (and discouragingly), there were few overt examples of increased tolerance and understanding of difference across the four cases, and several examples of stereotypes solidifying based on both interaction and lack of interaction with residents of a different age, tenure or cultural background. There could be two reasons for this lack: firstly, that increased tolerance and understanding were truly not supported in these cases, concurring with Valentine's (2008) suggestion that more than simple encounter is needed to combat prejudice, and secondly, that examples of tolerance and understanding were not considered by interviewees to be unusual enough to be mentioned. Given that they live in one of the most culturally-diverse cities in the world (International Organization for Migration, 2015) and many are migrants themselves, encounters with people from differing backgrounds are a regular part of their lives.

[47] Especially those in global cities such as Sydney.

There were a few examples of CSTs working towards breaking down prejudices, however, including the following from an Australian-born man of European descent:

> *Oh, my friend! [waves to man passing through the courtyard] He's Muslim and he's so proud to be becoming an Australian. He is a terrific guy. Alters all the um, all the bad stuff you hear. – William, Shore, owner 65-74*

Notably, this relationship was with a staff member, based on regular commercial interactions in a context with clear standing patterns of behaviour encouraging these interactions.

Some participants categorised their expectations of interaction according to ethnicity, with "the Asians and the Indians" (Victoria, Shore, Australian-born renter 25-34) sometimes marked out as people who would engage in civil inattention – though participants of all ethnicities engaged in civil inattention. At times participants noted the possibility of different norms and a greater concern for privacy, but lack of interaction could also be due to lack of confidence with language and cultural norms, uncertainty around length of residence and focuses on other concerns (as noted in the previous chapter). While civil inattention is vital for the maintenance of privacy in density, it does little for the promotion of cosmopolitanism (Lofland, 1998; Sennett, 2012). It is also, perhaps, a response to the diverse backgrounds, norms and ways of living embodied by the residents, and uncertainty over the production of new norms in a form of built environment that, for many, is new. Although this diversity of residents and unfamiliarity with density is particular to Sydney, similar situations are likely in many global cities with histories of lower density living.

Another tension identified was between owners and renters. While it was not a universal perception, several owners spoke of renters in terms of transience, disinterest, lack of care and stake in the complex, echoing findings by Power (2015) and Reid (2015) on prejudice towards renters, including blaming them for problems.

> *I'm sorry, I'm not saying… The tenants are beautiful people. But… it's a bit hard, I think for them, to give the same tender loving care for somewhere they're in only for a short time. – John, Bay Court, owner 65-74*

Problems do, of course, occur, and may be caused in some cases by renters. Renters' interest and stake in the complex was higher than some expected, however. While some of the managers expected a low survey response from renters due to perceived disinterest, the response in all complexes closely matched the tenure breakdown, indicating that renters are no less likely to be thinking about or engaging with these issues than owners. In fact, a far greater proportion of renters were lonely or contact-seeking, compared to owners (see Chapter 10). Among renter interviewees, a lack of engagement was often due to a shorter length of residence (see the following section 12.5) and failing to think of local connection, rather than being averse to interaction. Facilitation of CSTs may help to break down stereotypes about renters – as well as

supporting renters' greater involvement in their complexes. Scott, a renter at Bay Court who himself owned an investment property elsewhere, had much to say on the current status of renters and their lack of control over their living conditions.

> *There's going to be more and more renters, more and more living in apartments. And that's going to be a huge cohort of people in a huge age range that cannot be ignored, can't be sort of put to one side and given no voice. – Scott, renter 45-54*

Ethnicity and tenure were the most divisive differences between residents, though in most cases these divisions did not greatly affect daily life (for instance, some renters had not noticed a division between tenures). The influence of homogeneity was more pervasive, with participants tending to maintain higher-level CSTs with those similar to themselves in terms of age and household type, in addition to tenure and ethnicity. This was based, often rightly, on perceived shared interests (following the theory of homophily (McPherson et al., 2001)), though there were many examples of CSTs crossing these boundaries, facilitated by other commonalities such as being new to Australia or having a dog. If large apartment complexes with residents from diverse backgrounds are to be "spaces where conversations across difference become possible" (Wilson, 2011, p. 643), opportunities for these conversations must be increased, paying specific attention to how common interests can be made salient.

12.5. MOBILITY

This section and the following discuss two actants that appeared to particularly influence social outcomes in the Sydney context, and which are likely to be considerations in other global cities: mobility and social/financial viability. Residential mobility and lack of time and were often mentioned by participants, with residential mobility related to tenure and lack of time related to other focuses outside the local area such as work, friends or family (i.e. daily mobility). Residential and daily mobility therefore appear to have a strong impact on the development and maintenance of CSTs in my case studies, concurring with literature on sense of community and residential stability (Sampson, 1988; Forrest et al., 2002). This section considers these two forms of mobility in turn.

A greater proportion of daily life spent in shared spaces in the complex and the local area means more chances and motivation for developing CSTs. Daily mobility is a fact and benefit of a modern city (Amin & Thrift, 2002), however, reducing local opportunities for CSTs and providing residents with other opportunities. These opportunities are based less on place and more on common interests (Amin & Thrift, 2002) – producing ties that are 'chosen' rather than 'given', in Spencer and Pahl's (2006) terms.

> *There's not the desire to build them up, because people can pick and choose who you want to be friends with. – Jessica, Bay Court, renter 25-34*

While accessible, good-quality amenities might encourage residents to spend more time in them (as discussed in section 12.2), many residents will spend a majority of their time at workplaces or leisure spaces outside the area. This mobility differs according to demographics. Scanlon et al. (2018) noted that young private tenants were likely to socialise elsewhere, while Williams and Pocock (2010) found that young families and the elderly spent more time in the local area and were more open to interaction. In my research, participants with children were less likely to be non-committal about local social connection, suggesting more investment in their local area. Few residents aged 55+ were lonely, with several interviewees noting that older residents tended to have more time and motivation to connect. The extra-local focuses of other residents played a large part in the concerns for time and energy discussed in section 12.1. This implies that an apartment complex with good amenities to encourage local leisure and a larger proportion of young families and elderly residents will have more CSTs, both within these cohorts and with other residents because children often act as catalysts for interaction, while elderly residents tend to be more open to interaction.

Planners or developers could aim for a mix of ages to leverage this children/elderly effect, requiring greater use of universal design, amenities for children and certain proportions of family-sized apartments. However, it is difficult to regulate or predict who will move into private apartments.[48] Multi-bedroom apartments might cater to families, share house groups or single residents who desire more rooms, while the assumptions and marketing strategies of developers may not match the reality of who moves in (Fincher, 2004), especially when a high proportion of apartments are privately rented. Ensuring complexes cater well for children may attract young families, though it could potentially also increase costs and therefore exclude some family households.

Residential mobility influences CST development in a slightly different way: high residential mobility cuts short opportunities for the "incremental increase in mutual regard" (Painter, 2012, p. 527) that develops a CST. In complexes with high resident turnover, residents may be wary of wasting effort in connecting when a neighbour might soon move away. Conversely, if a person only expects to live in an apartment for a short period, they may have less motivation to connect with neighbours and be less open to interaction.

Residential mobility can be divided into voluntary and involuntary mobility. Residents may choose to move on for many reasons, including work, travel and education – indeed, those in their twenties and early thirties are often expected to be on the move before 'settling down' (Florida,

[48] Social housing or retirement villages may specify their tenants or buyers (as in Singapore's HDB ethnic quota (Sin, 2002)), however this is more difficult in the private market.

2002; Martin-Brelot, Grossetti, Eckert, Gritsai, & Kovács, 2010). However, in the context of the shift towards compact cities, a perception that apartments are a temporary option (Randolph, 2006) likely contributes to increased voluntary mobility. This is further supported by developers' and planners' targeting of "DINKS, singles, YUPPIES and empty nesters" (Randolph, 2006, p. 485).

This perception may be common in newer cities planned around the car, but it is not universal. While the desire for a single-family house and garden is widespread in many countries (e.g. Bech-Danielsen, Stender, & Mechlenborg, 2018; Scanlon et al., 2018), in other places apartment living is common across one's whole life course, and apartments are built to house the full range of life stages (Forster & Menking, 2016). If Australians are to shift to a compact city model from the low-density one currently enshrined in culture, this perception and its accompanying deficiencies in built form must be addressed. Apartments need to support all household types including families with children, and be of sufficient quality and flexibility that residents are happy to live in them long-term, even when life circumstances change. As Randolph (2006, p. 486) asks, "will these be positively vibrant communities or simply dormitories for lots of highly socially mobile people?"

Involuntary mobility is a different story. Australian residential tenancy laws include very little protection for renters against forced eviction, and in a hot rental market increasing rental prices can also force renters to move on (Hulse & Milligan, 2014). This contributes to great uncertainty about how long a renter will be able to remain in a particular apartment, and consequently reduced motivation to develop CSTs both on the part of renters themselves and their neighbours. As covered in the introduction, 55% of residents living in Sydney apartment complexes of four or more storeys are renting, largely due to the investor-driven nature of the Sydney apartment market.

> *It doesn't matter what we're planning, it depends on our landlord's plans. Because you have a one year lease, and that's it. You can't- you don't know. Maybe your rent goes up and you can't pay it anymore. Or they just want to sell it, or... I don't know, move back in. – George, Bay Park, renter 35-44*

Changes to residential tenancy laws, as have been advised and considered for several decades (Hulse & Milligan, 2014), would allow renters more certainty over their length of residence, and would increase motivation to connect.[49] The provision of affordable housing and reduction of market rents, however this is to be done, would also mean renters are less likely to be forced out

[49] New South Wales has recently amended their residential tenancy laws, and rent increases are now restricted to once per year to "reduce tenants' fear of retaliatory rent increases" (NSW Fair Trading, 2018). There are still no restrictions on how much rent may be increased, however.

by increasing rent.

In summary, apartment residents may be uncertain about how long they can or will stay (especially if they rent), and many people spend a large proportion of their life outside the local area. These insights suggest that there is a need to design apartment complexes with a view to increasing the desirability of spending time in shared spaces to encourage residents to use them. They also point to the central importance of improving security of tenure, which in addition to other benefits is likely to promote the establishment and maintenance of CSTs.

12.6. SOCIAL/FINANCIAL VIABILITY

Finally, the practical implications of the research need to be considered within the context of social and financial viability, especially in a profit-driven private housing market such as Sydney's. Much that supports social sustainability is not directly or objectively measurable in economic terms, as demonstrated by various attempts to associate a monetary value with social outcomes (Watson & Whitley, 2017; Property Council of Australia, 2018). Foth and Sanders (2005) observe that apartment complex design is often subject more to investment return considerations and individual unit space requirements than to sociological findings around interaction and the need for public space. Additionally, reduced costs through more effective decision-making (Borisova et al., 2014) are likely to become evident only in the long term. Expenditure on social concerns is therefore difficult to justify if considered through a purely economic lens, and if profit is seen as the only motivation to support sense of community and good facilities, social concerns may fall by the wayside (cf. CABE, 2010; Davison & Legacy, 2014).

As a community development manager at one local government pointed out, there is little scope for requiring developers to provide more extensive shared spaces within a development. Negotiations must already seek developer monetary contributions for local government-provided and developed public spaces – there is only so much one can ask for, and forgoing an extra apartment or two to provide more common space within a private development is several items down the list of local government officers' priorities.[50]

Conversely, there is also an increasing trend towards marketing apartments using a promised 'sense of community' and good facilities, especially at the higher-end of the market (Maller & Nicholls, 2014; Scanlon et al., 2018). In a tight housing market such as Sydney's or London's,

[50] Notably, local government officers for another area were keen to hear evidence supporting developer-provided shared spaces so they could more strongly argue for them in the face of developer opposition.

however, these considerations may not play a large part in decision-making for the majority of residents, and good facilities will likely add to price and ongoing costs. Sense of community may also not eventuate as promised (Maller & Nicholls, 2014), and facilities may not be well-used (though this could be ameliorated – see section 13.4). Anika (Bay Park) pointed out that, for many, the sociability and facilities of an apartment complex are relatively low in order of priority, with location, unit quality and of course price having a much greater impact on choice of dwelling (concurring with Scanlon and colleagues' (2018) research, as well as Australian research by Buys et al. (2013)). Sociability is rather an 'added extra' in a tight market. On the face of it, this suggests facilities and social concerns may add only minimally to profit.

However, providing a range of spaces both within the complex and in the local area is vital for CST development and the long-term viability of apartment living, and these should be considered within the context of planning controls and maximising the effective and efficient use of shared spaces. At the scale of the local area, local government-provided and developed public spaces are extremely important: the high cost of living in Sydney makes spaces such as parks and libraries especially significant, even when residents earn well, and these spaces can support integration of different groups. Reduced private space in apartments may also necessitate a greater reliance on shared and public spaces. Small local businesses also have a role to play in providing low-cost shared spaces and developing CSTs, however these may struggle commercially, and local government support or concessions may be needed to ensure customers pay minimal costs and businesses are financially viable. For example, increasing investment and increasing rent forced the closure of a well-loved third place café near River (Neto, 2014). Oldenburg (1999) argues that third places must be cheap to access, while Crommelin et al. (2017) underline the importance of affordable services for equity in densifying areas, warning against their replacement by more expensive alternatives. Socially-motivated thinking by developers or commercial owners might also contribute low-cost spaces for resident use and social connection; the difficult-to-fill commercial units common in mixed-use complexes (Foord, 2010) could theoretically be fitted out in a 'lighter, quicker, cheaper' fashion (Lang & Marshall, 2016; Project for Public Spaces, nd) for resident use while tenants are found, or leased out to not-for-profit organisations at under-market cost.

While shared spaces at a local area scale are vital, a lack of shared spaces that support lingering within a complex ('destination spaces') means higher-level CSTs are unlikely to develop (see section 11.3), reducing residents' sense of security and belonging within their apartment complex. These spaces are especially important in high density contexts where the public realm and civil inattention predominate. Failure to effectively support use of these spaces has an ethical dimension, as well as minimising opportunities for social connection. Residents pay for the

provision and upkeep of these spaces, and if they lie unused and unappreciated, this money is being wasted. Their lack of use also implies that they are unneeded and reduces the chances that future developers will invest in them. It is therefore imperative that destination spaces within the complex are well-designed and well-managed.

From another perspective, a focus on profit can have adverse effects on how and whether spaces are used – for example lobbies that must remain 'classy' for potential buyers and gardens that encourage looking at but not lingering in. Lofland (1998, p. 204) similarly critiques private 'antiparks' where "the landscaping often seems to be designed precisely to discourage use." A notable quality of the apartment complexes I visited in Europe[51] was the 'no-frills' nature of many of the spaces; these were spaces to be *used* and lived in (see Figure 12.1), with personal touches that likely facilitated residents' recognition of each other and awareness of common interests (see Figure 11.2). It is unlikely that residents would be put off using a space for fear of staining the carpet or avoid rearranging the room to suit their purposes. Highly-maintained look-don't-touch spaces do have value in providing a pleasant place to live (as in Bay Court), but the aims and qualities of the particular space are important to consider: is this a space best suited to aesthetic purposes, or lingering and social purposes?

Figure 12.1: Apartment complex garden, Vienna (own photo)

Where less focus is placed on investment profit, more attention can be paid to other concerns, including social and environmental health as well as costs of maintenance over the long term. In Vienna, the majority of apartment development is delivered through the government's mandatory competition system on government-owned land. This means that development must meet strict environmental, social, architectural, planning and economic criteria and is not-for-profit, with rent tightly controlled (Forster & Menking, 2016). This context is extremely different from Sydney. In a housing market dominated by private interests, social sustainability goals are unlikely to be achieved without strong government regulation and/or incentives.

[51] Especially in Vienna, where minimisation of maintenance costs is encouraged by the competition system.

12.7. SUMMARY

This chapter has reflected on the implications of the research in relation to six framing concepts (sociability, materiality, density, diversity, mobility and social/financial viability), contributing to theory on social connection at high density and the role of the environment in supporting this connection. First, it argued for the recognition of CSTs as beneficial for apartment residents due to associated feelings of safety, belonging, home and trust, possibilities for favours and enjoyable social interaction, while having a low impact on privacy and time (section 12.1). Anonymity and maintaining a friendly distance are also important, and a top-down emphasis on more traditional, *gemeinschaft* forms of community may deter residents from seeking connection due to the assumed time, energy and reduced privacy associated with these stronger ties. Section 12.2 underlined the importance of the built/natural environment in supporting CST development, emphasising how it provides or restricts opportunities for encounter and interaction in conjunction with many other factors, including management. Assemblage thinking is particularly valuable here to understand the interplay of actants and their inherent interlinkages – revealing a methodological contribution of this thesis. Section 12.3 covered density and its association with civil inattention and a lack of affordances promoting more-than-superficial interaction. Spaces that are more constitutive of the parochial realm (e.g. accessed by fewer people, closer to units, commonalities implied) are less associated with civil inattention, but the implications for cosmopolitanism should be considered. In section 12.4, the mixed evidence for resident diversity's influence on CST development was discussed. Ethnicity and tenure were two particular divides, and while there were examples of CSTs crossing these, stereotypes were evident in relation to expectations of civil inattention (ethnicity) and lack of care (renters). Homogeneity of age and household type increased the chances of CST development, though again there were some examples in my cases of CSTs crossing these groups. The final two sections considered two concepts particularly relevant to Sydney's apartment market: mobility and social/financial viability. Section 12.5 discussed findings on the negative impact high residential and daily mobility has on CST development. It argued for increasing the provision and quality of local amenities to encourage residents to spend more time in the local area, as well as considering ways that residential mobility might be reduced through security of tenure and shifts in perceptions of apartment living. Section 12.6 assessed how a focus on financial viability can affect CST development, with the economic case for CSTs difficult to make. Social connection is rarely a top priority for residents when choosing an apartment, and the 'community' often promised by marketing campaigns may not eventuate. Additionally, spaces prioritising aesthetics over functionality might increase saleability, but reduce resident use of spaces and therefore opportunities for CST development. Local, low-cost shared spaces are valuable for these opportunities, however they may not be financially viable. Given these findings and the (often

overlooked) importance of CSTs, government intervention and regulation to support delivery of shared spaces is likely necessary, due to the limited financial imperatives to do so.

13. CONCLUSION

Large apartment complexes are home to increasing numbers of people in Australia and around the world, following shifts in policy and development towards more compact city forms. The wider long-term implications of this shift for societal and individual well-being are unclear, however, and there is increasing academic and professional interest in how social sustainability may be achieved at density. A greater understanding is needed of the social dynamics in these contexts to ensure that large apartment complexes and their surroundings are desirable, socially sustainable places to live now and in the future.

There is a small, but growing, body of literature considering factors involved in relationship development in large apartment complexes, which notes the importance of repeated interactions, use of shared spaces, visual permeability, resident homogeneity, personality, hierarchical spaces, shared activities and control over contact (e.g. Ginsberg & Churchman, 1985; Kuo et al., 1998; Abu-Ghazzeh, 1999; Forrest et al., 2002; Zhang & Lawson, 2009; Reid, 2015; Scanlon et al., 2018). However, as covered in section 3.2, this research often involves just a small number of participants, lacks consideration of resident experience, focuses on a relatively narrow set of variables in isolation from their broader context, or considers relationship development in supportive contexts. In addition, the majority of studies of high density environments have focused on the development and maintenance of strong social relationships, although some authors have questioned this focus and considered instead weaker social ties (Abu-Ghazzeh, 1999; Reid, 2015). This research aimed to address these gaps in knowledge through examining casual social ties (CSTs) in several large apartment complexes in Sydney, considering both how these develop and what types of social relations best contribute to positive resident experience as well as wider social sustainability.

To do this, the research considered the phenomenon of relationship development from an assemblage thinking perspective, which sees a particular outcome as developing from the interactions between many different actants[52] and considers causality as non-linear and catalytic. It also drew on behaviour setting theory and affordance theory to explain how different environmental factors and associated behaviour patterns influence relationship development in specific contexts. The research examined relationship development in four large 'friendly' apartment complexes in Sydney, with the aim of determining how social connection had developed in these complexes despite theoretically-difficult conditions: large, recently-built complexes with many heterogeneous residents, and many renters (associated with increased

[52] Comparable to 'factor' – connotes capacity to affect and be affected (Latour, 1996).

residential mobility). It considered how CSTs were experienced by residents (RQ1), where these CSTs were developed and maintained (RQ2), and how factors interacted to produce CSTs (RQ3). Methods included a large resident survey, interviews with residents and managers of each complex, and documentation of shared spaces through fieldnotes and photography.

This chapter first succinctly answers the research questions, then presents and discusses the contributions of this research to theory on relationship development at high densities, to methodology, and to practice, outlining insights and implications for design, management and planning professionals. It then discusses research limitations and avenues for future research, before concluding with a reflection on the need for a shift in how shared spaces in large apartment complexes and their surroundings are considered and provided.

13.1. Answering the Research Questions

13.1.1. How do CSTs Influence the Experiences of Apartment Residents?

This research demonstrates that CSTs can provide a sense of safety and security through opening up possibilities for favours and emergency aid, as well as developing trust between neighbours. This contributes to well-being through stress-buffering (Cohen & Wills, 1985) as well as providing everyday social interaction in one's local area. This interaction, whether through commercial exchanges, brief incidental meetings or longer engagement around common interests, can contribute to a sense of home and belonging to the local area as well as enriching residents' lives. In some cases, a continuing relationship was not necessary for this sense of belonging; standing patterns of behaviour encouraging interaction with strangers supported a 'friendly' atmosphere (while also contributing to CST development).

However, civil inattention (politely ignoring others) was also an important standing pattern of behaviour, allowing privacy regulation and protection of time. Similarly, resident participants were often careful to maintain CSTs at a more superficial level due to concerns about their own time and privacy, as well as not wishing to impose on others. On the one hand, this supports arguments about the utility of CSTs (as secondary relationships) at high density (see for instance Jacobs, 1961; Abu-Ghazzeh, 1999; Reid, 2015). On the other hand, the research exposed a desire for slightly greater social engagement when faced with this superficial experience, combined with uncertainty about how to achieve this while protecting one's own and others' privacy and time. These 'friendly' apartment complexes had many acknowledgement ties, but these often did not develop into the chatting ties that were seen by many participants as more useful and desirable.

Resident experiences of CSTs were also diverse, as was their desire for them. Some participants,

especially those who felt highly time-pressed, were satisfied with few CSTs, and others were open to developing more CSTs with people they shared commonalities with. Participants were sometimes unclear about the utility of neighbour relationships, having not previously considered this, and a mismatch was identified between popular ideas of 'community' and what participants wanted in practice. This has implications for social sustainability goals in high density areas, and is further discussed in sections 13.2 and 13.4.1.

13.1.2. Where are CSTs Developed and Maintained?

Resident participants most often developed and maintained CSTs in apartment complex circulation spaces such as lifts, lobbies, corridors and carparks, however only to a superficial level given the perceived time constraints in these spaces. CSTs developed further in 'destination' spaces where time pressure was less salient, including roof terraces, gyms, swimming pools, parks and local community spaces, especially through organised activities such as classes or events that implied common interests. Common interests could also be implied by a space's location; participants were more likely to interact with people within their apartment complex due to their likely common residence. This common residence contributes to the perception of a parochial realm in these spaces, where people expect to know each other at least in passing. However, destination spaces within complexes were often little-used, and participants who did not use these spaces inevitably did not develop CSTs there. This implies that these spaces need to better serve their potential users if they are to support CST development. CSTs were also developed and maintained with staff in small local businesses such as cafés, convenience stores and newsagents.

In summary, CSTs develop more in spaces where time pressure is less salient and common interests are more salient, however they may develop to a superficial level in regularly-used circulation spaces within complexes. See section 13.4.2 for detailed considerations for the provision of shared spaces.

13.1.3. How do Human and Built/Natural Environment Factors Interact to Produce CSTs?

Characteristics of the location are not the only factors involved in CST development. Figure 11.1 (see Chapter 11) depicts the range of factors identified in this research as playing a role in CST development, with each factor making CST development more or less likely. The factors have been grouped according to whether they are best considered as human, built/natural environment or management factors to guide potential interventions. The factors should, however, be considered in terms of their interrelated actions, following assemblage thinking. For example, incidents and problems are very good catalysts, however they are also likely to affect comfort and

aesthetics, reducing use of spaces.

As the figure also shows, human and built/natural environment factors interact to produce CSTs through increasing the chances of encounters, providing catalysts, or increasing receptivity to these catalysts. Two overarching management factors, costs and priorities, influence how feasibly many other factors may be improved, as well as how directed actions are towards facilitating CSTs. Knowledge of how to improve CSTs and other factors also plays an overarching role.

13.2. Theoretical Contribution on Relationship Development in Dense Urban Areas

This thesis contributes to theory on relationship development in dense urban areas in two ways: first, through identifying the range of factors involved in relationship development in this context and considering how they interact to open up or close down possibilities, and second, through developing a better understanding of desire and need for social connection with neighbours in large apartment complexes and other local residents in the surrounding area, enabling identification of socially sustainable goals for connection in this context. This section discusses each of these contributions in turn.

Ziller (2004), Vallance et al. (2005) and Reid (2015) argue that more understanding is needed of how social sustainability may be supported in dense urban areas. Some past research considering the development of relationships in large apartment complexes has taken a non-holistic view of this process (see section 3.2), and the present research aimed to reach a more rounded, nuanced understanding of the factors involved. Drawing on the research findings and literature, the model in Figure 11.1 was developed to represent these factors.

While many of the factors have been previously identified in the literature, the model presents these in relation to each other and identifies how they may provide catalysts for interaction, increase receptivity to these catalysts, or increase the chances of repeated encounters. It was developed to relate specifically to large apartment complexes and their local areas, however many of the insights are likely to be applicable to other contexts, for instance the importance of time pressure, confidence, overregulation and purposes for use.

The second theoretical contribution concerns the value of weak local relationships and the concept of CSTs. On the one hand, much of the policy and literature considering apartments (sections 2.2 and 3.2) tends towards a *gemeinschaft* model, with strongly-connected communities the ideal. On the other hand, investigations into apartment-based relationships in affluent societies often find little social connection and little desire for it (section 3.2.1). The present research suggests the

reality is likely to be somewhere between these two poles, and CSTs represent a socially-sustainable form of social connection in high density residential areas.

The research indicates that many people are open to more local social connection, but may not put much effort into pursuing it, and people who truly do not desire contact in dense contexts are rare (see section 10.2.1). Residents may also be interested in connecting with people who share similar interests, which may or may not align with social groupings by age or cultural background. Connection through shared interests may therefore contribute to cosmopolitanism, where cross-group ties are developed (Lofland, 1998; Sennett, 2012), but shared interests may be difficult to ascertain. Facilitating connection through shared interests (for example, interest-based activities and providing spaces where shared interests can be implied or assumed) may therefore facilitate desired social connection.

Apparent in the research findings was a complex interplay between perceptions of 'ideal' connection in one's local area (often *gemeinschaft*-based), perceptions of current connection (with CSTs often overlooked) and what participants actually desired (often somewhere in between these). For interviewees, 'community' and 'knowing neighbours' appeared to imply strong connection, potentially leading people to overlook the value of weaker connection, feel guilt around lack of effort made to pursue 'community', or avoid social connection altogether due to a fear of over-commitment. This indicates that there is a need for a greater understanding in policy, building management and general society of more casual/secondary relationships and their value to enable better pinpointing of socially-sustainable outcomes (further discussed in section 13.4). My term 'casual social ties' is offered as a contribution to this end, with more neutral connotations than 'weak tie' or 'neighbour' and covering more wide-ranging relationships than 'acquaintance'.

13.3. METHODOLOGICAL CONTRIBUTION

There are two methodological contributions made by this research. First, the research tested the application of a conceptual framework based on assemblage thinking with the addition of standing patterns of behaviour and affordances and demonstrated that it was a useful methodological approach. Second, it developed a method of recruiting participants from private apartment complexes, which is acknowledged to be difficult (Lette, 2011; Reid, 2015).

Taking an assemblage thinking perspective was valuable due to its prompting consideration of many different ontologically-heterogeneous elements in concert, better reflecting complex real life conditions. This enabled a more holistic view of the phenomenon of relationship development, reducing the chances of factors being neglected, as well as supporting a focus on material elements in addition to social elements. It also allowed a more nuanced consideration of the

influence of different elements on relationship development, through increasing or decreasing possibilities rather than implying cause and effect. This permits a better understanding of why interventions may or may not work, including attention to factors not considered in more narrowly focused studies. Through this, we can better develop and maintain conditions supportive of social connection.

During the research process, there were several challenges with the application of the conceptual framework, which may be informative for future users of assemblage thinking, affordances or standing patterns of behaviour. One was pinning down useful concepts and their meanings; assemblage thinking encompasses many concepts, with a range of terms and variations in use by different scholars given its relatively recent emergence. Some focus, for instance, on the roles of power and desire (e.g. MacFarlane, 2011b), which I did not cover extensively in my research. In time, different schools of assemblage thinking are likely to become apparent. However, in the interim, those using assemblage thinking must pick and choose the most useful concepts for their research, as Dovey (2016) advises, and in some cases the most useful interpretations of those concepts.

While I expected territorialisation and coding to be key concepts (and to aid in considering such things as differing standing patterns of behaviour linked to territory), in many cases they proved unwieldy to map onto processes. Cultural background is an example: differing cultural backgrounds theoretically mean territorialisation is low because homogeneity is low. However, as the manager at River noted, people may be united by the fact of their difference (differences as ice-breakers), and therefore territorialisation is increased. Thus, considerable thought is needed to delve past surface-level territorialisation or coding processes. Affordances (as physical coding) were generally easier to consider, possibly because of their more restricted arenas of influence: physically constraining behaviour and inviting possibilities.

Two lessons relate to reporting findings. First, to better enable more general application of findings, it is important to present factors in concert and as potential influences rather than dependable causes, acknowledging that different actants will influence outcomes to different extents in different cases. While it may be tempting to revert to simple causality (for instance, higher population leads to fewer CSTs), this masks other factors at play and may lead to misguided focuses on, in this example, population size. The concept of a factor opening up or closing down possibilities (Anderson et al., 2012b), rather than the factor causing an outcome, is particularly useful to communicate the contingent nature of factors and the need for a holistic focus.

Second, assemblage thinking focuses on individual historicity and process rather than

comparisons between cases, arguing that differences and commonalities can have varied outcomes across cases (DeLanda, 2016a). As such, I was careful to describe each case separately and avoid comparing features and details, which made the case chapters somewhat repetitive in places and was at times difficult to adhere to. Some readers may wish for more direct comparisons to gain a better overview of cases, but I have deliberately avoided doing so due to the potential for assuming direct causality, rather than more complex and catalytic causality.

The more specific concepts of standing patterns of behaviour and affordances focused attention on the material aspects of spaces and how they contributed to CST development. In interviews, standing patterns of behaviour were operationalised as what was 'normal' in a space, drawing out insights into why, for instance, seating in circulation spaces is not particularly conducive to social interaction and why people tend not to interact in more-public spaces. A focus on the affordances in a space revealed the lack of activities afforded in many shared spaces, as well as highlighting the importance of access and visibility.

Secondly, the recruitment strategy was developed over several iterations of survey pilots and the course of the interview recruitment. Details of this are provided in section 5.6 and 5.7, and Appendix G gives a succinct overview of the strategy, which may be useful in future research with residents of large apartment complexes.

13.4. Practical Insights and Implications for the Provision of Shared Spaces

As identified by local government interviewees, decision-makers lacked information relating to the types and designs of shared space that are useful in high density areas, and how these impact on social outcomes. The present research holds practical insights for the planning, design and management of large apartment complexes and their surroundings: through the identification of particular factors that might be leveraged to increase the chances of CST development (Figure 11.1); through the application of these to particular spaces (section 13.4.2); and through better clarification of appropriate, socially-sustainable goals for social connection in large apartment complexes (sections 12.1 and section 13.4.1). It is essential to keep in mind the interrelation of factors, with people, environment and management factors all taken into consideration when seeking to increase social connection.

This section first considers overarching goals for social connection, relating particularly to management and policy professionals. It then draws on the research findings, study tours and literature to present suggestions for the design and management of spaces in the local area, and circulation spaces and destination spaces within the complex, following the

circulation/destination and parochial/public distinction identified in 11.3.

13.4.1. Overarching Goals for Social Connection

When encouraging social connection in areas with large apartment complexes, the possibility of loose connections with low time and emotional commitment is important, for example knowing who is on your floor, having someone local to call in emergencies and exchanging information about the complex and local area. This supports individual well-being through stress-buffering (Kawachi & Berkman, 2001), and creates loose networks that can support collective action to solve problems, improving the "health and functioning" of society (Dempsey et al., 2011, p. 297) and so contributing to social sustainability and neighbourhood resilience. Additionally, finding local people with whom to share interests can make living in a large apartment complex more enjoyable, directly supporting well-being (Kawachi & Berkman, 2001), and potentially connect groups that might not otherwise interact. This strikes a balance between the more positive aspects of social connection and the need for privacy and friendly distance, supporting social sustainability.

Both policy and academic research have tended to place emphasis on stronger forms of relationship. While these are important for some, they may not match the needs and wants of many residents of large apartment complexes, especially given residents' existing obligations to their wider social networks. The present research suggests that residents may not be willing to make much effort to develop CSTs (despite being open to them), so support is likely needed through top-down or grass-roots events, local activities and built/natural environment interventions (discussed in the following section).

The research also suggests explicit motivations for developing local CSTs that may aid community development initiatives in promoting social connection, especially where it is overlooked. These are the primary motivations of safety, trust and favours, as well as the perceived benefits of social interaction for well-being and enrichment and for a sense of home, belonging and community. These motivations should be balanced with an awareness of residents' concerns around privacy and time.

13.4.2. Provision of Shared Spaces

Given the diversity of resident characteristics, desires and experiences (see Table 11.1) as well as the range of relationships that support individual well-being and wider cohesion (Spencer & Pahl, 2006), provision of a diversity of spaces within and outside the complex is important to facilitate a range of relationships. Table 13.1 and Table 13.2 (pages following) detail shared spaces likely to support CSTs in the local area and the complex respectively, recognising residents' need and

preference for CSTs at a range of scales (Kusenbach, 2008). The tables consider how planning, design and management can best encourage CSTs in these different spaces, drawing on the built and natural environment factors discussed in section 11.3. These suggestions are drawn from the case studies unless otherwise specified.

It should be noted that these considerations are based on Sydney case studies and may vary according to context; for instance, stronger traditions of street socialising are likely to increase time spent lingering in circulation spaces (see section 3.2).

Table 13.1: Provision of Shared Spaces in the Local Area (within approximately ten minutes' walk)

Shared spaces	How they support CSTs	Issues to consider
Green space	• Provide a drawcard encouraging residents to spend time outside their unit. Particularly valued by those who had them close by, and desired by those who had to venture farther afield. • Supports relaxation, children's play and dog exercise, increasing encounters and providing catalysts.	• Should be easily accessible within a few minutes' walk. Busy roads reduce accessibility. • Smaller, local parks better support CSTs, however residents highly value larger regional parks for their amenity. • Should provide shade, especially where children play. • Children's safety (e.g. busy roads). • Management of and design for canine toilet needs and wear on landscaping
Mixed-use complexes and/or small local shops	• Residents often maintain CSTs with staff of small businesses. These provide reliable interaction and CST development. • Residents may feel a sense of ownership and belonging in relation to small businesses in their complexes.	• Continuity of staff and businesses better supports CST development. • Cost: affordable goods and services support 'hanging out' and more frequent use by a wider demographic. Rent should be affordable to support this. • Ground-floor commercial spaces in mixed use areas are often difficult to fill (Foord, 2010). This may be seen as an opportunity to provide low-cost spaces where long-term tenants can be found, or low-cost community spaces planned from the start. Local governments might ask for possession of commercial units in developer contributions, and lease these units to not-for-profit businesses.
Venues for activities, events and classes Public open space, libraries, cafés, community centres, gyms, swimming pools etc.	• Afford development of stronger CSTs based on common interests (e.g. gym, community garden), especially when encounters are likely to be repeated. • Provide icebreakers/ catalysts for CSTs. • Local events and festivals are valued, and support incidental encounters. • Local schools support CSTs due to children's friends, and caregivers lingering while picking up/dropping off. They also imply shared interests and support mutual exchange of aid.	• Must be sufficiently low-cost and welcoming to support lingering, and flexible enough to support different uses. Free, staffed facilities such as libraries are especially valuable. • Visibility and salience of these spaces is important; residents must know that they exist and what happens there. • Bureaucracy can dissuade grass-roots organisation of activities. Active community members should be supported and encouraged to organise these.

Table 13.2: Provision of Shared Spaces within the Complex

Shared spaces	How they support CSTs	Issues to consider
Circulation spaces Lifts, lobbies, carparks, building entrances, stairwells	• Residents are most likely to meet each other here. Brief acknowledgements and civil inattention are common because of perceived time pressure – users are on their way elsewhere. • Interactions here often initiate weak CSTs and support their maintenance, but do little to further develop CSTs due to their brevity.	• Catalysts such as dogs, children or problems increase interaction. • The fewer people who use a space, the more likely they are to acknowledge each other – though they may rarely see another person. • Seating, while functional and welcome in lobbies, is unlikely to support social interaction because lingering in these spaces is perceived as odd. Residents are likely to move to a destination space or their unit for longer conversations. • Visibility of users (e.g. through transparency of corridors, lobbies) increases visual encounters and recognition (Abu-Ghazzeh, 1999; Williams, 2005; Reid, 2015), but users should not feel exposed (Raman, 2010).
Circulation spaces Residential corridors	• An exception to the principles for circulation spaces, because residents often feel they 'should' know neighbours on their floor, at least by sight, and this space is immediately adjacent to units. • Neighbours on one's floor can best assist in emergencies or when locked out. • Children sometimes play in these spaces, catalysing interaction. • Provide a space on neutral ground for residents to meet.	• Lessons could be drawn from 'soft edges' (Gehl, 1986): affording resident display of personality and some transparency into private spaces, while affording privacy (e.g. small private balcony areas on exterior galleries, see Figure 11.2). Management could allow resident doormats, festive decorations, nameplates or other identity markers.[53] • 'Break-out spaces' for children's play, resident-initiated floor events and use by residents of small units may be useful to increase encounters – however these should be pleasant (natural light, well-ventilated, seating), easy to clean and afford purposeful but flexible use. Could offer residents an advantage unavailable in units e.g. winter sunlight, silence. Users should be visible, but not feel exposed – e.g. spaces should be partly screened from lifts, or distanced from them so users are not surprised by people exiting lifts and are given the choice to interact or engage in civil inattention. • A table is useful for residents to leave small gifts/swaps, creating a friendly atmosphere. • Resident involvement in management useful (see final point in 'Destination spaces' below).

[53] River appeared to be the only case in this research that allowed this.

Shared spaces	How they support CSTs	Issues to consider
Destination spaces Gardens, gyms, pools, courtyards, rooftops, workshops etc.	• Residents can develop deeper CSTs here, where time pressure is less apparent, common interests are implied and future meetings are likely – all increasing openness to interaction. • Activities and events in these spaces can catalyse interaction.	• These spaces often fail to be well-used, so care should be taken that they: ○ Afford multiple purposes matching residents' needs and interests. ○ Are easily accessible and visible, with clear wayfinding. Visibility from circulation spaces is an asset, promoting salience and incidental encounters, especially where destination spaces are adjacent to main circulation spaces (Reid, 2015). Activity within the space should be visible from outside it (but avoid a 'fish-bowl' experience), giving residents the chance to assess whether they want to enter (Abu-Ghazzeh, 1999; Williams, 2005; Raman, 2010). ○ Have sufficient seating, space, safety, privacy and climate protection for comfortable use: a sufficiently attractive environment and purpose in comparison with offerings from residents' private units and spaces in the wider city. • If too many people have access to a space, civil inattention becomes more likely. • Destination spaces for functional needs (e.g. bike storage/repair, dog or car washing) may be useful, providing a common interest as catalyst and a definite reason to regularly use the space (Lette, 2011; The Happy City, n.d.). • Safe play spaces should be provided, supporting children's residence and encouraging caregivers to venture out of units. • Over-regulation can stifle use of spaces e.g. restricting alcohol, glass, noise. Creative management strategies and careful design are needed to provide safety/ reduce maintenance while minimally restricting use. • Resident use for events and activities should be promoted and facilitated. 'Drinks and nibbles' events are useful, however are likely to attract only a subset of residents. Regular events of different types can attract different people and provide reliable settings for CST development, e.g. one interviewee suggested a fire drill immediately followed by a barbecue.

Shared spaces	How they support CSTs	Issues to consider
Destination spaces (contd) Gardens, gyms, pools, courtyards, rooftops, workshops etc		• Resident use for events and activities should be promoted and facilitated. 'Drinks and nibbles' events are useful, however are likely to attract only a subset of residents. Regular events of different types can attract different people and provide reliable settings for CST development, e.g. one interviewee suggested a fire drill immediately followed by a barbecue. • Direct resident involvement in the management of spaces is likely to increase use through spaces better meeting residents' needs[54] and greater resident engagement (Semenza & March, 2009). Spaces should be changed when they are not working – tactical urbanism or 'lighter, quicker, cheaper' approaches may work here (Lang & Marshall, 2016). Small projects (perhaps simply idea-generation for space use) could provide common goals for residents to discuss, thus developing CSTs (Semenza & March, 2009).

13.5. Limitations and Future Research

A limitation of this research is a possible self-selection bias which could lead to overstating the importance of CSTs. While several strategies were used to reduce this bias,[55] the true proportions of residents who are isolated or desire more contact may differ from those found in the survey. It should also be acknowledged that, due to the case study nature of the research, the findings cover only four complexes, with a limited number of participants (202 survey respondents, 63 resident interviewees). While this is a larger sample than many studies in this research area (e.g. Forrest et al., 2002; Lette, 2011; Reid, 2015), the limited nature of the sample should be kept in mind.

In the interview analysis, greater emphasis may have been placed on the value of CSTs than is warranted, given that this was based on largely self-selected participants who may have been more invested in the topic of CSTs than the general population. However, the large number of participants who were non-committal about social interaction implies that the findings may be read with some confidence that they adequately represent the broader population.

As previously discussed, while apartment complex destination spaces should theoretically be

[54] Based on tour of Lange Eng cohousing, Copenhagen, where residents had collectively revised the furnishing of several spaces to best suit their needs, as well as discussions with research participants.

[55] For instance: interviewer approach in apartment lobbies and adjacent spaces; increasing survey response rate through easily-returned, short surveys; encouraging survey response from those who did not know neighbours on posters (see sections 5.6 and 5.7).

conducive to CST development because of their possibilities for lingering and parochial-realm nature (see section 11.3), I found only limited evidence for this. This was due to the low use of many of the spaces, making it unclear whether the lack of CST development here was due to lack of use or to unfavourable conditions for tie development. Previous research has found similarly-low use of some shared spaces (Lette, 2011; Scanlon et al., 2018), though the reasons behind this are unclear, especially as some similar spaces are well-used while others languish.

Lastly, the research focused specifically on the Sydney context and the research findings may not be directly transferrable to other contexts. Nevertheless, it is possible that the findings in Sydney will reflect findings in locations with similar histories of low-density development, recent densification policies and ideals around apartment living, such as the UK, New Zealand and much of North America. The findings of this study may also be of interest in other contexts however, as Sydney provides a particularly challenging context for CST development due to its history of low-density development, rapidly-growing apartment market, and its high levels of rental tenure and resident heterogeneity, making it an extreme case study (Flyvbjerg, 2006).

13.5.1. Future Research

There are several areas where my findings and these limitations suggest potential for future research regarding the experience of CSTs, design and use of spaces, and management. First, CST development could be investigated in different geographical and demographic contexts to better understand the transferability of the findings, as well as gaining a more holistic picture of the range and influence of different factors. It would be enlightening, for instance, to compare experiences and development of CSTs in a context with low residential mobility or longer traditions of apartment dwelling.

Secondly, as discussed in section 12.4, the role of CSTs in bridging ethnicity/cultural and tenure divides was unclear. This means that the potential for culturally diverse, mixed tenure[56] large apartment complexes to encourage cosmopolitanism is in question, and more research is needed to better understand the nuances of the relationships between different groups in this context (Liu et al., 2018). Thirdly, more investigation of the social interaction needs and desires of those living alone would be useful, as they formed a smaller proportion of ‘lonely’ and ‘contact-seeking’ participants than expected (see section 10.3.9).

In terms of the design and use of spaces, the suggestions presented in 13.4.2 for increasing use of destination spaces within apartment complexes might be tested and consideration given to why

[56] Private tenants and owners (public housing tenants were not included in this research).

these spaces may be perceived as circulation spaces rather than destination spaces. Destination spaces have the potential to facilitate encounters between residents and contribute to the development of CSTs, however more investigation is needed to understand how they may best support regular use. Relatedly, some apartment complex spaces are perceived as public realm, with standing patterns of behaviour tending towards civil inattention (for example, River's plaza). Greater investigation into the factors that produce a parochial realm space rather than a public realm space could assist in designing and managing spaces to support CST development – though the value of civil inattention and control over interaction should also be considered.

Additionally, further research around the balance between having many people using a particular space and few would be useful, especially in relation to the number of people using lift lobbies and residential corridors. Apartment design guidelines often limit units per floor or lift well (likely deriving from CPTED principles and emergency exit considerations), however as demonstrated in the case chapters (sections 6/7/8/9.4.2), few units sharing a space can mean residents never encounter one another. The optimal conditions for CST development are likely to change based upon various other factors, but a better understanding of this would be helpful in producing apartment design guidelines and providing a basis for design decisions.

A major difficulty highlighted in section 11.4.2 is over-regulation of spaces, resulting in spaces being infrequently used. To address this, research into management strategies that support responsible, minimally-restricted use of shared spaces would be valuable, as well as exploration of design solutions to reduce the need for restrictive regulations. Building management professionals might also engage in information sharing and workshopping to develop these strategies. It would also be useful to investigate how safe, considerate user behaviour may best be encouraged.

13.6. Final Thoughts

> *While undertaking fieldwork, one resident's question particularly struck me: "If people really wanted to connect, couldn't they just make the effort and connect, why does something have to be prepared for them to do that?" (Dylan, River, renter 25-34).*

Intervention is needed because the current status quo environment at high density in Australian cities does not adequately support social connection, and there is a large group of people who would like more local social connection, but do not know how to facilitate it. These people may be pressed for time and already committed to wider, non-local social networks, making local connection more difficult. Without this local connection, we run the risk of apartment dwellers suffering from lower levels of physical and mental well-being (Kawachi & Berkman, 2001;

Eicher & Kawachi, 2011; Thompson & Kent, 2014), our neighbourhoods being less resilient (Klinenberg, 1999; Bouchama et al., 2007), the management of apartment complexes being less efficient (Borisova et al., 2014; Liu et al., 2018), and there being decreased place attachment and sense of care for local areas (Lewicka, 2011). Clearly, outcomes such as these reduce social sustainability through limiting the "continued viability, health and functioning of 'society' itself" (Dempsey et al., 2011, p. 297).

If policy-makers, local governments, developers and building and resident management wish to support connected communities and social sustainability, they must consider reducing barriers and providing opportunity structures for social connection. These include green spaces, low-cost venues for activities, events and classes, and small businesses in the local area, as well as pleasant, visible, easily-accessible shared spaces within complexes that support resident interests and more-personal spaces adjacent to apartment unit front doors. This effort to connect communities will also require a recognition of the value of anonymity and loose, non-committal social connections – 'casual social ties' – to ensure a balance between connection and privacy. These findings point to ways in which we can ensure we develop high-density residential areas that are socially sustainable (and desirable) to live in, now and in the future.

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APPENDICES

APPENDIX A: ETHICS APPROVAL

Human Research Ethics Advisory (HREA) Panel E: Built Environment
The University of New South Wales
UNSW Sydney, NSW, Australia, 2052
E: HREAPE@unsw.edu.au

22-Feb- 2016

Dear Sian Thompson,

Project Title	Supporting Weak Ties in Compact Cities
HC No	HC16086
Re	Notification of Ethics Approval
Approval Period	22-Feb-2016 - 21-Feb-2021

Thank you for submitting the above research project to the HREAP E: Built Environment for ethical review. This project was considered by the HREAP E: Built Environment at its meeting on 17-Feb-2016.

I am pleased to advise you that the HREAP E: Built Environment has granted ethical approval of this research project. Subject to the following conditions being met:

Conditions of Approval Specific to Project:

We do not recommend that you use your own personal address or telephone numbers on any documents issued to participants. If possible, you should supply UNSW contact details. You may need to complete a FBE Fieldwork Application Form. This must be obtained prior to physically conducting your research. Please seek the advice of your Head of Program or Head of School. Your application indicates that you may need to obtain one or more Letters of Support before you conduct your research. Letters of Support are required whenever you involve any organisation (other than UNSW) or any individual (other than an employee of UNSW) in your research, whereby: (a) you intend to interview, survey or include employees in a focus group; or (b) your research is wholly or partly funded by any organisation (other than UNSW) or individual (other than an employee of UNSW). Please contact your Supervisor for further direction (if applicable). A Letter of Support must conform to one of the formats indicated in Form 6. Please forward all Letters of Support to HREAP to complete your file. If approved, approval is granted to the applicant for a 5 year period from the date of this letter. Any approval to conduct research given to the applicant is done so on the condition that the applicant is at the date of approval: (a) a Student undertaking an approved course of study at UNSW; or (b) a member of Academic Staff at UNSW. If, at any time subsequent to the date of approval and prior to completion of the research project the applicant ceases to be either of (a) and (b) above, then any prior approval given to the applicant to conduct will be deemed to be revoked forthwith. The applicant must inform the FBE HREA Panel immediately upon any change, or possible change, to the applicant's status that may affect any prior approval given by the Panel to the applicant to conduct research.

litions of Approval-All Projects:

- The Chief Investigator will immediately report anything that might warrant review of ethical approv
of the project.
- The Chief Investigator will notify the HREAP E: Built Environment of any event that require
modification to the protocol or other project documents and submit any required amendments
accordance e with the instructions provided by the **HREAP E: Built Environment.** These instructions
be found at https://research.unsw.edu.au/research-ethics-and-compliance-support-recs.
- The chief Investigator will submit any necessary reports related to the safety of research particip
n accordance with **HREAP E: Built Environment** policy and procedures. These instructions car
ound at https://research.unsw.edu.au/research-ethics- and-compliance-support-recs.
- The chief Investigator will report to the **HREAP E: Built Environment** annually in the specified
ormat and notify the HREC when the project is completed at all sites.
- The Chief Investigator will notify the **HREAP E: Built Environment** if the project is discontinue
a participating site before the expected completion date, with reasons provided.
- The Chief Investigator will notify the **HREAP E: Built Environment** of any plan to extend the durati
of the project past the approval period listed above and will submit any associated require
documentation. Instructions for obtaining an extension can be found at:
https://research.unsw.edu.au/research-ethic s-and-compliance-support-recs.

- The chief Investigator will notify the **HREAP E: Built Environment** of his or her inability to contin
coordinating Chief Investigator including the name of and contact information for a replacement.

by of this ethical approval letter must be submitted to all Investigators and sites prior to commencin
roject.

HREAP E: Built Environment Terms of Reference, Standard operating Procedures, membership
ard forms are available from https://research.unsw.edu.au/research-ethics-and-compliance-sup

ld you require any further information, please contact the Ethics Administrator at

REAPE@unsw .edu.au
ps://research.unsw.edu.au/human-research-ethics-home

HREAP E: Built Environment wishes you every continued success in your research.

APPENDIX B: PROJECT INFORMATION STATEMENTS & CONSENT FORM

SURVEY

PROJECT INFORMATION STATEMENT

Date: 16th February 2018
Project Title: *Knowing Your Neighbours*
Approval No.: HC16086

UNSW AUSTRALIA
Built Environment

Participant selection and purpose of study
You are invited to participate in a study of how and where people in high density areas get to know each other, as well as how much they'd like to get to know each other. You were selected as a possible participant in this study because you live in a large, relatively new apartment building.

Description of study
If you decide to participate, we will use your answers to this survey to investigate how apartment buildings work socially and what kind of contact people want with their neighbours, with an aim of finding better ways to design and run apartment buildings and their local areas. The survey should take 5-10 minutes to complete, and will ask you some general questions about your preferences and experiences around knowing other people in your area, as well as a few questions about you.

Confidentiality and disclosure of information
Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, or except as required by law. We plan to publish the anonymised findings in a doctoral thesis and academic journals, and potentially newspapers and books. A general summary of findings will also be available to interested participants.

Recompense to participants
You will have the option of entering a prize draw for a $100 Westfield gift voucher. You will also have the chance to receive a general summary of findings for the project by providing contact details.

Your consent
Your decision whether or not to participate will not prejudice your future relations with UNSW Sydney or other participating organisations.

If you have any questions, please feel free to ask Sian Thompson on 0432 654 613, or at sian.thompson@unsw.edu.au. If you have any additional questions later, Dr Gethin Davison (Lecturer, 9385 5803, g.davison@unsw.edu.au) will be happy to answer them.

Best wishes,

Sian Thompson

Complaints may be directed to Research Ethics and Compliance Support (RECS), The University of New South Wales, SYDNEY 2052 AUSTRALIA (phone 02 9385 7257, email : humanethics@unsw.edu.au).

RESIDENT INTERVIEW

BE HREAP **FORM 3 – PROJECT INFORMATION STATEMENT** September 2014 page 1

PROJECT INFORMATION STATEMENT

Date: 27th January 2018
Project Title: *Knowing Your Neighbours*

Approval No.: HC16086

UNSW AUSTRALIA
Built Environment

Participant selection and purpose of study
You are invited to participate in a study of how and where people in high density areas get to know each other, as well as how much they'd like to get to know each other. You were selected as a possible participant in this study because you live in a large, relatively new apartment building in Sydney.

Description of study
If you decide to participate, we will talk about getting to know neighbours and acquaintances in this area, and about the spaces you use in this area. The research aims to find ways to design and run apartment buildings and their local areas to help people get to know each other when they'd like to, and to make the best use of shared spaces. The interview will take between 15 minutes and an hour, depending on your time.

Confidentiality and disclosure of information
Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, or except as required by law. If you give us your permission for this interview, we plan to publish the findings in a doctoral thesis and academic journals, and potentially newspapers and books. A general summary of findings will also be available to interested participants.

Your consent
Your decision whether or not to participate will not prejudice your future relations with The University of New South Wales or other participating organisations. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice by completing the statement below and returning this entire form to Sian Thompson, Red Centre West Wing 6007, UNSW Australia NSW 2052.

If you have any questions, please feel free to ask Sian Thompson on 0432 654 613, or at sian.thompson@unsw.edu.au. If you have any additional questions later, Dr Gethin Davison (Lecturer, 9385 5803, g.davison@unsw.edu.au) will be happy to answer them.

Kind regards,

Sian Thompson

REVOCATION OF CONSENT. Project Title: *Knowing Your Neighbours*
(Please send this entire form to the above address.)
I hereby wish to withdraw my consent to participate in this research project. I understand that such withdrawal will not jeopardise my relationship with The University of New South Wales, other participating organisations or other professionals.

……	……	……
Signature	Please PRINT name	Date

Complaints may be directed to Research Ethics and Compliance Support (RECS), The University of New South Wales, SYDNEY 2052 AUSTRALIA (phone 02 9385 7257, email : humanethics@unsw.edu.au).

MANAGER INTERVIEW

BE HREAP **FORM 3 – PROJECT INFORMATION STATEMENT** September 2014 page 1

PROJECT INFORMATION STATEMENT

Date: 27th January 2017
Project Title: *Knowing Your Neighbours*

Approval No.: HC16086

UNSW AUSTRALIA
Built Environment

Participant selection and purpose of study
You are invited to participate in a study of how and where people in high density areas get to know each other, as well as how much they'd like to get to know each other. You were selected as a possible participant in this study because you work as a manager in a large, relatively new apartment building in Sydney.

Description of study
If you decide to participate, we will talk about how residents get to know neighbours and acquaintances in this area, and about use of the building's common areas. The research aims to find ways to design and run apartment buildings and their local areas to help people get to know each other when they'd like to. The interview will take up to an hour, subject to your time.

Confidentiality and disclosure of information
Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, or except as required by law. If you give us your permission for this interview, we plan to publish the findings in a doctoral thesis and academic journals, and potentially newspapers and books. A general summary of findings will also be available to interested participants.

Your consent
Your decision whether or not to participate will not prejudice your future relations with The University of New South Wales or other participating organisations. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice by completing the statement below and returning this entire form to Sian Thompson, Red Centre West Wing 6007, UNSW Australia NSW 2052.

If you have any questions, please feel free to ask Sian Thompson on 0432 654 613, or at sian.thompson@unsw.edu.au. If you have any additional questions later, Dr Gethin Davison (Lecturer, 9385 5803, g.davison@unsw.edu.au) will be happy to answer them.

Kind regards,

Sian Thompson

REVOCATION OF CONSENT. Project Title: *Knowing Your Neighbours*
(Please send this entire form to the above address.)
I hereby wish to withdraw my consent to participate in this research project. I understand that such withdrawal will not jeopardise my relationship with The University of New South Wales, other participating organisations or other professionals.

.....	.....	.....
Signature	Please PRINT name	Date

Complaints may be directed to Research Ethics and Compliance Support (RECS), The University of New South Wales, SYDNEY 2052 AUSTRALIA (phone 02 9385 7257, email : humanethics@unsw.edu.au).

LOCAL GOVERNMENT/STRATA MANAGEMENT INTERVIEW

BE HREAP **FORM 3 – PROJECT INFORMATION STATEMENT** September 2014 page 1

PROJECT INFORMATION STATEMENT

Date: 3rd August 2017
Project Title: *Knowing Your Neighbours*

Approval No.: HC16086

UNSW AUSTRALIA
Built Environment

Participant selection and purpose of study
You are invited to participate in a study of social connection and shared spaces in apartment complexes and their local areas. You were selected as a possible participant in this study because your work touches on the intersections around apartment development, social sustainability, policy and design.

Description of study
If you decide to participate, we will talk about social connection amongst residents of higher density areas, the potential role of apartment complex and local area design in facilitating this connection, and the type of information that would be useful for policy and practice. The interview will take between half an hour and an hour, subject to your time.

Confidentiality and disclosure of information
Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, or except as required by law. If you give us your permission for this interview, we plan to publish the findings in a doctoral thesis and academic journals, and potentially newspapers and books. A general summary of findings will also be available to interested participants.

Your consent
Your decision whether or not to participate will not prejudice your future relations with The University of New South Wales or other participating organisations. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice by completing the statement below and returning this entire form to Sian Thompson, Red Centre West Wing 6007, UNSW Australia NSW 2052.

If you have any questions, please feel free to ask Sian Thompson on 0432 654 613, or at sian.thompson@unsw.edu.au. If you have any additional questions later, Dr Gethin Davison (Lecturer, 9385 5803, g.davison@unsw.edu.au) will be happy to answer them.

Kind regards,

Sian Thompson

REVOCATION OF CONSENT. Project Title: *Knowing Your Neighbours*
(Please send this entire form to the above address.)
I hereby wish to withdraw my consent to participate in this research project. I understand that such withdrawal will not jeopardise my relationship with The University of New South Wales, other participating organisations or other professionals.

.....	.....	.....
Signature	Please PRINT name	Date

Complaints may be directed to Research Ethics and Compliance Support (RECS), The University of New South Wales, SYDNEY 2052 AUSTRALIA (phone 02 9385 7257, email : humanethics@unsw.edu.au).

INTERVIEW CONSENT FORM

Note: participants could add conditions to their consent in writing on this form.

BE HREAP **FORM 4 – PROJECT CONSENT FORM** September 2014

PROJECT CONSENT FORM

Project Title: Knowing Your Neighbours

UNSW AUSTRALIA
Built Environment

You are making a decision whether or not to participate in a research project.

This PROJECT CONSENT FORM enables you to indicate your preparedness to participate in the project. By signing this form, your signature indicates that you have decided to participate.

You will be given a PROJECT INFORMATION STATEMENT that explains the project in detail, and that statement includes a revocation clause for you to use if you decide to withdraw your consent at some later stage. The PROJECT INFORMATION STATEMENT is your record of participation in the project.

This PROJECT CONSENT FORM will be retained by the researcher as evidence of your agreement to participate in this project.

Please complete the information in this box.

Please indicate which of the following options you agree to by ticking one of the following options:

☐ I consent to being quoted and identified
OR
☐ I consent to being quoted but I do not want to be identified

.....
Signature of Research Participant

.....
Please PRINT name

.....
Date

Name of researcher: Sian Thompson

APPENDIX C: SCALE SELECTION FOR SURVEY

This appendix details the process of scale selection for the survey, aiming to cover help, social interaction, homey atmosphere/belonging, exchanging language, culture and information, working together, security, social support, social cohesion, sense of community, loneliness and social capital. While this is not a full list of all scales available around these concepts, these represent some of the most widely-used scales in the area of social effects in local areas, as well as several scales included for their different perspectives on some concepts.

- Sense of Community Index 2 (Chavis, Lee, & Acosta, 2008)
- Neighborhood Cohesion Instrument (Buckner, 1988)
- an amended Neighbourhood Cohesion Instrument (Fone et al., 2006)
- Psychological Sense of Community in the Neighbourhood (Nasar & Julian, 1995)
- Brief Sense of Community Scale (Peterson, Speer, & McMillan, 2008)
- Multidimensional Measure of Neighboring (Skjaeveland et al., 1996)
- Residential Environmental Satisfaction Scale (Adriaanse, 2007)
- Short Neighbourhood Attachment and Social Subscale of Perceived Residential Environment Quality (Fornara, Bonaiuto, & Bonnes, 2010)
- Multidimensional Territorial Sense of Community Scale (Prezza et al., 2009)

The subscales presented by the authors and the individual items were examined in detail, and each item assessed as to whether it might be related to one of social interaction, help, working together, 'homey' atmosphere or belonging. The proportion of items relating to these concepts was then determined. The highest-scoring scales were the NCI (Buckner, 1988), the Fone et al. (2006) NCI, the Short Neighbourhood Attachment in Urban Environments and the social subscale of Perceived Residential Environment Quality (Fornara et al., 2010), and the Multidimensional Measure of Neighboring (Skjaeveland et al., 1996). The SNAUE/PREQ looks at only two of the target effects (belonging and social interaction), while the MMN looks at three (belonging, social interaction and help) and the NCI scales looks at five (belonging, social interaction, help, neighbourhood satisfaction and working together). The Neighbourhood Cohesion Instruments were therefore examined in more detail, and the Fone et al. (2006) version was chosen due to its greater correspondence with the concept of casual social ties (for example, it drops items including "I

like to think of myself as similar to the people who live in this neighborhood.”).

Buckner’s original (1988) Neighbourhood Cohesion Instrument was developed to measure what Buckner calls “collective-level” sense of community (p. 773), and incorporates subscales covering sense of community, neighbouring and attraction-to-neighbourhood. Using factor analysis, Fone et al. (2006) found two subscales for their amended scale, labelling them ‘neighbourhood belonging’ and ‘social cohesion’. The scale is shown below, with ‘NB’ and ‘SC’ to denote which subscale the items belong to.

Table C.1: Fone and colleagues' (2006) Neighbourhood Cohesion Scale

1. *Overall, I am attracted to living in this neighbourhood (NB)*
2. *I feel like I belong to this neighbourhood (NB)*
3. *I visit my friends in their homes (SC)*
4. *The friendships and associations I have with other people in my neighbourhood mean a lot to me (SC)*
5. *Given the opportunity, I would like to move out of this neighbourhood (NB)*
6. *If I need advice about something I could go to someone in my neighbourhood (SC)*
7. *I believe my neighbours would help in an emergency (SC)*
8. *I borrow things and exchange favours with my neighbours (SC)*
9. *I would be willing to work together with others on something to improve my neighbourhood (SC)*
10. *I plan to remain a resident of this neighbourhood for a number of years (NB)*
11. *I like to think of myself as similar to the people who live in this neighbourhood (NB)*
12. *I rarely have a neighbour over to my house to visit (SC)*
13. *I regularly stop and talk with people in my neighbourhood (SC)*
14. *Living in this neighbourhood gives me a sense of community (NB)*
15. *Overall I think this is a good place to bring up children (NB) (Fone et al., 2006)*

After piloting the survey, it was decided that the ‘neighbourhood belonging’ subscale should be cut for space, due to the social cohesion subscale covering more relevant concepts: neighbouring, importance of relationships, obtaining help, willingness to work with others, and local social interaction. Results would therefore be reported for ‘social cohesion’, but not overall ‘neighbourhood cohesion’. The final questions are shown below (with ‘neighbourhood’ replaced with ‘local area’ or ‘area’ to reduce connotations attached to the word and make it more in line with other questions in the survey).

16. *I visit my friends in their homes*
17. *The friendships and associations I have with other people in my local area mean a lot to me*
18. *If I need advice about something I could go to someone in my local area*
19. *I believe my neighbours would help in an emergency*
20. *I borrow things and exchange favours with my neighbours*
21. *I would be willing to work together with others on something to improve my local area*
22. *I rarely have a neighbour over to my house to visit*
23. *I regularly stop and talk with people in my local area (Fone et al., 2006)*

While the amended NCI measures interaction with neighbours, it does not give an indication of

whether the interaction might be positive or negative. Therefore, an item adapted from Skjaeveland et al. (1996) ('How often are you irritated with some of your neighbors?') and an item adapted from Fornara et al. (2010) ('People in this area are intrusive') were also included in the survey in order to gauge negative contact. Isolation was also not included in the scale, so an item adapted from the UCLA Loneliness Scale (Russell, Peplau, & Ferguson, 1978) was added: 'I feel isolated from others in my local area'. Additionally, an item adapted from a City of Sydney survey (Easthope et al., 2014) was included to gauge satisfaction with amount of contact with people: 'I have enough contact with people in my local area'.

APPENDIX D: SURVEY QUESTIONNAIRE

UNSW AUSTRALIA

Knowing Your Neighbours

Thanks for completing this quick survey! Your answers will help us find better ways to design and run apartment buildings and their local areas.

Leave your email at the end to be in to **win a $100 Westfield card!** Your survey answers are anonymous. Please see attached Project Information Statement for more information.

1. Are you aged 18 or older?

☐ I am 18 or older

About Your Local Area *(within 10 minutes' walk, including your building)*

2. How much do you agree with the following statements **about your local area**?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I visit my friends in their homes	O	O	O	O	O
The friendships and associations I have with other people in my local area mean a lot to me	O	O	O	O	O
If I need advice about something I could go to someone in my local area	O	O	O	O	O
I believe my neighbours would help in an emergency	O	O	O	O	O
I borrow things and exchange favours with my neighbours	O	O	O	O	O
I would be willing to work together with others on something to improve my local area	O	O	O	O	O
I rarely have a neighbour over to my home to visit	O	O	O	O	O
I regularly stop and talk with people in my local area	O	O	O	O	O
People in this area are intrusive	O	O	O	O	O
I am often irritated with some of the people in my local area	O	O	O	O	O
I have enough contact with people in my local area	O	O	O	O	O
I feel isolated from others in my local area	O	O	O	O	O

3. **How many people** in your building and local area (who do not live with you)…

…do you know very well? (friends and family)	None	1-5	6-10	11-20	21+
…do you stop and chat with? (acquaintances)	None	1-5	6-10	11-20	21+
…do you know by sight, and might say hello to but nothing more?	None	1-5	6-10	11-20	21+

4. Are there any places in your building or local area (within 10 minutes' walk) **where you talk to neighbours or acquaintances** at least once a month?

☐ No ☐ Yes (Please list them here) _____

_____

5. Have you attended a building-wide social event in the last year (e.g. barbecue, get-together)?

☐ No ☐ Yes

6. Have you served on your building's strata committee in the last five years?

☐ No ☐ Yes

A little about you

7. What is your gender?

☐ Female ☐ Male

8. What is your age?

☐ 18-24 ☐ 35-44 ☐ 55-64 ☐ 75-84
☐ 25-34 ☐ 45-54 ☐ 65-74 ☐ 85+

9. Do you have a dog?

☐ Yes ☐ No

10. Which building do you live in at -------? (Optional)

☐ A ☐ B ☐ C ☐ D ☐ E

11. How long have you lived in this building in years (or in months if less than 1 year)?

_____ Years **OR** _____ Months

12. How much do you agree with the following statements?

	Disagree strongly	Disagree	Disagree a little	Neither agree nor disagree	Agree a little	Agree	Agree strongly
I am satisfied with my unit	O	O	O	O	O	O	O
I am satisfied with my building/complex	O	O	O	O	O	O	O
I am satisfied with my local area	O	O	O	O	O	O	O
I see myself as extraverted and enthusiastic	O	O	O	O	O	O	O
I see myself as reserved and quiet	O	O	O	O	O	O	O

13. Is your home...?

☐ Owned ☐ Being rented ☐ Other (please specify) _____

14. Apart from you, who else usually lives in your household? Please tick ALL that apply.

☐ No one - I live alone
☐ My partner or spouse
☐ Adults not related to me (housemates, boarders)
☐ My child(ren) aged under 15
☐ My child(ren) aged 15 or older
☐ My mother and/or father
☐ My brother and/or sister
☐ Other adult relatives
☐ Other (please specify) _____

15. Where were you born?

☐ Australia
☐ Elsewhere in Oceania
☐ Americas
☐ North-West Europe
☐ Southern or Eastern Europe
☐ North Africa or Middle East
☐ Sub-Saharan Africa
☐ North-East Asia
☐ South-East Asia
☐ Southern or Central Asia

16. What language(s) do you speak at home?

☐ English ☐ Cantonese ☐ Hindi ☐ Mandarin ☐ Other (please specify)
☐ Arabic ☐ Gujarati ☐ Korean ☐ Persian _____

17. How often do you feel rushed or pressed for time?

☐ Almost always ☐ Often ☐ Sometimes ☐ Rarely ☐ Never

Thanks for completing this survey! Your help is really appreciated. If you'd like to go into the draw to win a **$100 gift card**, please leave an email/phone number below. Your survey answers are anonymous.

Email/Phone:

Tick here ☐ if you'd like to hear about the results of this survey.

Tick here ☐ if you're happy to be contacted about an interview on this topic (Knowing Your Neighbours).

Appendix E: Interview Schedules

Resident Interview

If possible, the interview should be held in a space within or close to the development.

Hi, thank you for volunteering to be interviewed and coming along today.

- Explanation of project – info statement, can read now or I can summarise
- Explanation of what we're doing today – structure (I have two focuses for this project: one is on neighbours and acquaintances, and one is on places in your area that people might meet. Set questions, but we can go off on tangents if anything comes to mind. It should take up to an hour, any commitments? Fill out survey first if not already completed)
- Consent form, turn on recorder
- Given name (anonymous)
- Date, place

About relationships

1. How well do you know other people in the building and the local area within ten minutes' walk?
2. Is this about right for you, do you think (refer to survey, ties)? (If no, what would you like?)
3. I'm particularly interested in the kinds of relationships where you might chat with someone and catch up a little, but they're not one of your close friends. What part do you think these relationships play in your life?
    a. What do you like about these kinds of relationships?
    b. What don't you like about them?
4. What about the people you don't really know, but you say hello to them – what part do they play?
    a. What do you like about these kinds of relationships?
    b. What don't you like about them?
5. Think about people in the area and in the building who you chat to. How did you first get to know these people? (If not covered, where did you get to know them?)
6. How do you think people generally get to know each other around here?
7. Why do you think some people might know lots of people, and others don't?
8. So you know these people here (refer to survey). What about other people who live around here, why do you think you haven't got to know them?

About spaces

9. Now I'd like to ask you about spaces in the building and local area. Could you take me through an average week living here – where you might go, where you might see people you recognise, nod or chat to people in the building and within about ten minutes' walk.
    a. Why do you think you see/talk to people in these places?
    b. What do you talk about?
    c. Do you use any of the other spaces in the building, e.g. (list others not mentioned, especially possible-lingering spaces)
    d. Why/why not?
    e. Would people talk to each other there? Why/why not?

10. I want to ask some more about one or two spaces (most used/sought out/valued and/or most often talk to people). (For each space, if applicable and not already covered) Can you tell me about this space?
    a. What do you usually do there? (If applicable: what makes it good for this?)
    b. Why do you think you see/talk to people in these places?
    c. Who do you talk to in this space? (Strangers? Acquaintances? Friends? Staff?)
        a. Do you think other people would do the same?
    d. What do you talk about?
    e. What do you like about the space?
    f. What don't you like about the space?
    g. Do people ever misuse the space?
    h. How could it be better?
11. Are there any spaces in the building or local area that aren't used as much as they could be?
    a. Why do you think this is?
    b. What could help them get used more, do you think?
    c. Do you think people would talk or get to know each other there, if the space was used more?
12. Are there any spaces you'd like to have in the building or area that aren't here?
    a. What would you do in these spaces?
13. Is there anything else you think might be useful for me to know?

Thank you for your time!

MANAGEMENT INTERVIEW

Interview Schedule (Management)

- Explanation of project – info statement, can read now or I can summarise
- Explanation of what we're doing today – structure (2 focuses: residents getting to know each other, common areas and places in the building and area that people might meet. Set questions, but tangents. It should take around half an hour, any commitments?)
- Consent form, turn on recorder

About relationships

1. How well do you think residents get to know each other in this building/development?
2. What advantages do you think there are to residents getting to know their neighbours?
    - What about any disadvantages?
3. What do you think is a good goal to aim for, in terms of relationships between residents?
4. What role do you think management can play in this?
    - What role do you personally think managers should play?
    - What would need to happen to achieve this?
5. How do you think residents of apartment buildings get to know each other generally?
6. What about in this building in particular?
    a. If needed prompt 'such as…' (minimise leading)
    - *Events*
    - *Children and pets*
    - *Crossing paths*
    - *Lingering in same spaces*
    - *Management*
    - *Icebreakers*
    - *Clubs/groups*
7. Do you think anything prevents residents getting to know others as much as they'd like to?
    a. If needed, prompt 'such as…' (minimise leading)
    - *Time pressure*
    - *Tenure*
    - *Length of residence (+ first movers vs later)*
    - *Personality*
    - *Existing r/ships (in/outside area)*
    - *Culture/language*
    - *Age group*
    - *Having things in common*
    - *Expectations (marketing etc.)*
8. What do you think about the location of management offices in residential buildings? Do you think this one works well?
9. What about the management-resident relationship? How would you like residents to think of you?
10. If you were aiming to promote acquaintance-type relationships and friendliness between residents, how would you go about it?

About spaces

11. Now I'd like to ask you about spaces in the complex. Firstly, I'd like to ask about the more everyday spaces in the building, like the lobby, the lifts, the corridors and the carpark. Do you know if people tend to say hello or talk to each other in these spaces?
    a. Why do you think they do/don't?
12. What spaces in the building work well, do you think? (well-used, well-liked, low maintenance but does its job).
13. Are there any spaces in the building that aren't used as much as they could be?
    - Why do you think this is?
    - What could help them get used more, do you think?
14. Have you had any problems with particular spaces being misused?
15. How do you go about preventing misuse?
16. Is there anything else you think might be useful for me to know? (and thanks)

Local Government

Hi, thank you for agreeing to be interviewed today.

- Explanation of project – info statement, can read now or I can summarise
- Explanation of what we're doing today – structure (Set questions, but we can go off on tangents if anything comes to mind. It should take up to an hour, any commitments?)
- Consent form, turn on recorder
- Given name (anonymous)
- Date, place

1. What advantages do you think there are to residents getting to know their neighbours and others in their local area?
    - What about any disadvantages?
2. What role do you think policy/design guidelines can play in this?
3. What kinds of information would be useful to know in developing apartment complexes and higher density neighbourhoods?
4. How might this information help you personally in your role?
5. What barriers do you think there are to developing more socially-successful apartment complexes and higher density areas?
6. Do you think relationships are harder to develop in apartments, and why?
7. Can you think of instances where apartment complexes have been particularly successful in terms of facilitating comfortable social connection?
    - Why do you think this complex performs well?
    - (If needed) How do you think the design of the complex contributes to its social performance?
8. Is there anything else you think might be useful for me to know?

Thank you for your time!

APPENDIX F: EXAMPLE RECRUITMENT FLYER AND POSTER

Knowing Your Neighbours

Never Stand Still | Built Environment

UNSW AUSTRALIA

Dear --------- Resident,

I'm a PhD student at UNSW, and I'd like to invite you to complete a quick survey.

What is it about? Getting to know your neighbours (and whether you want to).

How long will it take? 5-10 minutes.

Why should you complete it?
To help find better ways to design and manage apartment buildings, and to go in the draw to win a **$100 Westfield Gift Card**.

How do you complete it?
Pick one of these options:

- Online at www.surveys.unsw.edu.au/f/1626----------/ ***or*** use the QR code if you have a QR code reader ⟶
- ***or*** Fill out and return the attached paper survey (by post or drop it in the box in the foyer).
- ***or*** Call 0432 654 613 for a phone survey.

If you have any questions, please write to me at sian.thompson@unsw.edu.au or call 0432 654 613.

Thank you for your help!

Sincerely, Sian Thompson

Thank you!

Return your survey here
before Thursday March 23rd

What is the survey about?
Getting to know your neighbours (and whether you want to).

How long will it take?
5-10 minutes.

Who should complete it?
Any adult resident of ----------, whether you know your neighbours or you don't.

Why should you complete it?
To help find better ways to design and manage apartment buildings, and to go in the draw to win a **$100 Westfield Gift Card**.

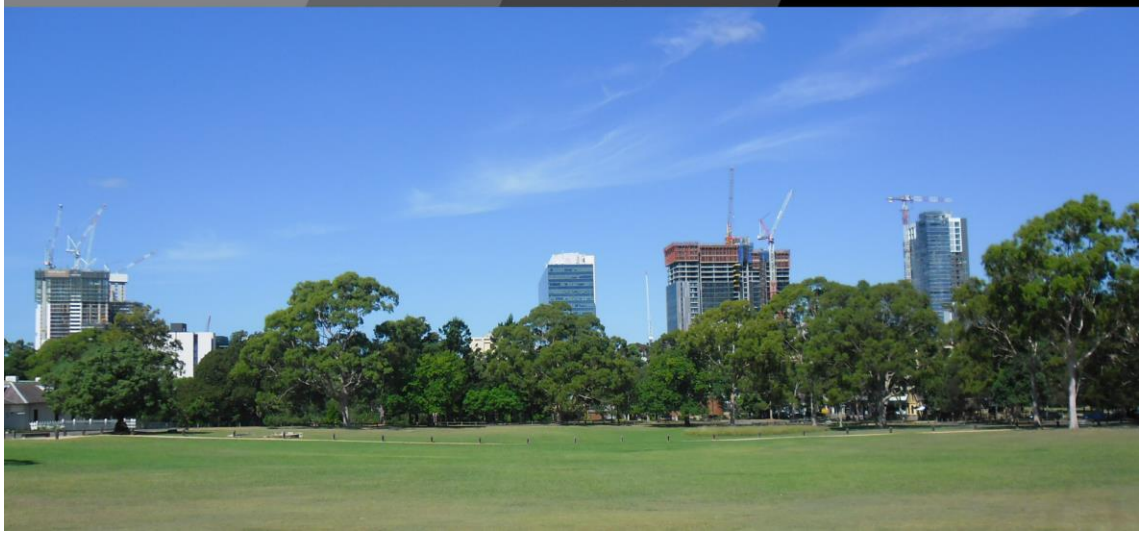
How do you complete it? Pick one of these options:
- Online at **www.surveys.unsw.edu.au/f/1626----------/** ***or*** use the QR code →
- ***or*** Fill out and return the paper survey here.
- ***or*** Call **0432 654 613** for a phone survey.

Thank you for your help! If you have any questions, please contact me at sian.thompson@unsw.edu.au.

UNSW AUSTRALIA

Knowing Your Neighbours

Never Stand Still | Built Environment | Sian Thompson, PhD Student



APPENDIX G: PARTICIPANT RECRUITMENT METHODOLOGY

This appendix summarises the research's participant recruitment methodology for the survey and in-depth interviews, with the aim of providing future researchers with guidance on successful strategies to recruit apartment residents. Notes on specific details are shown in italics.

- Gain the permission of building management (professional and resident committee). *Building managers were particularly helpful in this research in providing suggestions for survey return box placement and in-person recruitment (see below), as well as providing access to buildings where necessary.*

- Advertise the survey on posters on noticeboards and/or in lifts several days before survey distribution to increase chances of residents checking mailboxes, and to support the credibility of the survey through pre-notice (following Frohlich (2002)).

- Distribute survey questionnaires to all mailboxes along with a small flyer personalised to the complex, project information statement (following the terms of the ethics approval) and an addressed, non-stamped return envelope. *In one complex, permission was given to put these 'survey packs' under unit doors, and this complex received a higher response rate (28% of households, vs. 21%-23% of households at the mailbox complexes). The survey questionnaire was kept to two pages and printed in colour. The poster, flyer, information statement and questionnaire advised that respondents could enter a draw for a $100 general-purpose giftcard.*

- Place the survey return boxes prominently, for example by the lifts in building lobbies and/or by management offices (placement based on discussions with management). Use posters to associate the survey return boxes with the study.

- One week later, empty the survey return boxes. Change the posters in the lifts/noticeboards and survey return boxes to thank respondents and advise residents that there is one week remaining to return their surveys.

- Collect any last surveys collected and remove posters, survey return boxes two weeks after initial survey distribution. *This was based on discussion and agreement with managers.*

- The survey questionnaire included a tick box for respondents to indicate their interest in an interview, and leave their details. *Respondents who were contacted soon after the final survey collection (within one month) were most likely to agree to participate in an*

interview. Respondents were advised the interview would take half an hour to an hour, based on their time.

- Recruit additional interviewees through 'office hours' in the larger lobbies and shared spaces (adjacent parks, rooftop facilities). *Recruitment was best within the complex, as most passers-by were residents. A university flag was used to attract attention, and passers-by were asked if they had 20 minutes to spare to talk about living in the building. These interviews tended to be shorter, but captured insights from people who may not normally be interested in the topic, with agreement based more on their availability of time than interest.*

APPENDIX H: AFFORDANCE ANALYSES

SHORE: COURTYARD AND ASSOCIATED BREEZEWAYS, EXTERIOR CARPARK

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	Yes – path between the multiple entrances to the complex (north driveway, north pedestrian door, south pedestrian door) and building entrances. North driveway and south pedestrian door appear to be used more often, meaning residents spend more time in the space than if they used the north pedestrian door. View residents are likely to pass through more of the courtyard than Street residents. Note car-users do not have to pass through on foot, except for drop-offs in the loading zone.
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Courtyard is narrow and does not often receive sun, as well as being quite windy. A positive in summer, a negative in other seasons. The sides of the courtyard have overhangs, however the path from the north pedestrian door to the View building entrance is not adequately protected from rain (gaps between the awnings over the path). Central part of courtyard open to rain. b) Seating is provided by café, however a purchase is necessary, and seating is packed away after hours. c) Eating or meeting at the café, passing through on the way in or out, putting bicycle in the cycle rack or cycle store, parking (drop-off zone), collecting mail, washing car (though frowned upon). Children's play was once afforded (large space for scootering), but this space is now taken up by the café deck. d) Courtyard is technically publicly-accessible during business hours, however the lack of visibility from the street and the heavy wooden doors restrict perceived access. Café patrons may access the courtyard through the café, and a medical business operates in a commercial unit opening off the courtyard (by appointment). Residents are likely to feel the space is restricted to them in large part (some were unaware that it is publicly-accessible during business hours). e) Toilets and showers open off the courtyard. Food is available from the café. f) Reasonable amount of vegetation in large pots and planters on higher levels of the building. Lots of leaf-drop, but generally well-maintained by staff. An empty commercial unit with plate-glass windows opens off the southern end, potential for integration with courtyard and use as a resident space if not commercially let.
3) Waiting, pausing	Visitor waiting to be let into a building, waiting while other residents get out their keys, waiting to be let in when forgotten a key, collecting mail, locking up bicycle.
4) Perception of common interest a) Territory b) Other	a) Other users likely to also be residents, but the number of residents (and residential transience) means people are unlikely to initiate conversation with strangers, and may not acknowledge strangers. b) Weather (passing through semi-outdoor space), parking problems
5) Novelty/variability	Weather, vegetation, mail, carrying interesting things, people-watching comings and goings
6) Perception of opportunity/need for aid	Carrying things, opening doors, buzzing people in if forgotten key.
7) Access a) Physical (incl. border markers) b) Sensory	a) Few access barriers for residents, public must pass through large double doors (only business hours) or driveway gate. Border markers include the double doors, the raised deck for the café (delineates café space from open-access space)

c) Financial	b) Cannot see the road except through the café when sight lines align. Overlooked by lower levels of apartments, though sightlines restricted because buildings are close together. Noise would be heard by apartments above. Coffee and food might be smelt, though if doors are closed and there is a breeze, this may be lessened. c) Access to seating and deck space subject to café purchase. Other spaces free to residents at all times, and public during business hours.

Conclusion: The courtyard is mostly used to pass through on the way elsewhere, with short greetings or small talk between casual social associates. People may linger momentarily to collect mail or lock bicycle (though bicycles often taken to apartment instead), however they are unlikely to stay longer due to lack of free seating and lack of protection from climatic conditions in colder weather. Café users may stay longer, though purchases are needed.

Standing Patterns of Behaviour observed in site visits and reported in interviews: Passing through, brief acknowledgement of recognised others, potentially small talk with casual social associates if walking the same way. Collecting mail. Civil inattention common.

SHORE: ROOF TERRACE (SOUTH AND NORTH) AND ROOF TERRACE LIFT LOBBY

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	No
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Areas open to sun, rain and some wind and sun protection provided by roof and glass wall louvres over small area on South Terrace, however reasonably exposed b) Modular outdoor sofa (concave) with coffee table provided in more protected area in South Terrace, however cushions need cleaning and are sometimes taken for use on Roof Terrace North. Some planter box edging affords perching, but not particularly wide surface c) Sitting on sofa (Roof Terrace South only), perching on planter box edging, standing looking at the view, sitting on decking, sitting on cushion taken from sofa, gardening. Two separate spaces for activities. d) Cushions may be moved, seating too large to move easily. Singular activity spaces on each terrace mean only one group per space is likely to use it comfortably. Secure access – residents and guests only. e) No toilets, no obvious drinking water source. f) The view is very good, however the roof is also home to utilities which hide some of the view. Planter boxes might also afford gardening (though currently seem a little overgrown).
3) Waiting, pausing	On the terraces, if a meeting is organised. In the lift lobby, while waiting for the lift
4) Perception of common interest a) Territory b) Other	a) Accessible only to residents and their guests, and maintenance staff. b) Potentially gardening
5) Novelty/variability	The weather, very-distant people-watching, harbour-watching. Potentially gardening.

6) Perception of opportunity/need for aid	Opening doors between lobby and terraces, pushing buttons for the lift, sharing seating
7) Access a) Physical (incl. border markers) b) Sensory c) Financial	a) Only one lift serves the roof terrace, necessitating waiting for the correct one to arrive at your departure floor. Access restricted. b) The roof terraces are not visually accessible except through the glass doors from the roof terrace lift lobby (and then not fully visually accessible). Final choice of use (based on current occupancy) must therefore be made in the terrace lift lobby. Choice of two spaces provides backup option if first choice is not free however. Upper floors have aural access. c) No financial barrier for residents

Conclusion: While the roof terraces have potential as lingering spaces where residents might interact (with greenery, views), the awkwardness of accessing the roof (one lift, which must be used to access toilet facilities) and of determining whether the space is already fully occupied, as well as the minimal and lower quality seating (sofa cushions need cleaning, planter boxes afford perching only), along with regulations on access, glass, alcohol mean that residents are unlikely to regularly use them. This reduces the number of people who might meet incidentally, and so the likelihood of triangulation and interaction being afforded.

Standing Patterns of Behaviour observed in site visit and reported in interviews: No people present on site visit (2 days: cloudy day, and 40 degree day). Residents might briefly acknowledge other users, and subsequently engage in civil inattention unless the other users are already known to some degree (i.e. have met briefly on multiple occasions). Possibility of developing relationships.

SHORE: VIEW LOBBY

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	From the building entrance to the lifts, door to ground floor apartments, meeting room, building manager's office and vice-versa
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Indoors, air conditioned, no sun b) Large, comfortable sofa facing the unlit fireplace, facing away from the main door c) Waiting for someone, talking to the building manager, reading noticeboards, walking to and from apartments or meeting room (though this is usually locked), picking up parcels from the long table, finishing phone calls d) Secure access for building residents and guests, entrance overlooked by manager's office. Sofa, long table and unlit fireplace form a room-within-a-room, but highly permeable e) No f) People-watching cars, people in the courtyard outside
3) Waiting, pausing	For the lift, to finish phone calls, for guests or hosts
4) Perception of common interest a) Territory b) Other	a) Users are likely residents, management or guests b) Children, dogs, interesting packages
5) Novelty/variability	People passing through, children, dogs

6) Perception of opportunity/need for aid	Holding the lift, pushing the lift button, holding the door, carrying groceries/packages
7) Access a) Physical (incl. border markers) b) Sensory c) Financial	a) Through door from courtyard, accessible to residents and guests b) Large plate-glass windows from courtyard and 1st floor residential corridor. Sofa area cannot be seen from the lift waiting area. Meeting room cannot be seen from any part of the lobby. c) Residence in building, or guest of resident

Conclusion: A large number of people use this lobby, and civil inattention is quite common apart from when people open doors for each other. Some interviewees reported continuing conversations here that were started in the lift. While there is comfortable seating, it is not seen as a place to linger due to lack of purpose. The long table is used by the manager to put residents' parcels on, as well as dropped objects e.g. soft toy. In the past it was used for 'swap' or 'take free', but this was stopped by the committee due to image concerns. The sofa is not quite private enough to feel like your conversations are not being overheard, and its placement facing away from the main door encourages civil inattention between sitters and enterers (this seems positive, somewhat reducing awkwardness). Lingering is unlikely, and tie development therefore restricted.

Standing Patterns of Behaviour observed in site visits and reported in interviews: civil inattention, some acknowledgement, some small talk. Most people appear in a hurry.

River: Plaza

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	Yes, shortcut through the block, path to childcare centre, supermarket, other shops and cafés, carpark lift access.
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Some protection afforded by pergolas, though apparently very hot during summer and the pergolas don't protect against rain. Roof overhangs afford some rain protection by the cafés and the supermarket. b) Several benches (under pergola) and long low walls on which people regularly sit. More-comfortable café seating for patrons during opening hours. c) Accessing shops, eating at cafés or while sitting on the low walls, children playing with scooters, bikes, walking through d) Entry is through breezeways under residential buildings, or down a narrow path beside the childcare. Security guards recently employed overnight to prevent anti-social behaviour. Used by homeless in the past and possibly present. One interviewee wouldn't let his family go there after dark for safety reasons. e) Toilets are positioned down steep, narrow stairs and locked due to misuse (need a key to access). A range of food and drink available by payment (cafés, restaurants and supermarket). f) Workers use one out-of-the-way shaded corner on their breaks, sitting on a ledge beside the north-south passageway. Residents apparently do not linger in the space much,

	preferring to go home to their apartments, though some do use the cafés and most use the supermarket.
3) Waiting, pausing	Some people observed waiting for others – used as a meeting place – and others sit in the sun or shade or arrange their bags, attend to their children (though activity is mostly sporadic).
4) Perception of common interest a) Territory b) Other	a) Users of this space are likely to be members of the general public – difficult to determine if they are residents. More sense of territory with cafés (and potentially childcare, smaller shops) for interviewees who regularly used them and liked them. b) Markets, when organised, or children's activities could provide common interests. Supervisors looking after children playing have a common interest and apparently share food.
5) Novelty/variability	Different people passing through the space, events when organised, possibly people up on L6 (the roof) looking at the pool
6) Perception of opportunity/need for aid	Carrying bags potentially, talking to staff
7) Access a) Physical (incl. border markers) b) Sensory c) Financial	a) Open access, but entry through breezeways/narrow paths marking a clear boundary. b) Can see the plaza from balconies facing it, can also see through from the street at the entrances, and also from the shops around the plaza. Smells/noise can be problems. c) No financial barrier to lingering in the plaza, but to use the nicer café seating you must be a patron. Patrons of the businesses also have quicker access to the toilets (can more directly ask the staff for a key).

Conclusion: The plaza is a relatively busy public realm space, with users accessing the supermarket and shops. It is unclear who is a resident and who is not, and civil inattention is most common – people get on with their own business. Friends/contacts meet at the cafés. The seating is sufficiently comfortable for visitors and workers on their breaks, however interviewees felt they would rather go home than sit in the plaza. Children and their supervisors do use it for scootering/cycling. More shade and grass might make it more inviting for residents (though less suitable for scootering/cycling). Toilet facilities need better access. Some events (e.g. a market) were valued but rare due to the work involved.

Standing Patterns of Behaviour observed in site visits and reported in interviews: People appear to talk to known contacts they arrive with, civil inattention towards strangers. One instance of incidental meeting between contacts observed over 6 hours of observation and multiple walk-through visits (unsure if these people were residents). The most common behaviour is walking through the plaza on the way elsewhere.

River: Pool Building Corridors

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	Path between residential units and lift/building entrance, well-used in daily routines.
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control	a) Protected from wind, afternoon sun. Large windows provide lots of natural light in the area by the lift. Not air conditioned, however, and can get very hot in summer (windows do not open). b) No seating provided. c) Children playing, parents supervising, potentially other activities due to reasonable size space, but not generally used

e) Comfort (toilets, food/drink) f) Other	for other activities. Sometimes used for children's birthday parties. d) Seen as 'belonging' to those living on the floor (four units 90-170m^2), though access control point is at building entrance, not in lift (all residents of this particular building can therefore access). The lift button is low enough for toddlers to reach, meaning that supervisors must be careful to watch young children in case they call the lift. e) No food/drink or toilets available, but immediately adjacent to units so unneeded. f) People-watching out the window or sitting in the sun (subject to weather and time of day) are potential activities, however the lack of seating makes this less likely.
3) Waiting, pausing	Waiting for the lift when going out.
4) Perception of common interest a) Territory b) Other	a) High territorialisation in terms of few residents (four units) sharing the space, though note accessible by residents of other floors. Residents are likely to greet each other. b) Children if playing
5) Novelty/variability	Large windows afford view of street.
6) Perception of opportunity/need for aid	Pressing lift buttons, carrying e.g. shopping
7) Access a) Physical (incl. border markers) b) Sensory c) Financial	a) Access security-controlled at building entrance, residents of other floors unlikely to exit lift onto corridor unless invited. Immediate access from residents' units – only physical barrier is unit front door, which might be left open if other floor residents are known and trusted. b) May be seen from street (large windows), but limited range of vision and passers-by unlikely to be able to see much. Visible from lift when lift doors open. Sound likely to be heard from inside units, though the foyer area with windows is around the corner from most units and separated somewhat by the lift core. c) Free for residents and their guests

Conclusion: The large, well-lit space provides a good area for young children's use in addition to private space within units, due to its size, immediate access from units, relatively enclosed, safe space (except for lift button-pressing) and the fact it is shared between only four units. Interviewees did not mention noise, however this may be a consideration. The space might also afford adult use if seating were provided, however potential activities (people-watching, reading, sitting in the sun) might be better afforded or preferred in other spaces (e.g. further from units, better enjoyment of weather, vegetation, views etc.). Adult users might also feel intruded upon/awkward when lift doors open (though this could be improved by increasing screening/obvious division between the lift and a seating space). Seating would allow children's supervisors to sit in the space, however, and may increase the amount of time adults spend in the space, increasing the possibility of more extended interaction with passersby.

Standing Patterns of Behaviour observed in site visits and reported in interviews: No one encountered on two visits to multiple examples of this layout on different floors (daytime). Interviewees report acknowledgement and small talk with other residents, though rare to encounter.

River: Rooftop facilities (Pool, Gym, Sauna, Changing Rooms, Covered ex-BBQ area)

Affords…	Photo/Building Layout analysis

1) Path to elsewhere (→ propinquity)	No – though pool area must be passed through to access the gym
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Outdoor area quite windy, though affords shelter from rain and sun in covered ex-BBQ area. Can sunbathe beside pool. Gym and sauna are inside and protected from weather. b) No seating provided except in changing rooms c) Affords swimming, sunbathing, reading a book in the sun, relaxing in spa, supervising children, water games, exercising (though limited choices of equipment), relaxing in sauna (if working), changing clothes, showers, children's parties, eating, drinking (though alcohol technically not allowed). d) Technically should be residents and guests, but in practice might be others (who are felt to abuse the space at times). Only one point of security to access (though door to roof locks after hours) e) Toilets and water tap f) Affords a good view of surrounding area, fireworks can be seen at times. Gym appears spartan.
3) Waiting, pausing	While supervising children (2 men observed leaning against the railing chatting while supervising).
4) Perception of common interest a) Territory b) Other	a) Most people using these spaces will be residents or their guests b) Interest in exercise, having children.
5) Novelty/variability	People-watching, possibly watching activity in street or plaza below. Weather. Maintenance of equipment.
6) Perception of opportunity/need for aid	Opening doors, opening swimming pool gates, potential life-guard duty
7) Access a) Physical (incl. border markers) b) Sensory c) Financial	a) Complicated to access if you do not live in the pool building – involves descending to B3, walking through the carpark to the correct lift, and ascending to the roof. Residents may not know how to access. Additionally, the carpark is not the most comfortable environment to walk through, especially with swimsuits or in exercise clothes. Changing rooms provided, but might be an additional psychological barrier/time. b) Pool balcony can be seen from plaza, but unclear exactly what it might be if not known. Not particularly obvious. Pool can be observed from gym, but less so vice-versa (slightly-mirrored glass). Potential surveillance discomfort? c) Free for residents and their guests

Conclusion: The rooftop facilities are relatively well-suited to meeting and potentially developing connections with other residents due to the multiple activities afforded (and so multiple reasons to use the space). Some activities (exercising with personal music) don't invite interaction, however regular meetings through regular use of the space could lead to interaction. The facilities are cumbersome to access for many residents, however, which reduces the number of people using them through lack of knowledge or commitment to access. Better visibility or signage for the facilities could help. Maintenance (especially of sauna and gym equipment) a problem at times, and the BBQ was removed due to cleaning difficulties/users' lack of responsibility. Seating/sun lounges would be appreciated by users, and may mean more time spent here (though most interviewees reported the pool/open area is reasonably well-used, at least in summer). The ex-BBQ area is unused (no seating or meaningful activities). Potentially more use could be made of the indoor areas for year-round use other than the gym.

Standing Patterns of Behaviour observed in site visits and reported in interviews: Pool: acknowledgement of other users, asking for information about pool, children playing together, supervisors chatting while watching children, civil inattention at times (e.g. father and son down one end of pool, though son later interacts with other children, and sunbathers). Gym: generally civil inattention, though may acknowledge or chat at times. Women may not feel welcome.

BAY COURT: COURTYARD

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	Shorter path to the commercial centre/light rail for residents of the south and west buildings, but not for north or east buildings. Division between south/east buildings and north/west buildings meaning you can't walk directly through these. Also note access control. Seen mostly as a path to walk through rather than linger.
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) No real shade or rain protection. Protected from winds mostly due to surrounding buildings (or at least seemed to be on visiting). Taller trees may provide shade in time (but is soil deep enough?) b) Several benches beside paths, but these did not appear to be seats to be sought out (hard), more to pause quickly (though why would you pause if you're almost close to home). Potentially sit while waiting for dogs to do business? c) Walking through, walking dogs. Not much sitting according to residents and managers. Used for complex events organised by management. d) Secure access, only by residents (though could potentially jump fence). Residents may not know they can access the garden level that is not their own (unclear whether this is possible). Benches are set back from path, reducing imposition. e) No toilets – need to go up to apartment. f) Beautiful, lush vegetation that was highly valued, possibility of meeting cats or dogs. Lanterns at night. People enjoyed looking out at the garden, though may not physically use it.
3) Waiting, pausing	If locked out, or potentially if meeting someone else or walking one's dog.
4) Perception of common interest a) Territory b) Other	a) Other users are very likely to be residents, and most likely of one of the two buildings that each share part of the courtyard. b) Dog walkers, possibly children but not really a playspace for children due to lack of soft areas and possibly noise – just paths.
5) Novelty/variability	Vegetation, potentially things on people's balconies/signs of life (which might be disallowed by strata bylaws), people sitting on the benches (this is rare).
6) Perception of opportunity/need for aid	Opening doors, carrying bags

7) Access a) Physical (incl. border markers) b) Sensory c) Financial	a) Secure access doors and gates, division between upper and lower gardens. Most of the courtyard is inaccessible due to planting. b) Can be easily seen from apartment windows, leading to feelings of being watched and reducing likelihood of using. Can also be seen from outside gates. Visual outlook from apartments valued however. Several participants spoke of being wary of making too much noise in the courtyard, indicating noise is easily heard. c) No charge for residents (except through rent/strata levies). Apparently highly maintained, which is likely to be expensive.

Conclusion: The courtyard is valued for its greenery and peace when seen from the apartments or when walking through, but is very rarely used for lingering except when events are organised. This is partly due to the lack of usable space (only paths), lack of comfortable seating (compared to private apartments) and feelings of being watched. This might be ameliorated by shade, more comfortable seating or grass, and potentially tables to encourage more purposeful use for e.g. convenient picnicking.

Standing Patterns of Behaviour observed in site visits and reported in interviews: Acknowledgement when walking through. Seeing someone sitting on a bench is rare, but catalyses interaction (though this may be due to its rarity).

Bay Court: Library and Study Spaces

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	No
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Indoors, window to courtyard with morning sun but window does not open, there is no air conditioning b) 3 plastic/metal chairs and 2 stools in the study space. Library space: 2 deck chairs, 3 low stools, 3 high stools at window bench c) Reading, studying, looking out the window, chatting, leaving things on tables or in bookcase, browsing bookcase, having a meeting (though quite cramped for more than a few people), children playing potentially d) Visually-permeable dividers between corridor and library/study spaces (plants on poles and bookcase) e) No, but close to apartments for those who live on the floor f) People-watching out the window to courtyard, but not much happens in there.
3) Waiting, pausing	Potentially if organising to meet there
4) Perception of common interest a) Territory b) Other	a) Resident of the complex, likely the floor due to lack of knowledge of the space b) Books, studying
5) Novelty/variability	Books (though very few present), view out the window, lift going up and down and sometimes opening
6) Perception of opportunity/need for aid	Not particularly. Need for civil inattention while studying.
7) Access a) Physical (incl. border markers) b) Sensory	a) Accessible to all residents, but few know how to get there. Must enter building, go up in the lift to the correct floor. Spaces are marked off from the corridor through wallpaper, visually permeable dividers (plants, bookcase)

c) Financial	b) Likely difficult to see interior fitout from the courtyard or apartment windows in other buildings. Can hear children playing in here from outside or other apartments. Easily viewable when lift doors open (making it awkward to have a meeting here) c) Must live in the complex or be a guest. One interviewee was worried about paying for cleaning should e.g. drinks be spilled

Conclusion: These spaces are unknown to most residents, and did not offer anything particularly attractive to interviewees I informed of them. Interviewees living with others in small apartments had used (or would have liked to use) this space as break-out space when e.g. noisy in their apartment. People had also anonymously left small gifts for other residents here e.g. bookmarks, which contributed to a friendly atmosphere. The space is too small and not private enough for meetings, especially as the lift doors open right in front of it. Children appeared to play in a similar (but bare) space on another floor. It could be used for small events, but cleaning and responsibility were concerns.

Standing Patterns of Behaviour observed reported in interviews: very rare to see anyone using them, civil inattention the only behaviour reported.

Bay Court: Entrance (lobby and exterior)

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	Into and out of the building, but could be bypassed through the carpark. Terraced-unit residents do not need to use. Also path to courtyard and shortcut through complex for some (though access control makes this slightly awkward).
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Indoor lobby, covered area outside, sun b) No c) Waiting to be let in, waiting for the lift, opening the door, holding the lift or the door, waiting to meet someone, looking in the mirror, collecting mail d) Lobby accessible to residents and their guests e) None f) Greenery
3) Waiting, pausing	For lift, to be let in, for door to open, to meet someone
4) Perception of common interest a) Territory b) Other	a) Living in the building, or guest of someone in the building b) Attire, having a child or a dog
5) Novelty/variability	People, bikes, cars, dogs going past on the street or going into the building, cleaners
6) Perception of opportunity/need for aid	Holding the lift, holding/opening the door, carrying groceries/packages, pressing the lift button
7) Access a) Physical (incl. border markers) b) Sensory c) Financial	a) Lobby accessible by residents and their guests, exterior accessible by public but involves small change of grade (ramp) and change of ground material as well as having a roof overhang, implying public space/apartment complex border, though not as strongly as at Bay Park

	b) Lobby wall is glass, so some activity can be seen from the street and the exterior as well as the courtyard (though shaded somewhat). The lift is in an alcove, so people waiting for the lift cannot be seen from the street. c) Residence in the building/guest to access the lobby

Conclusion: There is some scope for pausing and chatting while waiting for the lift or entering/exiting the lobby as well as collecting mail. Tie development likely to be restricted to acknowledgement ties however, due to perceived time pressure.

Standing Patterns of Behaviour observed in site visits and reported in interviews: Acknowledgement or civil inattention, or some small talk if people know each other.

Bay Park: Pocket Parks (with closed park)

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	Intermittently. They may be used to get to the larger park, or the Tramsheds (greener path and possibly shorter). Probably more likely to be a pathway to elsewhere once the park is fully open.
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Shaded by buildings to the north, but should get reasonable sun in the mornings/afternoons. Not much shade in summer (though young tree in South Park). Potential wind tunnel? No rain protection. b) Four park benches, two on each side of the park facing onto the paths (or the larger park). c) Dog walking, potentially sitting in the sun, standing around chatting to other dog owners. Parking bicycle (note only share bikes there). Waiting for other people. d) Step up to the grass area, otherwise walk-through. Public space, publicly accessible. No barriers to entry (though elevated grass could be e) None (but small). Picnic area potentially (though dog place?) f) Small hill in South Park that baby of one participant loved, but dogs enjoy it too. Grass is dead in patches from overuse as a toilet by dogs in South Park, not so much in North Park (which has sculptures). Unsure of reason for greater use of South Park by dogs – possibly more central for people in the existing buildings to the south?
3) Waiting, pausing	Seats to sit on. Observed people sitting on them at times – potentially good place to wait to meet someone from another building, or have a break when carrying shopping bags from the commercial centre (but depends how far you are from home).
4) Perception of common interest a) Territory b) Other	a) Between the Bay Park buildings and very convenient. People walking past could be anyone, but likely from the general area. No real flow between the buildings and the park; they are separate, private residences on either side. Entrance opening to park potentially could 'claim' the park? b) Used by dogs and their owners, annoyance at closed park
5) Novelty/variability	Greenery, sculptures, dogs, things happening in the closed park

6) Perception of opportunity/need for aid	Not particularly (except for fences to large park that people helped each other through)
7) Access a) Physical (incl. border markers) b) Sensory c) Financial	a) Very convenient (directly beside buildings), but likely seen mostly as a pass-by or pass-through space unless you're a dog owner (this possibly contributes to it not being used for other things). Benches set back from the path a little, but do face directly onto it which could contribute to recognition and acknowledgement, or possibly be seen as too close. Wide footpath though. b) Quite visible from buildings around and the path, and small compared to other parks – one participant spoke of feeling too obvious and exposed sitting there. c) Freely accessible

Conclusion: The parks are very convenient to the buildings and users are highly visible to people walking past. Mostly used by dog walkers (which dissuades many other users), though other users may find the larger parks better for their purposes anyway (young children potentially excepted – convenience). There are few potential programs in the site that might not be done elsewhere e.g. picnicking, children playing, sunbathing, reading, in a less-exposed place with more pleasant conditions. However, the parks' convenience and their appropriation by dog walkers mean that relationships are developed between dog walkers, and potentially with passersby. The closed park also offered opportunities to assist others at times, through helping each other through the fence, as well as providing an easy talking point.

Standing Patterns of Behaviour observed in site visits and reported in interviews: Few people using while I was there. Reports of dog users using it and chatting to each other, acknowledgement from passersby.

Bay Park: Corridors

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	Path from apartment door to lift/fire stairs and vice-versa.
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Indoor, window beside lift b) None c) Waiting for the lift, opening apartment door, checking self in the mirror d) Only accessible by floor residents and their guests e) None f) -
3) Waiting, pausing	For the lift, when opening apartment door, to chat before entering apartment (one extravert interviewee)
4) Perception of common interest a) Territory b) Other	a) Living on the same floor b) Attire (e.g. baseball cap)
5) Novelty/variability	Children, dogs, other people in the corridor (uncommon)
6) Perception of opportunity/need for aid	Pushing button, holding lift, carrying groceries/packages
7) Access	a) Only floor residents and their visitors can access

a) Physical (incl. border markers) b) Sensory c) Financial	b) Apartments are all along the bar of the 'T' corridor, but lifts are in the perpendicular section (so people waiting at the lift cannot see people coming out of or going into apartments, but can hear them. c) Residence in building

Conclusion: Residents tend to greet each other in the corridors, but are unlikely to meet each other in the corridor unless they leave at the same time in the morning. Some interviewees (older, extraverted and/or with young children) had made an effort to find out the names of other residents on their floor and might chat at length with some. The configuration of the corridor means increased privacy (apartment doors cannot be seen from the lift or lift waiting area) but may reduce chances to see people.

Standing Patterns of Behaviour reported in interviews: acknowledgement, small talk, holding the lift for people coming out of their apartment (though they cannot see you are holding the lift, which sounded slightly awkward according to one interviewee but is an opening for conversation).

Bay Park: Entrance (lobby and exterior)

Affords…	Photo/Building Layout analysis
1) Path to elsewhere (→ propinquity)	Into and out of the building, but could be bypassed through the carpark. Terraced-unit residents do not need to use.
2) Enjoyment a) Protection/enjoyment of climate b) Sitting c) Concurrent, meaningful activities d) Territorial control e) Comfort (toilets, food/drink) f) Other	a) Indoor lobby, covered area outside, afternoon sun b) Perching on planters afforded, used by at least one resident c) Waiting to be let in, waiting for the lift, opening the door, holding the lift or the door, waiting to meet someone d) Lobby accessible to residents of the particular building (not whole complex) e) None f) Green plants in planter boxes, people-watching
3) Waiting, pausing	For lift, to be let in, for door to open, to meet someone
4) Perception of common interest a) Territory b) Other	a) Living in the building, or guest of someone in the building b) Attire, having a child or a dog
5) Novelty/variability	People, bikes, cars, dogs going past on the street or going into the building
6) Perception of opportunity/need for aid	Holding the lift, holding/opening the door, carrying groceries/packages, pressing the lift button
7) Access a) Physical (incl. border markers) b) Sensory c) Financial	a) Lobby accessible by residents and their guests, exterior accessible by public but involves change of grade (steps and ramp) and change of material as well as having a roof overhang, implying public space/apartment complex border b) Lobby wall is glass, so all activity can be seen from the street and the exterior (though shaded somewhat). People at the exterior can be very easily seen from the street c) Residence in the building/guest to access the lobby

Conclusion: There is some scope for pausing and chatting while waiting for the lift or entering/exiting the lobby, and one interviewee mentioned sitting on the planters people-watching. Limited tie development occurs here however, due to people generally being on the way somewhere else.

Standing Patterns of Behaviour observed in site visits and reported in interviews: Few people directly observed. Acknowledgement or civil inattention likely, based on interviews, and sometimes small talk while waiting for the lift depending on e.g. children, dog, known person.

APPENDIX I: ASSUMPTIONS FOR HIERARCHICAL MULTIPLE REGRESSION

This section covers the assumptions tests run for the hierarchical multiple regression in section 10.1, following Laerd Statistics (2018).

There was independence of residuals (sufficiently low correlation between variables), with a Durbin-Watson statistic of 2.102. Variables met linearity assumptions based on scatterplots of the studentised residual and unstandardized predicted value, as well as the independent variables and social cohesion (DV). There was homoscedasticity, as assessed by visual inspection of the studentised residuals/unstandardized predicted values scatterplot. There were no correlations between independent variables above 0.7, and the lowest tolerance value was .399 (for chatting ties), therefore assumptions of collinearity were met. There were no studentised deleted residuals greater than 3 SD, though there was one leverage value above .2. This respondent was removed from the analyses. There were no Cook's Distance values above 1, therefore (apart from the removed respondent) there were no significant outliers, high leverage points or influential points. Based on visual inspection of a P-P Plot and a Q-Q Plot of studentised residual, normality assumptions were met.

APPENDIX J: SPSS OUTPUT FOR HIERARCHICAL MULTIPLE REGRESSION

Descriptive Statistics

	Mean	Std. Deviation	N
Social cohesion scale	25.0847	5.34683	189
Extraversion 1-7	4.3122	1.50545	189
Overall satisfaction scale	5.9242	.88098	189
Length of residence in years including months	1.9361	1.40776	189
What is your age?	2.9471	1.46133	189
What is your gender?	1.4392	.49760	189
Do you have a dog?	.1111	.31510	189
Living alone	.1852	.38948	189
Time pressure dichotomised	.4127	.49363	189
Tenure with no 'other' answers	1.6772	.46877	189
Binary born in Aus, Oce., Amer., EU/other	.6825	.46672	189
Presence of children under or over 15	.2275	.42034	189
Case is Shore	.2169	.41325	189
Case is River	.2381	.42705	189
Case is Bay Court	.3492	.47799	189
Case is Bay Park	.1958	.39784	189
Family-friends ties None, 1-5, 6+	.7672	.71368	189
Chatting ties None, 1-5, 6+	1.0317	.69117	189
Nodding ties None, 1-5, 6+	1.3175	.65620	189

		Social cohesion scale	Extraversion 1-7	Overall satisfaction scale	Length of residence in years including months	What is your age?	What is your gender?	Do you have a dog?	Living alone	Time pressure dichotomised	Tenure with no 'other' answers	Binary born in Aus, Oce., Amer., EU/other	Presence of children under or over 15	Case is Shore	Case is River	Case is Bay Court
Pearson Correlation	Social cohesion scale	1.000	.287	.199	.111	.248	-.012	.089	-.031	-.094	-.195	-.175	.159	.016	.031	-.149
	Extraversion 1-7	.287	1.000	.128	-.012	.040	.004	.151	-.086	.076	-.041	-.029	.123	.027	-.050	.051
	Overall satisfaction scale	.199	.128	1.000	-.165	.062	-.029	-.027	.010	-.009	-.021	.092	-.039	-.071	-.140	.118
	Length of residence in years including months	.111	-.012	-.165	1.000	.230	-.072	-.029	.136	-.009	-.285	-.105	.028	.052	.267	-.321
	What is your age?	.248	.040	.062	.230	1.000	.032	.047	.073	-.110	-.398	.077	.106	.019	.020	-.095
	What is your gender?	-.012	.004	-.029	-.072	.032	1.000	-.041	-.038	.038	.041	.077	.054	-.078	-.019	.067
	Do you have a dog?	.089	.151	-.027	-.029	.047	-.041	1.000	-.039	-.057	.028	.024	-.112	.141	-.198	.165
	Living alone	-.031	-.086	.010	.136	.073	-.038	-.039	1.000	.043	-.079	.237	-.259	.179	.053	-.206
	Time pressure dichotomised	-.094	.076	-.009	-.009	-.110	.038	-.057	.043	1.000	.142	.087	.109	.002	.087	.017

	Tenure with no 'other' answers	-.195	-.041	-.021	-.285	-.398	.041	.028	-.079	.142	1.000	.186	-.003	.061	-.119	.055
	Binary born in Aus, Oce., Amer., EU/other	-.175	-.029	.092	-.105	.077	.077	.024	.237	.087	.186	1.000	-.253	-.027	-.313	.094
	Presence of children under or over 15	.159	.123	-.039	.028	.106	.054	-.112	-.259	.109	-.003	-.253	1.000	-.194	.200	.079
	Case is Shore	.016	.027	-.071	.052	.019	-.078	.141	.179	.002	.061	-.027	-.194	1.000	-.294	-.386
	Case is River	.031	-.050	-.140	.267	.020	-.019	-.198	.053	.087	-.119	-.313	.200	-.294	1.000	-.409
	Case is Bay Court	-.149	.051	.118	-.321	-.095	.067	.165	-.206	.017	.055	.094	.079	-.386	-.409	1.000
	Case is Bay Park	.130	-.036	.083	.045	.073	.020	-.132	.005	-.116	-.002	.251	-.109	-.260	-.276	-.361
	Family-friends ties None, 1-5, 6+	.592	.345	.133	.022	.105	.020	.163	.022	-.073	-.162	-.159	.036	.118	.008	-.088
	Chatting ties None, 1-5, 6+	.552	.300	.056	.213	.165	.021	.228	.057	.008	-.264	-.101	.085	.162	.028	-.243
	Nodding ties None, 1-5, 6+	.332	.233	.119	.239	.156	-.103	.111	.081	.037	-.097	.001	.007	.117	.052	-.254
Sig. (1-tailed)	Social cohesion scale	.	.000	.003	.065	.000	.435	.111	.338	.099	.004	.008	.014	.415	.337	.020
	Extraversion 1-7	.000	.	.039	.432	.291	.477	.019	.121	.149	.287	.348	.047	.354	.247	.243
	Overall satisfaction scale	.003	.039	.	.012	.200	.347	.356	.445	.450	.387	.104	.295	.164	.027	.053
	Length of residence in years including months	.065	.432	.012	.	.001	.164	.347	.031	.453	.000	.076	.349	.238	.000	.000

What is your age?	.000	.291	.200	.001	.	.330	.258	.158	.067	.000	.147	.073	.397	.391	.096
What is your gender?	.435	.477	.347	.164	.330	.	.286	.304	.303	.289	.147	.231	.144	.397	.178
Do you have a dog?	.111	.019	.356	.347	.258	.286	.	.299	.218	.351	.371	.063	.027	.003	.012
Living alone	.338	.121	.445	.031	.158	.304	.299	.	.278	.141	.001	.000	.007	.233	.002
Time pressure dichotomised	.099	.149	.450	.453	.067	.303	.218	.278	.	.026	.117	.068	.489	.118	.407
Tenure with no 'other' answers	.004	.287	.387	.000	.000	.289	.351	.141	.026	.	.005	.482	.201	.052	.228
Binary born in Aus, Oce., Amer., EU/other	.008	.348	.104	.076	.147	.147	.371	.001	.117	.005	.	.000	.355	.000	.099
Presence of children under or over 15	.014	.047	.295	.349	.073	.231	.063	.000	.068	.482	.000	.	.004	.003	.140
Case is Shore	.415	.354	.164	.238	.397	.144	.027	.007	.489	.201	.355	.004	.	.000	.000
Case is River	.337	.247	.027	.000	.391	.397	.003	.233	.118	.052	.000	.003	.000	.	.000
Case is Bay Court	.020	.243	.053	.000	.096	.178	.012	.002	.407	.228	.099	.140	.000	.000	.
Case is Bay Park	.038	.312	.128	.268	.160	.391	.035	.472	.057	.491	.000	.068	.000	.000	.000
Family-friends ties None, 1-5, 6+	.000	.000	.035	.381	.074	.393	.013	.382	.159	.013	.014	.313	.053	.455	.115
Chatting ties None, 1-5, 6+	.000	.000	.220	.002	.012	.387	.001	.218	.456	.000	.084	.123	.013	.349	.000

Nodding ties None, 1-5, 6+	.000	.001	.052	.000	.016	.078	.063	.134	.308	.091	.495	.463	.054	.241	.000

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River[b]	.	Enter
2	Family-friends ties None, 1-5, 6+[c]	.	Enter
3	Nodding ties None, 1-5, 6+, Chatting ties None, 1-5, 6+[c]	.	Enter

a. Dependent Variable: Social cohesion scale

b. Tolerance = .000 limit reached.

c. All requested variables entered.

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.510[a]	.260	.200	4.78170	.260	4.362	14	174	.000	
2	.677[b]	.458	.411	4.10283	.198	63.346	1	173	.000	
3	.706[c]	.498	.448	3.97267	.040	6.761	2	171	.001	2.170

a. Predictors: (Constant), Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River

b. Predictors: (Constant), Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River, Family-friends ties None, 1-5, 6+

c. Predictors: (Constant), Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River, Family-friends ties None, 1-5, 6+, Nodding ties None, 1-5, 6+, Chatting ties None, 1-5, 6+

d. Dependent Variable: Social cohesion scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1396.196	14	99.728	4.362	.000[b]
	Residual	3978.449	174	22.865		
	Total	5374.646	188			
2	Regression	2462.504	15	164.167	9.753	.000[c]
	Residual	2912.141	173	16.833		
	Total	5374.646	188			
3	Regression	2675.904	17	157.406	9.974	.000[d]
	Residual	2698.742	171	15.782		
	Total	5374.646	188			

a. Dependent Variable: Social cohesion scale

b. Predictors: (Constant), Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River

c. Predictors: (Constant), Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River, Family-friends ties None, 1-5, 6+

d. Predictors: (Constant), Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River, Family-friends ties None, 1-5, 6+, Nodding ties None, 1-5, 6+, Chatting ties None, 1-5, 6+

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	13.745	3.480		3.949	.000	6.876	20.614					
	Extraversion 1-7	.832	.241	.234	3.454	.001	.357	1.308	.287	.253	.225	.924	1.082
	Overall satisfaction scale	1.138	.414	.188	2.750	.007	.321	1.955	.199	.204	.179	.915	1.093
	Length of residence in years including months	.102	.282	.027	.360	.719	-.455	.658	.111	.027	.024	.773	1.294
	What is your age?	.595	.275	.163	2.162	.032	.052	1.139	.248	.162	.141	.751	1.332
	What is your gender?	.126	.711	.012	.177	.859	-1.276	1.529	-.012	.013	.012	.973	1.028

	Do you have a dog?	1.734	1.183	.102	1.466	.145	-.601	4.069	.089	.110	.096	.875	1.143
	Living alone	.333	.997	.024	.334	.739	-1.635	2.300	-.031	.025	.022	.807	1.240
	Time pressure dichotomised	-.628	.739	-.058	-.850	.397	-2.086	.830	-.094	-.064	-.055	.915	1.093
	Tenure with no 'other' answers	-.728	.873	-.064	-.834	.405	-2.451	.994	-.195	-.063	-.054	.727	1.376
	Binary born in Aus, Oce., Amer., EU/other	-2.085	.894	-.182	-2.332	.021	-3.849	-.321	-.175	-.174	-.152	.699	1.431
	Presence of children under or over 15	1.593	.939	.125	1.697	.092	-.260	3.447	.159	.128	.111	.781	1.281
	Case is Shore	1.405	1.031	.109	1.362	.175	-.630	3.440	.016	.103	.089	.670	1.493
	Case is River	1.096	1.068	.088	1.026	.306	-1.011	3.203	.031	.078	.067	.585	1.709
	Case is Bay Park	3.056	1.045	.227	2.925	.004	.994	5.117	.130	.216	.191	.704	1.420
2	(Constant)	14.627	2.988		4.895	.000	8.729	20.525					
	Extraversion 1-7	.279	.218	.079	1.279	.203	-.152	.709	.287	.097	.072	.830	1.204
	Overall satisfaction scale	.789	.358	.130	2.206	.029	.083	1.495	.199	.165	.123	.902	1.109
	Length of residence in years including months	.188	.242	.049	.776	.439	-.290	.666	.111	.059	.043	.771	1.297
	What is your age?	.536	.236	.146	2.267	.025	.069	1.003	.248	.170	.127	.750	1.333
	What is your gender?	-.166	.611	-.015	-.271	.786	-1.371	1.040	-.012	-.021	-.015	.969	1.032
	Do you have a dog?	.599	1.025	.035	.585	.559	-1.424	2.623	.089	.044	.033	.858	1.165
	Living alone	-.090	.857	-.007	-.104	.917	-1.781	1.602	-.031	-.008	-.006	.803	1.245
	Time pressure dichotomised	-.300	.635	-.028	-.472	.638	-1.553	.954	-.094	-.036	-.026	.911	1.098

	Tenure with no 'other' answers	-.097	.753	-.008	-.128	.898	-1.583	1.390	-.195	-.010	-.007	.718	1.392
	Binary born in Aus, Oce., Amer., EU/other	-1.215	.775	-.106	-1.569	.119	-2.744	.314	-.175	-.118	-.088	.685	1.460
	Presence of children under or over 15	1.488	.806	.117	1.846	.067	-.103	3.078	.159	.139	.103	.780	1.281
	Case is Shore	.452	.893	.035	.507	.613	-1.310	2.214	.016	.038	.028	.658	1.520
	Case is River	.571	.918	.046	.622	.535	-1.242	2.383	.031	.047	.035	.582	1.718
	Case is Bay Park	2.481	.899	.185	2.759	.006	.706	4.256	.130	.205	.154	.700	1.430
	Family-friends ties None, 1-5, 6+	3.759	.472	.502	7.959	.000	2.826	4.691	.592	.518	.445	.788	1.269
3	(Constant)	13.958	2.903		4.809	.000	8.228	19.688					
	Extraversion 1-7	.178	.214	.050	.831	.407	-.245	.601	.287	.063	.045	.807	1.239
	Overall satisfaction scale	.734	.350	.121	2.100	.037	.044	1.424	.199	.159	.114	.885	1.130
	Length of residence in years including months	.054	.239	.014	.227	.821	-.417	.525	.111	.017	.012	.744	1.344
	What is your age?	.556	.230	.152	2.415	.017	.102	1.009	.248	.182	.131	.743	1.346
	What is your gender?	-.251	.598	-.023	-.421	.675	-1.431	.928	-.012	-.032	-.023	.949	1.053
	Do you have a dog?	-.289	1.022	-.017	-.283	.778	-2.307	1.729	.089	-.022	-.015	.809	1.236
	Living alone	-.150	.830	-.011	-.181	.857	-1.789	1.489	-.031	-.014	-.010	.803	1.245
	Time pressure dichotomised	-.509	.618	-.047	-.824	.411	-1.728	.711	-.094	-.063	-.045	.903	1.107
	Tenure with no 'other' answers	.423	.751	.037	.563	.574	-1.059	1.905	-.195	.043	.031	.678	1.475

	Binary born in Aus, Oce., Amer., EU/other	-1.281	.750	-.112	-1.707	.090	-2.762	.201	-.175	-.129	-.092	.684	1.461
	Presence of children under or over 15	1.095	.789	.086	1.387	.167	-.464	2.653	.159	.105	.075	.763	1.311
	Case is Shore	-.283	.888	-.022	-.319	.750	-2.036	1.469	.016	-.024	-.017	.624	1.603
	Case is River	.138	.899	.011	.154	.878	-1.637	1.913	.031	.012	.008	.569	1.757
	Case is Bay Park	1.608	.904	.120	1.778	.077	-.177	3.392	.130	.135	.096	.649	1.541
	Family-friends ties None, 1-5, 6+	2.835	.531	.378	5.340	.000	1.787	3.883	.592	.378	.289	.585	1.710
	Chatting ties None, 1-5, 6+	1.983	.665	.256	2.983	.003	.671	3.295	.552	.222	.162	.398	2.514
	Nodding ties None, 1-5, 6+	.234	.574	.029	.407	.684	-.900	1.368	.332	.031	.022	.591	1.693

a. Dependent Variable: Social cohesion scale

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	Case is Bay Court	.[b]	.	.	.	.000	.	.000
	Family-friends ties None, 1-5, 6+	.502[b]	7.959	.000	.518	.788	1.269	.582
	Chatting ties None, 1-5, 6+	.471[b]	6.744	.000	.456	.694	1.440	.573
	Nodding ties None, 1-5, 6+	.201[b]	2.806	.006	.209	.795	1.258	.573
2	Case is Bay Court	.[c]	.	.	.	.000	.	.000
	Chatting ties None, 1-5, 6+	.273[c]	3.663	.000	.269	.524	1.907	.524
	Nodding ties None, 1-5, 6+	.132[c]	2.102	.037	.158	.779	1.284	.572

3	Case is Bay Court	.[d]	.	.	.	.000	.	.000

a. Dependent Variable: Social cohesion scale

b. Predictors in the Model: (Constant), Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River

c. Predictors in the Model: (Constant), Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River, Family-friends ties None, 1-5, 6+

d. Predictors in the Model: (Constant), Case is Bay Park, Tenure with no 'other' answers, What is your gender?, Extraversion 1-7, Living alone, Overall satisfaction scale, Do you have a dog?, Time pressure dichotomised, Presence of children under or over 15, Length of residence in years including months, Case is Shore, Binary born in Aus, Oce., Amer., EU/other, What is your age?, Case is River, Family-friends ties None, 1-5, 6+, Nodding ties None, 1-5, 6+, Chatting ties None, 1-5, 6+

Appendix K: NVivo Coding Structure for All Cases

The following tables show the top three levels of the coding structure used for the qualitative analysis across all cases. The first parent node (built environment) was structurally coded, and the remaining four parent nodes were thematically coded. The full coding structure contains two further levels under some nodes (5 levels in total).

Built Environment	Interviews	References
Apartments v terraces	**17**	**38**
Complex circulation spaces	**92**	**914**
Carpark	48	147
Corridor	54	239
Lift	64	251
Lobby-front entrance	68	195
Complex functional spaces	**28**	**52**
Garbage	10	13
Mailroom	4	5
Manager's office	12	20
Meeting room	6	13
Complex other buildings	**11**	**24**
Complex potential lingering spaces	**72**	**504**
Courtyard BC	17	92
Courtyard S	31	83
Library-Study rooms BC	16	62
Mysterious roof spaces R	4	6
Plaza R	16	57
Pool, gym, sauna R	21	106
Roof terrace S	23	98
Private apartments	**21**	**54**
Public local spaces	**68**	**1464**
Commercial centres	35	162
Community facilities	48	204
Food & drink	64	557
Parks	53	327
Streets generally	48	157
Transport	32	57
Wider city-country	**13**	**16**

Wish-list spaces	**56**	**212**
Community garden	4	8

CST Experience	Interviews	References
Balancing interaction-privacy	**63**	**369**
Going wrong-intrusion	22	36
Privacy	7	8
Small role	50	158
Home-Belonging-Community	**56**	**213**
Fragmented	4	9
Friendly	36	85
Norms	9	19
Stake-invested	7	9
Safety -trust-favours	**65**	**355**
Help-favours	62	192
Recognition	16	36
Working together	12	32
Social interaction-isolation	**62**	**213**
Diversity-novelty-expand horizons	25	41
Not knowing people	37	68
Pleasant	16	31

Developing CSTs	Interviews	References
Kids & Pets	**55**	**313**
Children	44	166
Pets	38	147
Other focuses	**67**	**689**
Previous-existing relationships	47	115
Self-sufficiency	13	29
Time pressure	54	204
Personal attributes	**64**	**525**
Culture-language	44	147
Lifestage	29	69
Renters-owners	34	94
Right sort of people	10	25
Staff	52	190
Personality	**66**	**512**

Commonality	53	148
Initiative	49	130
Lonely-Living alone	3	6
Social animals	3	4
Unsure of reciprocity	4	6
Time-process	**68**	**1451**
Interactions	67	567
Regularity	68	668
Transience	51	156

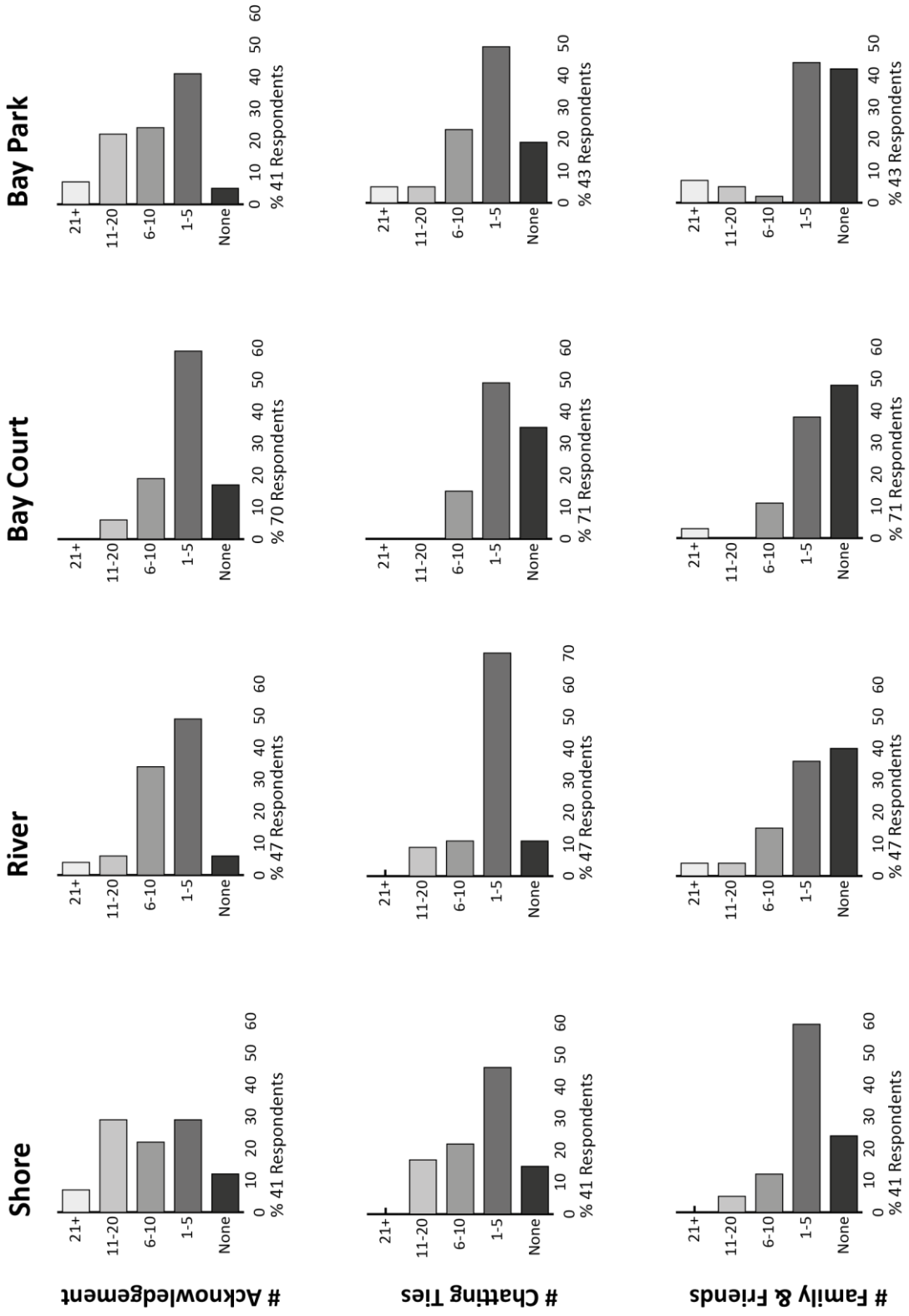
Management-activation	Interviews	References
Drawcard	**44**	**166**
Atmosphere	37	75
Management loyalty-dynamics	9	30
Preferred food-drink	21	47
Events, activities	**59**	**358**
Activities-interest groups	40	110
Events	53	170
Knowledge	11	29
Moving in	25	49
Management initiative	**31**	**81**
Community aspect	6	10
Management restrictions	**21**	**57**
Bureaucracy	7	23
Communication-rules	8	19
Money concerns	**44**	**143**
Problems	**54**	**276**
Code of conduct	24	78
Conflicting activities	3	4
Maintenance-cleaning	38	101
Politics	9	23
Unfulfilled promise	2	7

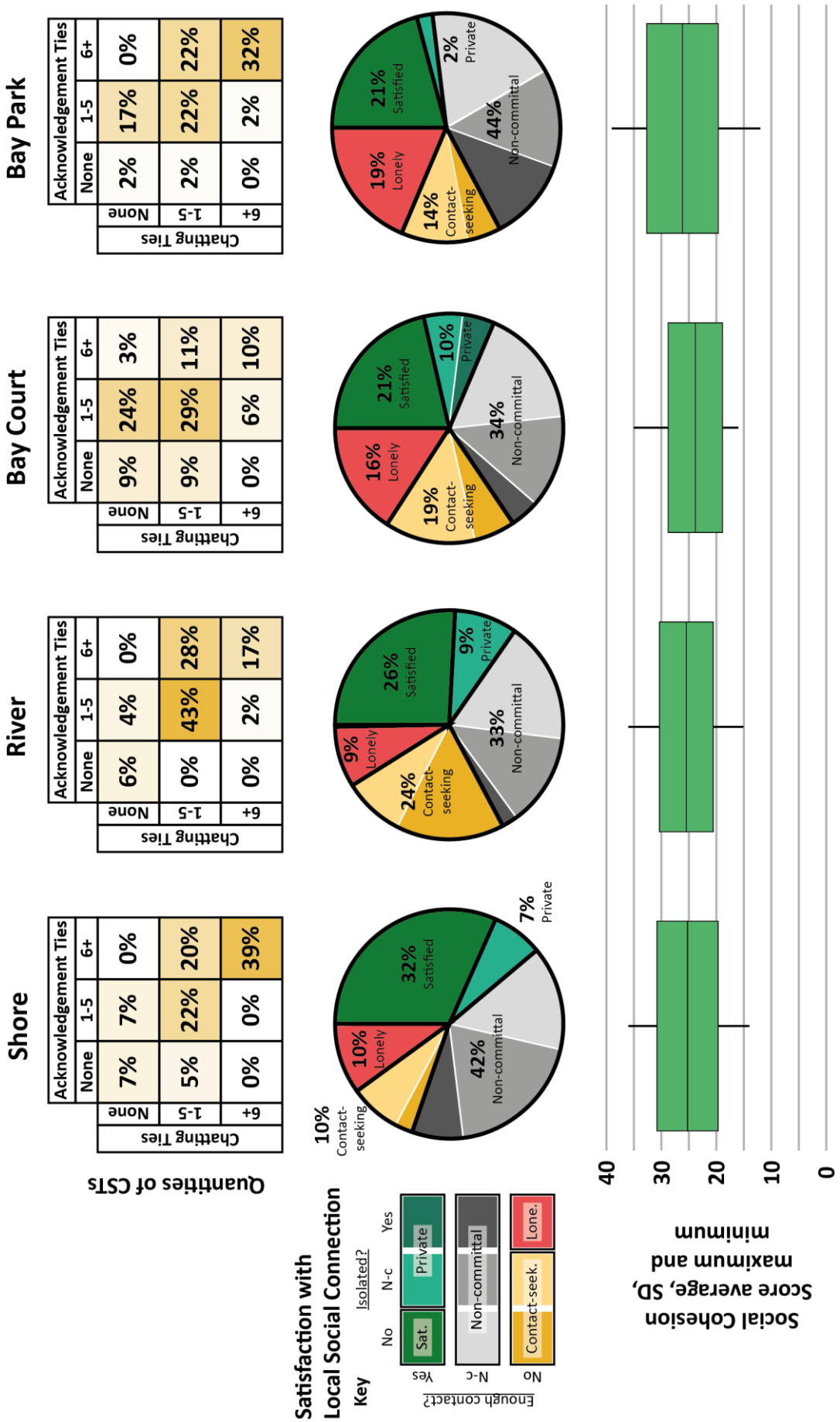
Use	Interviews	References
Access & Salience	**62**	**345**
Access	50	157
Convenience	57	171

Knowledge of it	10	17
Circulation spaces	**46**	**96**
Pass through	39	80
Time pressure	12	16
Comfort	**68**	**667**
Civil inattention	56	280
Crowding	8	15
Feel socially uncomfortable	2	6
Looking presentable	5	8
Noise consciousness	11	31
Pleasant	58	187
Privacy	14	42
Safety-security	42	98
Competition with other spaces	**65**	**336**
Facilities	60	252
Go elsewhere instead	40	84
Purpose	**67**	**613**
(No) purpose	21	58
Leisure	62	393
Need	33	106
Not aimed at me	35	56
Territory-Realms	**48**	**170**

APPENDIX L: SIDE-BY-SIDE SOCIAL ASSEMBLAGE FIGURES FOR CASES

The following pages repeat the social assemblage figures (sections 6/7/8/9.2) for each case, with the social cohesion figure simplified to a box-and-whisker plot for clarity. This is to help understanding of the social assemblage in each case.




Shore
River
Bay Court
Bay Park
Quantities of CSTs
Chatting Ties
Acknowledgement Ties
None
1-5
6+
Satisfaction with Local Social Connection
Key
Isolated?
No
N-c
Yes
Sat.
Private
Non-committal
Contact-seek.
Lone.
Enough contact?
Yes
N-c
No
10% Contact-seeking
10% Lonely
32% Satisfied
42% Non-committal
7% Private
9% Lonely
24% Contact-seeking
26% Satisfied
33% Non-committal
9% Private
16% Lonely
19% Contact-seeking
21% Satisfied
34% Non-committal
10% Private
19% Lonely
14% Contact-seeking
21% Satisfied
44% Non-committal
2% Private
Social Cohesion Score average, SD, maximum and minimum
40
30
20
10
0