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Overview

Australians have made enormous progress in thinking about how to make cities more productive and sustainable. Yet we lag behind in understanding what makes a *social* city – a city that helps to connect us with other people.

Humans are social animals: relationships are critical to our wellbeing. A lack of social connection leads to loneliness and isolation, experiences far more harmful than previously realised.

There are worrying signs that isolation and loneliness are increasing in Australia. Data shows that people's friendships and neighbourhood connections have diminished over the past two decades. Our changing population means these trends could get worse.

Already a quarter of Australian households consist of people living by themselves and this is the fastest growing household type. People living on their own are more likely to experience loneliness. Australia is an ageing society, and older people have a higher risk of isolation, as do other groups like sole parents and people with limited English.

What does this have to do with cities? The way we build and organise our cities can help or hinder social connection. At worst, failed approaches can 'build in' isolation, with long-term damage to quality of life and physical and mental health.

For example, inefficient urban transport networks see much of our day swallowed up by commuting, leaving us less time for friends and family. It is simpler for people to get together to play sport if training grounds are available nearby, and it is easier to organise a picnic if you can walk to a local park. Streets can prioritise cars or pedestrians. Being able to move easily by car is convenient, but heavy traffic in residential areas diminishes contact between neighbours. We tend to hurry past a building that presents a blank wall to the street, whereas an open facade can create inviting spaces to stop and talk.

This report explores these and other aspects of our cities. While it is not comprehensive, it draws together a wide range of current knowledge into a single document. A clear thread running through our findings is that people attract people: we like (and need) to be around one another.

Of course we are not suggesting that city design is the answer to every challenge. Many influences on the quantity and quality of social connection are not related to urban form. Nor are we suggesting there is a crisis – relative to many countries, indicators of social connection in Australia remain positive. But if our cities are to absorb larger populations *and* improve quality of life for all, they will need to meet our social as well as our material needs.

Many issues facing our cities are enormous, difficult, and expensive to tackle. Residents often feel they have no say in decisions affecting them. But improving social connection is not necessarily hard or costly. In many cases big returns can come from small outlays, as shown by examples in our appendix. Conversely, the loneliness and isolation that result from neglect of our social needs will cost individuals and society dearly. After all, cities are for people.

1. What is social connection, why is it important, and what does it have to do with cities?

1.1 Social connection is critical to our wellbeing

Social connection refers to our relationships with others. More specifically, social connection is meaningful, positive interaction between people. It makes us feel that we matter, that we are engaged with others and that we are embedded in networks of mutual appreciation and care.

We form connections at three different levels: intimate personal and family relationships, links with a broader network of friends, relatives and colleagues, and collective connection – our feeling of belonging in our communities. All these levels of connection are important – from the close regular contact with loved ones to incidental interactions on the street.

Research shows that social connection is crucial to wellbeing. This is not surprising. Humans have evolved in an environment where group membership is essential to survival. Neuroscience research suggests that over tens of thousands of years our need to deal with other people fundamentally influenced the structure of the human brain. In a literal sense, the need to socialise and connect made us who we are today.²

Reflecting this, people place great value on personal relationships and understand that they are a fundamental source of happiness and wellbeing. If you ask a room full of people to close their eyes and visualise what is most important to them, the majority will

invariably report thinking of family and friends.

There is a deeply ingrained idea that people will always seek to satisfy material needs (like the need for food and shelter) before worrying about psychological needs (like the need for human contact). However, close study of human behaviour suggests this idea is misleading: the Young Foundation's fieldwork reveals young people going without food in order to keep their mobile phones topped up, leading the Foundation's former chief executive, Geoff Mulgan, to conclude that "the human need for connectedness" outweighs "almost everything else". 3

The true importance of social connection becomes most apparent when it is absent. Loneliness can be severely damaging.

It is worth noting that there is no opposite for the word 'lonely' in the English language, just as there is no opposite for the word 'thirsty'. When we are *not* lonely – and we spend about 80% of our waking hours in the company of other people – a fundamental need is being met.

Loneliness can have serious health consequences, with a similar impact to high blood pressure, lack of exercise, obesity, or smoking.⁴ Loneliness also has a major impact on how we assess our own health: as Figure 1 shows, people who feel lonely once a day or once a week, rate their personal health much lower than people who only feel lonely once a month or once a year.

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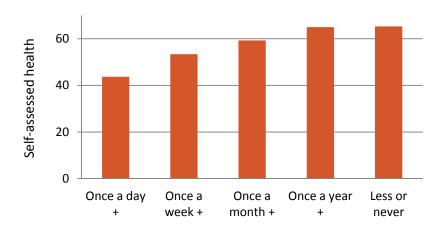
¹ Cacioppo and Patrick (2008)

² Ibid.

The Young Foundation (2009), p.26 Mulgan (2010a)

⁴ House, Lambis and Umberson, as cited in Cacioppo and Patrick (2008), p.5

Figure 1: Frequency of feeling lonely and self-assessed health, Australia, 2009⁵



There is growing evidence that people with strong social connections live longer. This is due to social relationships themselves, not just because of associated health benefits such as increased exercise or improved mental health.⁶

Indeed, the impact of a Chicago heatwave on the elderly shows that social connection can make the difference between life and death. Anything that facilitated social contact, from being a

member of a social club to owning a pet, was associated with an increased chance of survival.

Fewer people died in neighbourhoods where people knew and trusted their neighbours, than in a nearby area with weak social connections.⁷ Australian research also shows that older people with stronger networks of friends live longer.⁸

It's no surprise that solitary confinement is considered among the worst of punishments. The sensation of loneliness and the sensation of physical pain are both created by similar neurological processes, so loneliness can be seen as a social form of pain, and can have a bigger effect on wellbeing than physical pain or a low income (see Figure 2).

The importance of social connection to health and wellbeing means that, for many people, improved relationships are a much more realistic path to a better life than increased income. According to the Australian Unity Wellbeing Index, on a median household income it would take around \$36,000 to improve wellbeing by 1%, with the figure rising to astronomical levels for people earning higher incomes. ¹⁰

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⁵ The scale is 1 (poor) to 100 (excellent), Franklin and Tranter (2011)

⁶ Holt-Lunstad, *et al.* (2010), This meta study looked at morbidity data for more than 300,000 people over an average time span of 7.5 years and found "a 50% increase in odds of survival as a function of social relationships". A number of the studies assessed linked social support to better immune function and slower disease progress. The review found that social connection exerts an independent effect on the risk of death.

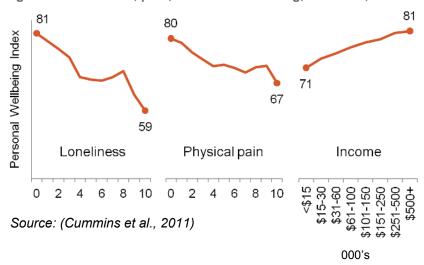
⁷ Klinenberg (2002), pp. 46; 110, quoted in Harris (2008)

⁸ Giles, et al. (2005)

⁹Cacioppo and Patrick (2008)

¹⁰ Cummins, et al. (2011)

Figure 2: Loneliness, pain, income & wellbeing, Australia, 2011¹¹



At a societal level, this is known as the 'Easterlin paradox' after US economist Richard Easterlin, who argued that beyond a certain level of GDP, increases in income do not significantly increase happiness. The Easterlin paradox has been contested, ¹² but it remains clear that for wealthy societies and individuals there is not a straightforward link between income and people's sense of wellbeing.

This prompted British Prime Minister David Cameron to instruct the Office of National Statistics to devise a new way of measuring wellbeing. He noted that while western societies have experienced decades of rising GDP, "levels of contentment have remained static or have even fallen". ¹³ Similarly, in 2008 French President Nicholas Sarkozy commissioned a team led by economists Joseph Stiglitz, Jean Paul Fitoussi and Amartya Sen to attempt to come up with "more relevant indicators of social progress" than GDP. ¹⁴

Concepts like wellbeing and happiness may be difficult to quantify but there is a growing recognition that we need to refine our tools of measurement and analysis to understand what makes a successful society.

Social connection is central to these concerns. It underpins many features of how people interact and how societies function. It contributes to building social capital, social trust, social cohesion and social inclusion, but is not identical to them (see Figure 3).

Through our social connections we share information, resources and skills. This makes communities more dynamic and more resilient. Interactions with others inform our expectations of them and teach us about social norms. ¹⁵ In essence, social connections make us a part of society. Without them, we could not establish the mutual expectations and trust that are the foundation for economic exchange and a healthy democracy.

¹¹ The Personal Wellbeing Index (0-100) is based on satisfaction with seven life domains. Around 74 to 77 can be considered a normal range.

¹² For example, see Stevenson and Wolfers (2008)

¹³ Cameron (2010)

¹⁴ Stiglitz, *et al.* (2009)

¹⁵ OECD (2011b)

Figure 3: Untangling the jargon

A city without people would just be an empty collection of roads and buildings. **Social connection** – meaningful, positive interaction – is the vital ingredient that transforms architecture, engineering and people into a place with character and culture. Social connection is linked to, but distinct from, other concepts that are invoked to describe successful communities:

Social capital "refers to features of social organisations such as networks, norms and trust that facilitate co-ordination, and co-operation for mutual benefit". ¹⁶

Social trust is the level of confidence we have that others will behave according to social norms, or act as they say they are going to act. ¹⁷

Social cohesion refers to common values and civic culture, social order and social control, social solidarity and a shared sense of belonging. ¹⁸

Social inclusion refers to people having the resources, opportunities and capabilities to participate in all aspects of life, so that they can meet their basic needs and "live in dignity". ¹⁹ This includes opportunities for education and training, work, and engaging in community activities. ²⁰

Successful cities have high levels of all four: **social capital, trust, cohesion** and **inclusion.** These are goals to strive for. **Social connection** is an essential building block that helps us to achieve them.

1.2 Is there a problem?

The few internationally comparable statistics relating to social connection suggest that Australia is doing quite well. A high proportion of people have relatives or friends they can count on in a time of need, and a high proportion of people feel that most people can be trusted.²¹

This is good news, but there are trends, both in Australia and elsewhere, that show social connection is declining. A study in the US found that the number of people who said they had no-one to talk to about important matters more than doubled from 10% to 25% between 1985 and 2004. Even critics who challenge these figures agree that Americans' "core discussion networks" (circles of close confidants) have shrunk by about a third and become more restricted to family members over this period. ²³

Nearly half of all older people in the UK consider the television to be their main form of company. In 2006 more than half a million older people spent Christmas Day alone. ²⁴ In Australia our average number of friends has fallen in the last twenty years, as has the number of local people we can ask for small favours (see Figure 4). At the same time, church attendance has fallen and there has been a decline in the number of Australians who are

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¹⁶ Putnam 1993: 35

¹⁷ Productivity Commission, (2003) Social Capital: Reviewing the Concept and its Policy Implications

¹⁸ Jenks and Jones (2009)

¹⁹ Cappo (2002) *in* VicHealth (2005)

²⁰ Commonwealth Of Australia (2010)

²¹ On the first measure, Australia ranks sixth out of 41 countries, and fifth on the second, OECD (2011b). For trust, figures from Australian Bureau of Statistics (2011), which includes responses to the same question, "most people can be trusted", were compared to the OECD data.

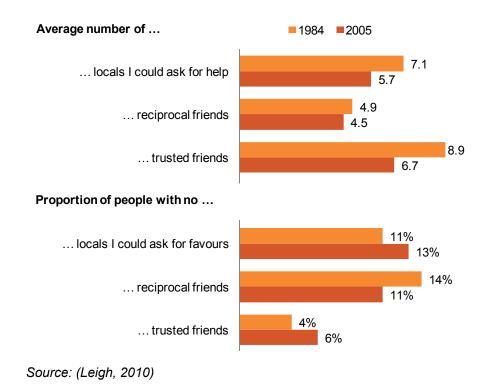
²² McPherson, et al. (2006)

²³ Hampton, *et al.* (2009)

²⁴ The Young Foundation (2009) P.109

active members of organisations (such as sporting clubs, school parents' and citizens' groups or business associations).²⁵

Figure 4: Ability to ask locals for help and number of friends, Australia, 1984 and 2005



Not only do some aspects of social connection appear to be declining, and at risk of falling further, they are unevenly distributed. People on lower incomes, and people with disabilities, have lower trust in others, creating a barrier to social connection for groups who already suffer other forms of disadvantage.²⁶

Since some of the factors that have been blamed for this decline are likely to intensify, the downward trend in social connection could continue. Impersonal technologies are becoming more prevalent, ²⁷ for example. Over time, our comparatively high residential mobility could make it harder for people to connect with their neighbours and communities. ²⁸

Perhaps most significantly, the demographic groups that are most vulnerable to social isolation are growing: our population is getting older, more ethnically diverse, and has a rapidly growing proportion of single-person and sole parent households.

One-person households are the fastest-growing household type in Australia, expected to grow from 24% of all households in 2006 to 28% in 2030.²⁹ People in one-person households are much more likely to experience loneliness. As Figure 5 shows, compared to people in larger households, they are more than three times as likely to experience loneliness more than once a day.

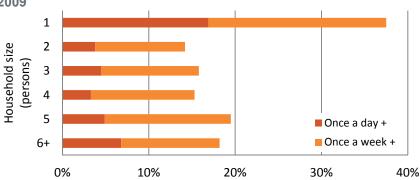
²⁵ Leigh (2010)

²⁶ In addition, people on lower incomes also have lower relationship satisfaction, Cummins. *et al.* (2011)

Andrew Leigh identifies impersonal technologies, (e.g. online shopping) as one reason for the decline in Australia's social capital, Leigh (2010)
 Australia has the second highest rate of residential mobility in the OECD, OECD (2011a). This rate could rise even further in response to housing shortages, tight rental markets, and the divergence of economic growth in different regions.

²⁹ Department of Infrastructure and Transport (2011), p. 29

Figure 5: Frequency of Ioneliness and household size, Australia, 2009

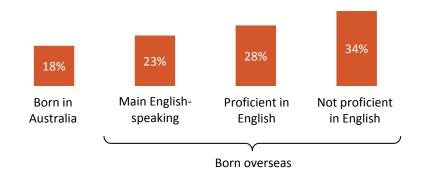


Source: (Franklin and Tranter, 2011)

Being a single parent living with dependent children is another risk factor for loneliness.³⁰ The number of one-parent families is also projected to increase strongly, rising by between 40% and 77% over the 25 year period from 2006 to 2031.³¹

People with limited English are more likely to be socially isolated and to have limited face-to-face contact with people outside their household (see Figure 6). A rapidly growing proportion of the population is born overseas, and within this group, a growing proportion is from outside the main English-speaking countries – especially since 2001. 32

Figure 6: No face-to-face contact with family or friends living outside household in past week, Australia, 2010



Source: (Australian Bureau of Statistics, 2011)

These data are at an aggregate level, and different people have different needs for social connection.³³ Privacy and solitude are also important (and are very different from loneliness or isolation). There is no such thing as an 'ideal' level of connection that should be imposed on everyone.

Beyond a basic minimum, individuals have different preferences for the amount of interaction and connection they want. However, for everyone, some level of connection is critical to wellbeing.

³⁰ Flood (2005)

³¹ ABS (2010)

³² Australian Institute of Health and Welfare (2011)

³³ Cacioppo and Patrick (2008) explain that different needs for social interaction are influenced by genes and environmental factors, pp. 23-24

1.3 What does this have to do with cities?

The Grattan report *The cities we need*³⁴ argued that when evaluating how our cities are doing, we should ask how well they address people's needs. These needs are both material and psychological. In policy and political terms, material needs tend to be prioritised – in part because they are easier to measure and influence. But psychological needs such as social connection are just as important, and cities play a role in whether they are met.

Of course many factors have an impact on social connection that are not directly linked to cities. They include individual dispositions, income, family situation, health, crime, culture and countless others.

But cities provide many essential ingredients for social connection – despite the fact that they have often been represented as sites of loneliness and alienation (see Figure 7). Cities are places where large numbers of people come together to benefit from interacting with each other. Urban transport allows people to move around to see family and friends. Cities provide places for us to meet: homes, cafes, libraries, parks, footpaths, sacred places, and so on.

Proximity, mobility and shared spaces are important because, despite other ways of connecting, face-to-face contact remains a crucial way to develop and sustain our personal relationships. As Schluter and Lee note, trust, sympathy, respect, understanding, loyalty and co-operation – qualities at the core of social connection – come more easily through direct contact. ³⁵ Online

relationships complement, rather than replace, direct contact.³⁶ Studies show that people communicate more through the Internet, and collaborate more effectively, when they are in closer proximity.³⁷

Cities can help social connection, or hinder it. They can be so poorly organised that they are hard to get around – a problem not just for getting to work, but also for seeing friends and family and participating in social activities.

A city that 'builds in' isolation through its housing options, transport accessibility, and other features, can have significant consequences for the strength of people's relationships and for physical and mental health.

Of course, the physical by itself does not determine what happens. Design is not destiny. People often find ways to meet despite physical obstacles. Conversely, the best-designed spaces don't guarantee connection. Overt attempts to engineer social interaction can backfire as people often withdraw when they feel their privacy is under threat. The right balance flows from an interaction between physical structures and social organisation.

This interaction often depends on fine details of design, which means that 'people-friendly' arrangements can sometimes be counterintuitive and difficult to achieve. For example, individual business owners might feel more secure when their shops are protected at night by roll-down shutters. However, a row of

³⁷ Wellman, et al. (2006); Mok, et al. (2010); Takhteyev, et al. (2011)

The Grattan Institute (2010)

³⁵ Schluter and Lee (1993)

³⁶ Internet support from 'unmet' internet friends has no relationship to wellbeing Cummins, *et al.* (2008)

shuttered businesses creates an empty streetscape that feels unsafe and deters foot traffic, which reduces security.

A lively street might prove better at reducing crime and anti-social behaviour than physical security measures such as shutters or CCTV cameras, but this would require a significant number of business owners to agree to remove their shutters, maintain litwindow displays and perhaps continue to trade into the evening.

To see that cities influence social connection, we need only reflect on how badly things can go wrong. Places like Cabrini-Green in Chicago, Fountainwell Place on the Sighthill Estate in Glasgow and Broadwater Farm in London were ambitious attempts to create low-cost housing that fell into decline. These failures, and others like them, resulted from a combination of flawed urban design and misguided social policy. Examples like this show that understanding social connection is important, not just for decisions about existing areas of our cities, but also as we continue to build new communities on greenfield sites.

Another important element of feeling connected is whether residents have a 'sense of belonging' to where they live. Knowing neighbours, feeling safe on the streets and living in an area with a distinctive character can help to create this sense of belonging. So can having spaces and activities in the city that encourage us to mix, both with those from our own networks, or of similar age groups and backgrounds and with people who are very different. Cities can and do help set the signals for engagement and interaction.

Figure 7: Imagined cities

The industrial revolution helped to create both the modern city and the modern novel, so it's hardly surprising that in 19th Century fiction, cities were frequently portrayed as inherently anti-social. Observing the harsh realities of their day, writers from Dostoyevsky to Dickens represented the city as a place of alienation, where "materialism hardened the heart and diminished compassion, altering our sense of human scale, our sense of community".³⁹

Disconnected from tradition and nature, city dwellers were depicted as culturally rootless and morally adrift. The desolate city found its antithesis in idealised accounts of village life, where residents were still grounded in the seasonal rhythms of agriculture that bound them together as a community.

Of course, there are alternative narratives. The city can be a place of excitement and opportunity, offering escape from the strictures of country life. Today cities often provide the setting for romantic comedies. But the image of the bad city remains a powerful strain in contemporary culture. Think of the urban crime genre or science fiction: in novels, films and TV dramas, cities are frequently portrayed as isolating, lonely, dangerous and soul-destroying places.

History suggests that negative literary representations are a poor guide to human experience. There has been no let up in urbanisation since the mid 19th Century and there is strong evidence that people thrive in cities: that city dwellers generally live longer, healthier, richer and more fulfilling lives than their country cousins. An evertheless, our perceptions of the city continue to be shaped by its literary representations. Perhaps this is no bad thing, since the alienating and lonely city of Dostoyevsky's imagination gives a warning of what cities could be like if social connections fail.

³⁸ The Young Foundation (2010b)

³⁹ Lehan (1998), p.4

⁴⁰ Glaeser (2011)

1.4 What this report aims to do

The significance of cities for social connection is not a new understanding. Many people over many years have dedicated their careers to making our cities more 'people-friendly'.

But, because good design for social connection can often be counter-intuitive, it continues to be hard to value. Combined with the demographic and other trends described above, this means that social connection needs to be incorporated into our decision making about cities, just as we think about economic and environmental impacts.

Each chapter in this report discusses how cities affect social connection at a different spatial level. We start with the overall structure of the city and then look at neighbourhoods, streets, and individual buildings.

This structure may tend to over-emphasise the physical form ahead of what is really at stake: the interaction between the physical and social. However, a spatial analysis provides a convenient and familiar way to order the material, and to signpost potential points for intervention and change.

The primary aim of the report is to make the case that social connection is important and to put it higher on the agenda of everyone involved in making our cities better places. It is not aimed solely, or perhaps even primarily, at government because there is no single policy lever to pull, and no single responsible authority to do the pulling. Governments, businesses, community organisations and individuals all have a role to play.

For this reason, we deliberately don't highlight one or two things that could be done. Instead, in an appendix, we provide practical examples of things that have worked in Australia and overseas to foster social connection in cities.

1.5 What this report does not do

This report is not driven by a belief in physical determinism. The physical structure of a place can influence social behaviour but it is only one factor among many.

Nor are we suggesting that everyone should interact more, or that we should all be friends with our neighbours. As discussed above, the capacity to enjoy privacy and solitude are also cherished characteristics of successful cities.

Some readers of early drafts of this report questioned 'why a serious organisation such as Grattan was looking at such a fluffy issue', when other urban challenges loom so large. This is an understandable response, but the fact that an issue has received relatively little attention does not make it unimportant. It does present additional challenges: for example, it means the evidence base is not as extensive as it is with other issues, making it harder to compare potential policy options and opportunity costs. One aim of writing this paper is to highlight the fact that we need better evaluation of what works and what doesn't, precisely so that such questions can be answered.

Finally we acknowledge that this report is not comprehensive. There will be important ideas, examples and research that we have missed – and we encourage readers to point them out to us.

2. City structure

The shape of our cities can make it easier, or harder, for people to interact with each other. Where we live, work and meet, and how we travel between these places, has a big impact on how much time we have to connect, and who we can meet face-to-face.

Social connection is becoming more widely recognised as an important goal in the design of streets and the architecture of buildings (discussed in later chapters). However, when major decisions about transport infrastructure and land use are made, social connection is rarely given the same priority as movement of people and goods for employment and commerce.

This chapter discusses how mobility, commuting, and the functions of different parts of the city influence our ability to connect with each other.

2.1 Mobility

People need to get around the city in order to get to work and do the shopping, to travel to see friends and family, and to participate in sporting, cultural and community activities. But transport "serves a greater purpose than merely moving people from one location to another". Mobility enhances wellbeing by helping people feel "in control and autonomous, competent and connected with others and the community at large". 42

Transport therefore has a significant impact on social participation. In Melbourne, one in four people with limited access to transport have difficulty participating in activities at least once a week.⁴³ People who suffer transport disadvantage are also more likely to report being isolated due to time pressure and having lower levels of wellbeing.⁴⁴

In many parts of Australian cities, not having a car is a huge barrier to mobility. People who live in outer suburbs and have low incomes – a factor associated with reduced mobility – do not feel they miss out on activities due to transport, as long as they have a car. However a lack of alternative transport options essentially means many households are forced to own a car (or perhaps two cars), even when this causes financial pressure on other parts of their budget. It also renders many households vulnerable to changes in petrol prices and mortgage costs. 46

Many people who cannot afford a car, or cannot drive, are not well served by public transport. As Figure 8 shows, those who

⁴³ This compares to 14% among people with low transport disadvantage, Delbosc and Currie (2011).

⁴⁴ The proportion of respondents with high transport disadvantage that reported being isolated due to lack of time: 43% (sometimes) and 13% (frequently). For people with low transport disadvantage the figures were 38% and 6%. Personal wellbeing scores were 3% lower. Ibid.

Research in Melbourne found that these households report lower difficulty accessing activities than the overall metropolitan sample. Currie (2009).
 Research in the UK has also identified car ownership as an important determinant of travel barriers to social activities, Social Inclusion Unit (2003).
 Dodson and Sipe (2006)

⁴¹ Stanley, *et al.* (2011)

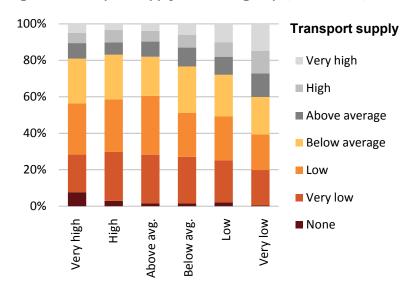
⁴² Ibid.

have the greatest need for public transport often have the least access to it. In Melbourne, almost 8% of areas with the greatest need for public transport have no access at all. By contrast, areas with lower than average transport needs are much better served.⁴⁷

Even being able to get onto public transport does not guarantee mobility over a wide area. As the examples in Figure 9 show, the distance that you can travel in a reasonable amount of time varies greatly in different areas. Typically, the destinations that can be reached are more limited from the outer suburbs, where taking public transport involves a larger time cost. 48

Another problem is access to public transport on weekends, when many social trips and meetings happen, particularly for young people. ⁴⁹ As the maps in Figure 9 illustrate, even in areas with rich public transport options, such as central Adelaide, the distance people can travel in 45 minutes falls sharply on weekends.

Figure 8: Transport supply and need groups, Melbourne, 2006



Transport need

Source: (Currie et al., 2009)

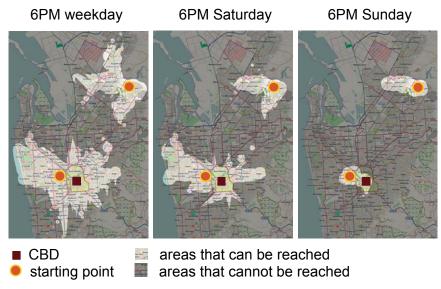
Social connection is only one reason we move around the city, but it is important. Some groups, particularly people who rely on public transport, face barriers that limit their options to visit and meet people, increasing their risk of social isolation. This suggests that more can be done to balance social connection with the other objectives for transport systems.

⁴⁷ No access is defined as living more than 400m from bus and tram stops and more than 800m from train stations. The research defines transport need according to: accessibility distance from the CBD; number of adults without a car; people aged over 60; people with a disability pension; low income households; adults not in the labour force; students; and children aged five to nine years-old

⁴⁸ When time costs are taken into account, it is cheaper to commute by car than by public transport in Melbourne's outer suburbs – almost \$700 a year in a new car and almost \$3,000 a year in a new car. Bureau of Infrastructure Transport and Regional Economics (2011)

⁴⁹ For example, Victorian Integrated Survey of Travel and Activity (VISTA) data indicate that in Melbourne 75% more social trips happen on a weekend day than on a weekday.

Figure 9: How far you can travel on public transport in 45 minutes from two different starting points, Adelaide 50



Source: Grattan Institute

2.2 Commuting

Mobility has a direct impact on social connection by determining who people can see and where they can go. But it also has an indirect impact by influencing how long it takes to get to work, and how much time is left over for other things. Given that so many Australians travel to work or study each weekday, it is not

surprising that commuting is commonly discussed. However, the discussion often overlooks commuting's impact on social connection.

There have been many studies on the economic cost of congestion. In 2007, the Bureau of Transport and Regional Economics estimated the avoidable cost of congestion in capital cities in 2005 at \$9.4 billion. Over one third of this represented private time costs caused by trip delays and uncertainty. Revised calculations by the Bureau in 2011 using a different methodology suggest that traffic volumes (and therefore congestion costs) may have been overestimated in the 2007 study, but the impact of congestion on economic productivity remains a focus of public policy. There is also a growing awareness of the environmental costs of travelling to work, particularly in relation to carbon dioxide emissions. Yet there has been less emphasis on the impact commuting has on people's relationships.

In America, Robert Putnam found "a simple rule of thumb: every 10 minutes of commuting results in 10% fewer social connections". ⁵³ Commuting also erodes relationships in Australia. Parents spend less time with their children as commuting time increases – one study found that over 10% of working parents spend more time commuting than they do with their children. ⁵⁴

Longer commuting times are also associated with spending less time socialising, and with not being a member of a sporting group or community organisation. The Australian Work Life Index found

⁵⁰ Starting points are Thebarton (inner west) and Greenwith (north east). Assumes maximum of 15 minute ride or walk to get to stations/stops. Indicative estimates generated using Mapnificent

⁵¹ Bureau of Transport and Regional Economics (2007)

⁵² Economics (2011) For discussion see: Loader (2012)

⁵³ Putnam (1995)

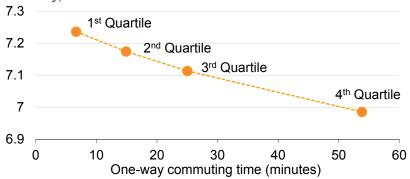
⁵⁴ Flood and Barbato (2005)

that workers with long and very long commute times have the worst outcomes in terms of work-life balance. ⁵⁵ Reflecting the link between commuting and social activity, more than half of commuters said they would spend more time with their family and friends if their commuting time was significantly reduced. ⁵⁶

As well as reducing time for social connection, longer commutes are linked to lower overall wellbeing and life satisfaction (see Figures 10 and 11). If long journeys to and from work are causing this reduction in wellbeing, they are also having a secondary impact on social connection, because low wellbeing makes us less likely to connect with others.⁵⁷

Historically, commuting distances have risen more rapidly than commuting times as new technologies (such as the car) and better infrastructure (such as the freeway) enable workers to travel further, at a faster rate. ⁵⁸ Whether technology and infrastructure can keep pace with the growth of Australian cities is an open question. The mean weekly commuting time for full-time workers in major capital cities rose from 4.8 hours to 5.2 hours between 2002 and 2006. ⁵⁹ Averages obscure an uneven distribution of travel times, with residents in the outer suburbs generally facing longer commuting times (see Figure 12). ⁶⁰

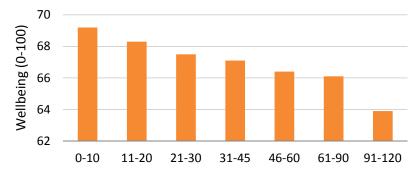
Figure 10: Commuting time and average reported life satisfaction, Germany, 1985-1998



Satisfaction scale = 0 (completely dissatisfied) to 10 (completely satisfied).

Source: (Stutzer and Frey, 2008)

Figure 11: Commuting time and reported wellbeing, USA, 2009



Minutes from home to work

Source: (Crabtree, 2010)

⁵⁵ Pocock, et al. (2007)

⁵⁶ Results (52%) are from a survey of over 1,500 commuters in Australian capital cities. Spending more time with family and friends was the most popular response, followed by more exercise (51%) and more sleep (50%) IBM (2011)

⁵⁷ Cacioppo and Patrick (2008), p. 33

⁵⁸ Pooley and Turnbull (1999)

⁵⁹ Wilkins, et al. (2009). .

⁶⁰ The gap in one-way average commuting time between inner and outer suburban residents was six minutes for Melbourne (2007-08) and seven minutes for Sydney (2005-06). Department of Infrastructure and Transport (2011)

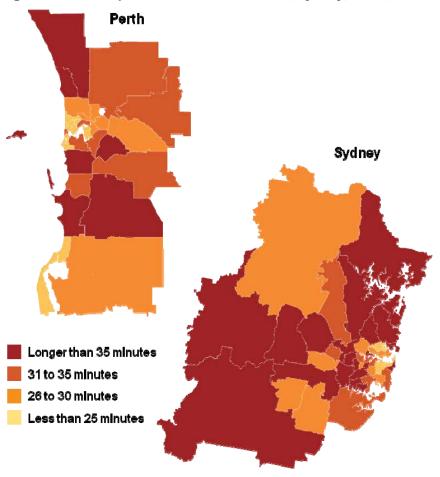


Figure 12: Median peak travel commute times, Sydney, Perth, 2010

Source: (Department of Infrastructure and Transport, 2011)

The experience of commuting itself does little to encourage social connection. Most commuting in Australia is done by driving, and some researchers have suggested that car commuting is particularly harmful to social connection. Driving to work is usually done alone and typically features unpredictable stops and starts, being stuck in traffic and competing with other drivers, who are often perceived as rude. Over 80% of Australian drivers find their commute stressful and frustrating.

But public transport can also cause social withdrawal, and even rudeness. Passengers are often forced into uncomfortable proximity. Research shows they respond with defensive strategies different from their normal behaviour. ⁶³ These range from innocuous signals that you don't want to talk, such as listening to music, using phones or facing away from people, to using bags as a barrier, deliberately coughing or even, as one person reported, "acting crazy" to gain more personal space. ⁶⁴

Some degree of crowding (and related defensive behaviours) on public transport is inevitable if the system is to maximise passenger numbers. However, the public transport experience could be improved and the potential for positive interactions enhanced, by offering faster, more frequent, more reliable

⁶¹ Putnam (1995);Leigh (2010) both point to car commuting as one reason for a long-term decline in social capital.

Reasons given included start-stop traffic (57%), low speed (36%) aggressive drivers (30%) and unreliable journey time (26%) – perceived driver aggression in Brisbane was among the highest in the world, IBM (2011)

⁶³ Thomas (2009) links this to the disrespect implied by ignoring personal space, and feelings of loss of control.

⁶⁴ Hirsch and Thompson (2011), from a study on passenger reactions to rail overcrowding in five Australian capital cities.

services and cleaner, quieter, more comfortable vehicles. ⁶⁵ Commuters might also be encouraged to engage more with fellow travellers if shared waiting areas (such as platforms and bus stops) were enhanced, potentially with the physical presence of platform announcers or 'greeters', to make travellers feel safer and better informed about delays and cancellations. ⁶⁶ We can also make small, personal efforts, which influence others, such as thanking bus drivers. ⁶⁷

Regardless of the experience of public transport, however, improved and expanded services would increase social connection and wellbeing by increasing mobility, enabling people to make more trips and do more things. This is particularly the case for people with limited transport options. Recent research shows that people place a far higher value on the potential to make additional trips than standard economic modelling suggests, leading to the conclusion that "the value of significant transport service upgrades ... will be substantially greater than has hitherto been estimated". 68

2.3 Deciding how land is used

Deciding how cities grow, what different areas are used for, and the kind of development that happens, all have a big impact on social connection. These choices help determine the distribution of people and places to connect, as well as the distribution of congestion and mobility.

One vital factor is the location of jobs relative to housing and relative to other jobs. Moving some jobs out of the city centre can reduce the time we spend commuting. This only works if jobs are relocated close to public transport, but it has been successful in Singapore, Stockholm and Tokyo, and has been adopted as policy in Perth and Brisbane. ⁶⁹

Land use decisions also affect social connection by determining how far people have to travel to get to places where they can connect with others, such as cafes, libraries, shops, parks, churches or other people's homes.

Where possible, there are benefits to having destinations within people's neighbourhoods, and within walking distance. It helps to create a sense of belonging, and promotes lively, active streets that make people feel connected. If shops, services, jobs and community facilities are relatively close to each other, it also allows linked trips, so one journey can achieve several things.

Mixed-use zoning, where commercial, retail and residential activities are located in the same area, can bring destinations closer to where people live. It can also help if enough people live

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 $^{^{65}}$ Land use planning also affects commuting times and public transport crowding, as discussed below.

⁶⁶ Thomas (2009) notes that in most public transport, seating is primarily adjacent and cramped, making it "socially crippling". ⁶⁷ Ihid.

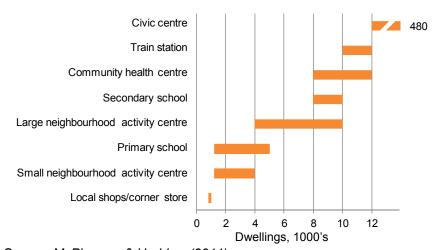
⁶⁸ Stanley, et al. (2011)

⁶⁹ Bernick and Cervero (1997);Malone-Lee, et al. (2001);Burke, et al. (2011)

⁷⁰ Lund (2002);Leyden (2003);du Toit, *et al.* (2007). Lund and Leyden both found that walkable neighbourhoods increase social interaction. However, the literature is mixed. For example, in an Australian study, du Toit *et al* found no clear-cut relationship, although there was an association between walkability and increased community belonging. Despite this, between the time saving local shops and services can provide, the sense of community they promote, and the benefits of active streets (discussed below), where possible it seems like distributed, walkable shops and services are beneficial.

in an area to make local businesses and services viable. Figure 13 shows estimates of the population needed to support a range of facilities. If this population is too spread out, the facilities are close to fewer households.

Figure 13: Indicative population thresholds for facilities



Source: McPherson & Haddow (2011)

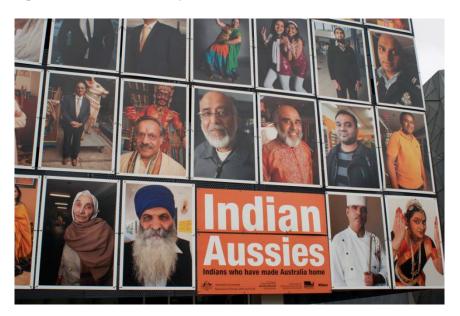
Finally, it is important to consider whether any proposed changes to the structure of the city, such as highways, roads, re-zonings, or new greenfield developments do more to connect people and places, or more to separate them.

2.4 A sense of belonging

Extensive research has been carried out in the UK to understand what makes people feel they belong. Central to this work is the premise that people can instinctively sense acceptance – and

therefore connection – from groups such as family, colleagues, their neighbourhood, and society. They do so through informal 'feedback circuits' which can either reinforce a sense of belonging or make individuals feel excluded. The work can help explain why some long-standing residents feel they no longer belong in a neighbourhood or city, or, conversely, why in some places newcomers feel at home.⁷¹

Figure 14: Indian Aussies portraits



Source: Michel Lawrence, Egg Digital

⁷¹ Commission on Integration and Cohesion (UK) (2007)

An example of messages about whether particular groups belong in their city is the response to a series of attacks on Indian students and taxi drivers in Melbourne in 2010. The attacks prompted a debate about racism in Australian society, and saw disturbing terms such as "curry bashing" enter the lexicon. Individuals, community groups and government came up with a range of initiatives to counter the attacks and try to reset the 'feedback circuits' that were making Indian Australians feel excluded.

Web designer Mia Northrop's Vindaloo Against Violence campaign saw about 17,000 people eat curry at Indian restaurants on the same evening as a mark of solidarity with the Indian community. She said she wanted to show the community that it is "welcome and entitled to feel safe here". 72

An exhibition of 40 larger-than-life portraits of Australian Indians mounted in Federation Square, gave a clear signal at a landmark site that the city valued the presence and contributions of Indian Australian residents (Figure 14).

⁷² Edwards (2010)

3. Neighbourhoods

Life is more local than most people realise

John Helliwell⁷³

A neighbourhood is more than just the area surrounding our home. Spending time with others in our neighbourhood helps us feel we belong there. Knowing other people in the area can contribute to our wellbeing and sense of identity.

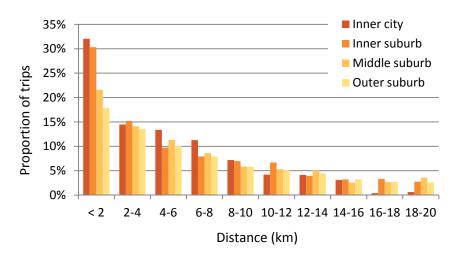
A lot of social contact takes place in our local area. Figure 15 shows that for Melbourne residents a large proportion of weekend trips for social purposes are short, meaning to places close to home. The Surprisingly, proximity is even important when we interact online – people tend to communicate more with people close to where they live. The social surprise in our local area. Figure 15

As well as accounting for a lot of our social connections, local relationships have a bigger impact on wellbeing.⁷⁶ Canadian

⁷³ Professor John Helliwell, an economist and wellbeing researcher has found that patterns of social interaction, like trade, are much denser and more local than often assumed, Helliwell and Wang (2011).

research shows that people who trust their neighbours enjoy 5% higher wellbeing. For people who feel a sense of belonging in their community, it is 11% higher. The benefit of local belonging is greater than the combined benefit of feeling a sense of belonging to the nation as a whole, and to the state or territory.⁷⁷

Figure 15: Social trips on the weekend, by distance and area, Melbourne, 2007



Source: VISTA 2007, Department of Transport (Victoria)

All neighbourhoods are different, and people who live in the same area often think about it in very different ways. However, there are some ways that neighbourhoods can help people to connect. These include providing common places where people can spend

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⁷⁴ These data do not show the proportion of trips that originate from people's homes, but it is likely to be high.

⁷⁵ This has been found in numerous studies, for example, Wellman, *et al.* (2006), and Mok, *et al.* (2010), who found a sharp drop in social ties as distance increased from one to 20 miles. See also Wellman, *et al.* (2006) and Takhteyev, *et al.* (2011), who found that 39% of global Twitter tiers are between people in the same metropolitan area, mostly within in easy driving distance. Proximity of authors has also been linked to higher quality academic research, Lee, *et al.* (2010).

⁷⁶ Fowler and Christakis (2008)

⁷⁷ Helliwell and Wang (2011)

time, bringing people together through local events and activities and fostering a local sense of identity.

3.1 Places to meet

Neighbourhoods are made up of places. Neighbourhoods that encourage social connection include a mix of places where people can meet and interact, both deliberately and by chance. They can be parks and other green spaces, public squares, and places for specific activities, such as community centres, sports grounds, cafes and shops. A diverse mix of such places can meet the needs of different people within a neighbourhood.

Public spaces

Some spaces for social connection are public resources. They include parks, libraries, community centres and public sports grounds. They are places where people can meet, hold group activities and feel a sense of belonging.

Sports facilities are important places for social connection because sport and exercise often involve shared goals, teamwork and regular interaction. In Australia, people who take part in sport and physical recreation have more contact with friends and family, and more friends they can confide in (see Figure 16). It is important that opportunities to exercise are close by – evidence indicates that living close to places for physical recreation makes people much more likely to use them.⁸⁰



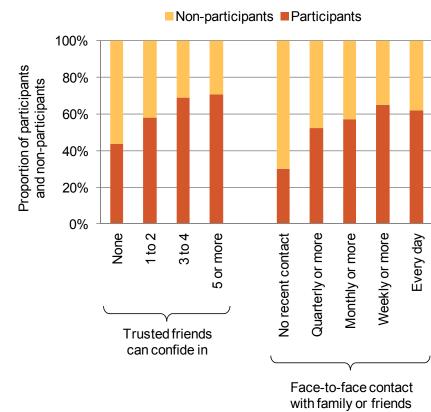


Figure 16: Physical recreation & social networks, Australia, 2006⁸¹

Source: (Australian Bureau of Statistics, 2009)

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⁷⁸ Harris (2008), p. 52

Abu-Ghazzeh (1999); Williams and Pocock (2010); Baum and Palmer (2002)

⁸⁰ The evidence is summarised in Kent, *et al.* (2011), p. 57. Especially see Wendel-Vos, *et al.* (2007);Sallis and Glanz (2009).

⁸¹ The standard error for "no recent contact" is high, so that estimate should be interpreted with caution

Parks are one of the most important places to meet and spend leisure time with family and friends, and can be particularly important when private outdoor space is lacking. Parks also connect us to people from outside our circle of family and friends. A study of more than ten thousand residents in the Netherlands found that "people with more green space in their living environment feel less lonely". 82

There is no doubt we value good public parks: just think how proximity to a park can increase property prices. But measurements of available green space can be misleading. A study for the City of Brimbank in Melbourne's west found the area had an adequate amount of open space, but that much of it was "barren, unattractive and undeveloped". 83

As a result, the city's parks were not well used. Cultural reasons were often used to explain this: it was suggested that some ethnic communities did not like spending leisure time outdoors, or that as newly arrived migrants they were too busy working to visit the park. However, the re-development of Kevin Wheelahan Gardens suggests otherwise. After the playground equipment and seating was redesigned and upgraded (see Figure 17), Council officers immediately noticed increased activity in the park, with more children using the playground.

This indicates that the quality of open space is just as important as the quantity. A small park that is well maintained and watered, with established trees to provide shade, vibrant flower gardens for visual pleasure, quality seating and creative playgrounds, will be

used far more actively than a park that is far larger but less inviting. In fact without appropriate design, parks can be too big for comfort. In his pioneering work William H Whyte demonstrated that people prefer to congregate on the edges of public spaces (see Figure 18). So if seating and play equipment are stranded in the middle of large open areas they will not get much use, because people will feel exposed and vulnerable. This is particularly true when a park is bounded by busy roads, blank walls and fences or vacant and derelict land.

Some of the most successful parks are intimate mini-parks or 'pocket parks'. Pocket parks are often created on irregular-shaped patches of land that are too small for building, or on vacant lots between other developments. Sometimes the developers of major projects are required to include pocket parks as part of their planning approval. In response to the sub-prime mortgage crisis, the City of Los Angeles is transforming foreclosed properties into pocket parks with the aim of adding amenity and raising the value of surrounding houses and neighbourhoods at the same time.

In the 1980s in the UK, Northamptonshire planner Alan Teulon pioneered the idea of pocket parks by involving local residents in identifying, creating and maintaining small, local parks. This evolved into the Doorstep Greens program that, for a small investment, has transformed more than 100 neglected public areas into popular green spaces. Strong public engagement and volunteering has helped to keep costs and vandalism down. The process of developing these pocket parks has brought local residents together and helped to foster social connection. 84

⁸² Maas, et al. (2009)

⁸³ Brimbank City Council (2008)

⁸⁴ Natural England (2006)

Figure 17: Kevin Wheelahan Gardens, Sunshine, Melbourne - before and after





Source: Brimbank City Council

Figure 18: William H Whyte and public spaces

In 1969, William "Holly" Whyte wondered how newly created squares, parks and footpaths in New York were actually being used. Armed with cameras, notebooks and research assistants, he set off to find out.

By systematically watching people Whyte identified behavioural patterns that help explain why some public spaces are more successful than others. He found that people prefer the edge of a space because it creates a feeling of safety and provides a good view of what is going on.

People like to be able to choose between sun and shade and are more sociable in seating that faces other seats. Above all, people like to be around other people.



These findings appear self-evident, but are often overlooked. As Whyte said: "It is difficult to design a space that will not attract people. What is remarkable is how often this has been accomplished."

Well-designed public places increase land values, improve business returns, create venues for civic activity and improve the feel of an area. Most importantly, they create opportunities for us to connect with one another, because as Whyte said: "What attracts people most, it would appear, is other people."

Sources: (Whyte, 1980); Project for Public Spaces: http://www.pps.org/

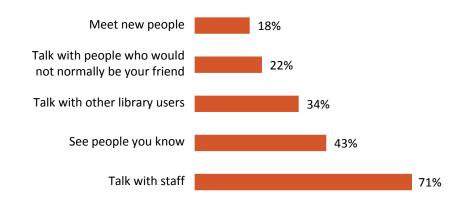
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The presence of public places is not enough to ensure they are successful. Employees at one council told us about a consultation where people were asked what kind of services and facilities they needed. They replied that they wanted a community centre. They didn't realise they were meeting in their community centre. Clearly more effort was needed to communicate what facilities were available, and how they could be used.

There are lots of ways to let people know about local places that can aid social connection. Clear signs, community websites and advertising can all help. Paid guides or volunteers can inform people and answer questions. For example, in some new neighbourhoods, a 'greeter' visits each resident after they move in to tell them about local community organisations, sports facilities, shopping areas and transport options.

It is easy to overlook the potential for social connection offered by places that primarily provide another service, such as libraries (see Figure 19). Other places have unrealised potential. Many neighbourhoods have public facilities, such as school halls and sporting facilities, that are under used. Efforts to make these places available to the community have been made overseas and in Australia, but implementation of the programs has sometimes fallen short.⁸⁵

Figure 19 Social activities in the library, Victoria, 2005



Source: (State Library of Victoria, 2005)

Private spaces

Private spaces such as shops, cafes, restaurants, shopping centres or hairdressers can be as important for social connection as they are for buying goods and services. Like the public places discussed above, they are places where people can spend time and be around other people. These 'third places' allow casual connection with strangers, or somewhere to meet friends, without imposing threatening or invasive interaction. ⁸⁶

Being able to connect with others can increase people's enjoyment of shopping and influences their decisions about where

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⁸⁵ Examples include the UK's "extended services" program, American national anti-obesity policies, and, in Australia, school partnerships and the Building the Education Revolution program. McShane (2012)

⁸⁶ Oldenburg (1989)

to shop. ⁸⁷ Smaller, locally-owned shops can also help give people a sense of identity, and can better reflect the specific needs, culture and background of individual local areas. ⁸⁸

To foster social connection, it helps for shops to be close to home and easy to get to. Then customers can return and get to know people that work and shop there. Ultimately, our local shops can become part of how we think about ourselves and our local community. A Queensland woman explained in one study:

"When you live in an area like this, where the shops and the offices and the living area are all close together, it forms a nice bond. ... It is – it makes a lovely community." 89

The shared activity in third places may not always be directly linked to the usual purpose of the space in question. For example, the City of Stirling in Perth uses trained volunteers to provide a free walking group for older people. The group walks at the Karrinyup Shopping Centre Mall twice a week because the shopping centre is safe, air-conditioned and has even flooring.

3.2 A local sense of identity

Feeling a sense of local identity is linked to increased trust, improved wellbeing, and greater community participation. All of which, in turn, create opportunities for social connection. There are several ways neighbourhoods can help social connection, including though their layout, local events and participation in decision making.

Neighbourhood layout

People need to make sense of their environment – we hate being disoriented and confused. 90 The layout of a neighbourhood can help us feel oriented, and give us a sense of territory and belonging. Physical evidence of 'edges' that mark the boundary of a neighbourhood can contribute to a sense of common identity, while still being welcoming to visitors. These boundaries can use natural features, such as a river or hill, or incorporate symbols such as gateways or signs.

Distinctiveness in style can have a similar effect. "People who live in the area will think: this is my city, my quarter and my street, while outsiders will think: now I am visiting others in their city, quarter or street." Conversely, an area that feels anonymous does little to promote a sense of ownership or belonging.

Neighbourhood layout clearly plays a role in bringing people together. However, research on neighbourhood structure suggests no clear answer as to what type of layout works best. Some studies report that grids produce increased contact and a greater sense of community⁹², while other studies suggest that cul-de-sacs promote more familiarity between neighbours.⁹³

It is likely there is no ideal urban form. Different communities may benefit from different approaches. However, we do know that successful neighbourhoods balance privacy with enough activity, diversity and interest to stimulate people and engage them with

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⁸⁷ Johnstone and Conroy (2008)

Mehta (2007); Johnstone and Conroy (2008)

⁸⁹ Williams, et al. (2009)

⁹⁰ Kaplan and Kaplan (1982)

⁹¹ Gehl (2010) p101

⁹² Hillier and Shu (2000) in Cozens and Hillier (2008)

⁹³ Sanoff & Dickerson (1971), Smith (1973) and Appelyard (1981) in Ibid.

the local environment. There is also evidence that walking promotes a sense of local identity and social connection. Residents in 'walkable' neighbourhoods are "more likely to know their neighbours, to participate politically, to trust others and to be involved socially". 94 As well as opening up opportunities for social connection, walking helps us to map our neighbourhood in our mind (see Figure 22).

Local Events

Like local shops or sporting clubs, local events can bring people together and promote a shared sense of identity. 95 Examples include open-air concert and theatre performances, street festivals, farmers' markets, craft fairs and school fetes. Community festivals can celebrate local identity and they create greater social benefits when they align with the values of the community and maximise local volunteering and participation. 96

Another example is Clean up Australia, an annual national event that is organised on a neighbourhood basis to bring together residents for the common purpose of removing litter. The result is not only a cleaner environment, but also opportunities for people to work together and get to know each other people in their neighbourhood.

Figure 20: Clean up Australia Day, Perth



Source: Clean up Australia

⁹⁴ Leyden (2003) 95 Allen, *et al.* (2005);Duffy (2006)

⁹⁶ Gursoy, et al. (2002);Small (2007)

Local participation and decision-making

Another way to encourage a local sense of identity is to create opportunities for people to make decisions about their neighbourhood. Helping to shape the future of the local area creates a sense of stewardship and promotes connection with other residents.⁹⁷

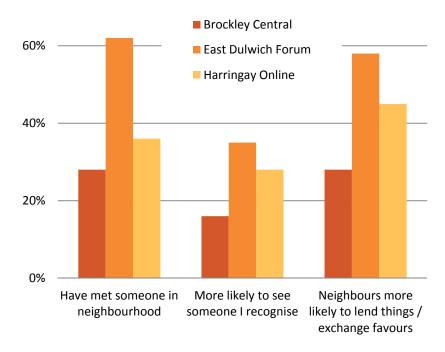
A 2008 report by the Young Foundation presents a series of case studies of projects that engage residents at the neighbourhood level. The report concludes that "local projects which involve residents working together to create visible change to their neighbourhoods are a good way of creating meaningful connection between neighbours". ⁹⁸ Residents can be involved in decisions about parks or community facilities, and might work together to maintain and improve these shared spaces.

Local email lists, neighbourhood social networks and 'hyper-local' websites can be an effective way to share information and link people into decision-making about the future of their area.

Studies of three successful neighbourhood websites in London found that communication extended beyond online interaction, and significantly increased participants' local connections and sense of belonging (see Figure 21). A website for Harringay in northeast London has 4000 members in a community of 8000 people. The site has become an important feature of community life, providing local news, details of activities such as bird

watching and providing a place for people to exchange goods or share lawnmowers and other equipment.⁹⁹

Figure 21: Neighbourhood relationship changes as a result of participation in local website, London, 2010



Source: (Harris and Flouch, 2010)

⁹⁸ Hothi, et al. (2008)

⁹⁹ Mulgan (2010b)

⁹⁷ Baum, *et al.* (2000);Helliwell (2011);Semenza (2003)

Figure 22: Drawings by children who walk or are driven to school

As well as creating opportunities for social connection, walking around a neighbourhood helps people map it in their mind. This makes it familiar and lets people identify things they want to do in their local area in the future.

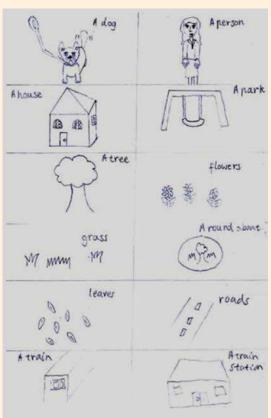
In a VicHealth study on children's independent mobility, children at five schools were asked to draw pictures titled 'this is a map of my neighbourhood' and 'how I got to school and what I saw on the way'.

Children who walked to school drew pictures like the one on the left. They included street names, identified friends' houses and described people and places in detail. Children who were driven to school often drew a car as the central focus, and abstract or unrelated images divided into different windows (like the picture on the right).

The study suggests that children who walk to school are better oriented and better connected to their local community and the people who live there.

Sources: (VicHealth, 2011); (Lee, H., 1989); for a discussion of children's independent mobility and their social connectedness, see (Love and Whitzman, 2011)





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4. **Streets**

People have always lived on streets. They have been the places where children first learned about the world, where neighbours met, the social centres of towns and cities.

Donald Appleyard

At least a third of all developed land in cities is consumed by space for vehicles, most of which is streets. In the especially carfocussed cities of the US, the average rises to around half. In Los Angeles, an estimated two-thirds of urban land is primarily for vehicles. 100

Since streets take up so much space, it is worthwhile devoting attention to how they are designed and used. This chapter will focus on different types of streets: arterial roads, commercial streets and residential streets.

4.1 What is a street for?

In a heavily car-dependent society such as Australia there is a tendency to think of city streets primarily as transport routes, thoroughfares for vehicles to drive along, often with as little hindrance as possible. But streets are also places for connecting with others – for playing, for sharing food and drink, for talking, for shopping and for watching the world go by.

Being on lively streets satisfies our need to be around other people and leads to chance encounters. It opens up opportunities for the sort of voluntary, incidental interactions that build trust, and that Jane Jacobs described as "the small change from which a city's wealth of public life may grow". 101 It is also on the street that we are most likely to meet those who live closest to us - our neighbours.

It can be helpful to think of streets as being like rooms in a house with different functions. A corridor is a link to other rooms and is primarily a place for moving through rather than for staying. A lounge room, on the other hand, is a place for sitting and socialising. It will be furnished appropriately with comfortable chairs and thought will be put into the atmosphere created by the choice of lighting and decoration.

A major highway is like a corridor – it is primarily a transport route and not generally a pleasant place to stop and stay. A residential street is more like a room: a place where people reside. Vehicles need access but if cars dominate then the street will lack intimacy and comfort. It will be like a lounge room where our attempts to relax are constantly disrupted by a stream of people walking past.

The different uses of streets can be classified into two types of primary activity: moving activity (walking, riding, driving) and staying activity (chatting, sitting or window-shopping). Of course, as Figure 23 illustrates, most streets are used for a mix of

eyes open' the untrained Jane Jacobs had an enormous impact influence on

debates about cities. Her insights were based on a particular place and time

(Greenwich Village in the 1960s) and some of her arguments have since been

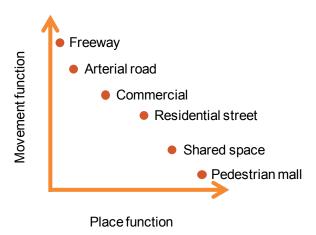
proved incorrect, yet Jacob's perspective on how street life can turn a neighbourhood into a community remain important. **GRATTAN Institute 2012** 30

 101 Jacobs (1961), pp. 56, 72, see also Gehl (1987). By 'walking around with her

¹⁰⁰ Southworth and Ben-Joseph (2003), p. 5

residential, commercial and transport uses – in other words they have varying degrees of both 'movement function' and 'place function'.

Figure 23: Street functions



Adapted from (Department for Transport (UK), 2010)

4.2 Arterial roads

It is an established policy objective to enhance public transport systems in Australia's growing cities to cope with commuter flows and to upgrade rail links to shift more freight from road to rail. Yet even if these ambitious plans are achieved, efficient urban road transport networks will remain important, particularly if there is continued rapid growth in delivery services (driven in part by the rise in online shopping). Therefore, it is essential to clearly identify the major arterial roads and freight routes where vehicle traffic is

prioritised and to separate these routes as much as possible from other uses. The SmartRoads program in Victoria employs this approach. 102

In a society with high levels of private car ownership, an efficient road network is important for social connection. It enables us to get together with friends and family, attend public events and so on. However, as discussed above, many streets are not solely thoroughfares for vehicles. Commercial and residential streets can be particularly important for social connection.

4.3 Commercial streets

People prefer to do things in lively streets because people are the biggest attraction for other people. We tend to congregate within the same parts of public places, even when open space is available. When we stop to talk, we gravitate to the most congested part of footpaths and open spaces. Consequently it makes commercial sense to design lively shopping streets.

Walkability

One way to create an active street is to have well-designed pedestrian areas. Streets with footpaths that are wide enough, are shaded – particularly by trees – and have public seating attract more pedestrians. 104 Shorter blocks, frequent pedestrian crossings without long waiting times, and removing obstacles can

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¹⁰² VicRoads

¹⁰³ Whyte (1988)

¹⁰⁴ See Mehta (2007) for a useful review of literature on these features

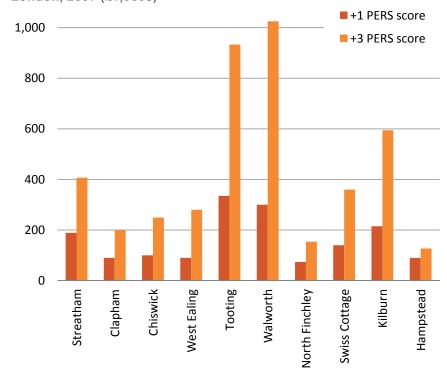
also help people walk from place to place in a shorter time, encouraging more pedestrians to use the street.

The benefits of good footpath environments are reflected in the value pedestrians place on them. UK research based on stated preference surveys suggests that improving the pedestrian environment on ten high streets (totalling 24 km) would result in annual public benefits of up to £4.3 million a year (see Figure 24).

This methodology is indicative rather than exact. Asking theoretical questions about how much a pedestrian would be willing to pay for improved local streets cannot yield precise predictions of increased value. However, it is a useful starting point and the finding is supported by a positive association between the quality of the pedestrian environment and local property prices and rents. ¹⁰⁵ There are also other important benefits of high quality pedestrian environments, such as improved mobility for people with disabilities. ¹⁰⁶

While the cost and benefits of transport infrastructure for cars are routinely modelled to inform investment decisions, using this approach for pedestrian infrastructure is much less common.

Figure 24: Perceived value of street improvements for pedestrians, London, 2007 (£1,000s)¹⁰⁷



Source: (CABE Space, 2007)

¹⁰⁵ CABE Space (2007)

Both apartment values and shop rents were estimated to rise by approximately 5% for each point in the Pedestrian Environment Review System (PERS) scale. The impact on people with disabilities was not assessed. Ibid.

¹⁰⁷ The scenarios are increases of one and three points, in Pedestrian Environment Review System (PERS) categories: quality of environment; personal security; permeability; user conflict; surface quality; maintenance; lighting; legibility; dropped kerbs/gradient; obstructions; and effective width. Calculations of public benefit take into account the number of pedestrians and time spent walking.

Some aspects of good pedestrian design need to be considered at an early stage of urban planning, but most can be achieved in established areas, often at a low cost. One way to identify opportunities to improve footpaths is a *walking audit*. In preparation for the 2012 Olympic Games, Transport for London commissioned an audit of major pedestrian routes from a train station to an Olympic venue in East London.

The audit used specialised software to highlight areas with the worst walking conditions and identified more than 100 "quick wins" where inexpensive improvements could be made. They included improving kerbs at crossings and removing redundant barriers that block footpaths. ¹⁰⁸

Diversity

Good physical design of pedestrian areas is not enough to ensure lively streets. As Figure 25 illustrates, in commercial and mixed-use streets this needs to be combined with variety and activity at a human scale, which is encouraged by certain types of businesses and building facades.

Diverse businesses, with windows to look into and with personalised frontages, prompt people to linger and window-shop. This increase in staying activity makes streets livelier and is self-reinforcing, because "people come where people are". 109

Figure 25: Liveliness on two similar street corners, Boston, 2005



Good physical features – wide footpaths, ample street furniture, trees and varied facades built up to the footpath – do not attract people on their own. They should be coupled with a variety of things to do, such as community gathering places, and a rich mix of stores and land uses.

The diagram shows two physically similar blocks on the same street in Boston. They are a similar size, have street furniture, are well maintained, and feature historic buildings with many entrances. Each dot is a person seen during study observations.

A bank takes up the whole building at Corner 1. At Corner 2 are several small shops with window displays. There is also a cafe that is a local gathering place and has outdoor seating. This combination of good physical features and varied activities results in a much livelier street.

Source: (Mehta, 2007)

¹⁰⁸ Clark and Davies (2009)

¹⁰⁹ Gehl (2010)p.65

Narrower frontages, greater commercial variety in a block, unique displays and signs are more often associated with independent retailers than chain stores. 110

Small businesses also often have local owners whom customers can get to know, which helps foster recognition and connection. ¹¹¹ Businesses that provide outdoor commercial seating also provide a strong motivator for people to stay, chat, or people-watch if they're on their own. ¹¹²

Buildings with varied facades at street level contribute to variety through nooks, alcoves and ledges that provide visual interest, places for people to stand, for children to play and buskers to perform. However there is no doubt that finding the right balance between traffic, pedestrians and commercial activity is not easy (see Figure 26).

Planners can design streetscapes that feel intimate, have varied street furniture and street art, and have mixed commercial uses where appropriate. But streets that are walkable and lively can also be promoted through grassroots efforts.

In America, a community organisation, Better Block, makes improvements to run-down streets. It focuses on blocks that could be good pedestrian areas, but that have vacant buildings and poor pedestrian infrastructure. Community activists and groups provide temporary seating, landscaping, lighting, bicycle lanes and pedestrian zones. They also set up pop-up shops, stalls and public performances.

Figure 26: The evolution of a street

Swanston Street is the spine of Melbourne's CBD. Lined with shops and cafes, it is home to landmark buildings and serves as a key transport hub where nine tram routes funnel into the city.

Balancing the competing interests of various users is a challenge. In the 20th Century traffic began to dominate all other activities. In 1992, Swanston Street was closed to private cars. Pavements were significantly widened, trees planted and public art installed. The result was a sharp increase in pedestrian traffic.

The changes were hotly contested, but in 2008, when newly elected Lord Mayor Robert Doyle proposed restoring cars to Swanston Street, he met strong resistance. Few wanted to return to the noisy, polluted and congested street of the past.

The Lord Mayor changed his mind and Swanston Street is being redeveloped to give tram-travellers, cyclists and pedestrians even greater priority over motor vehicles. Tour buses have been moved out, taxis will follow and authorities want to shift delivery vehicles to loading zones in adjacent streets.



Four new tram 'superstops' with 'full disability access' were promised to resemble 'mini city squares', but when the first stop opened in late 2011 it was greeted with loud complaints about the way it mingled pedestrians, tram passengers and cyclists in a common area. Finding the right balance in Swanston Street looks certain to be an on-going process.

Sources: (Adams, 2010; City of Melbourne, 2011)

¹¹⁰Whyte (1980);Whyte (1988);Mehta (2009)

¹¹¹ Mehta (2009)

¹¹² Mehta (2007); Mehta (2009)

¹¹³ Mehta (2009)

Figure 27: Bottom-up street improvements

A Better Block project in Oakland, California, with seating in parking areas, temporary landscaping and stalls:



A pop-up cafe, open to anyone, not just customers, New York:



These projects have been staged in many cities across America. They have demonstrated the demand for and the benefits of street improvements. In many areas, this has convinced local governments to make some of the improvements permanent and has led to new businesses renting vacant buildings. 114

In New York, 'pop-up cafes' in parking spaces were successfully piloted in 2010 and 2011. In 2012, businesses will be able to apply to set them up over summer. In return, the new seating areas must provide a continuous barrier on the traffic side, maintain sightlines, and be clearly labelled as public spaces, not just for customers of the cafe or restaurant. Both approaches show how crucial individuals and businesses are to making successful streets (see pictures in Figure 27).

4.4 Residential streets

Neighbours, everybody needs good neighbours. With a little understanding you can find the perfect blend

Neighbours theme song

While the residents of Ramsay Street are fictional, the enduring popularity of the TV show hints at the importance of neighbours in our lives – something borne out in empirical research. Using large data samples from US and Canadian surveys, economist John Helliwell and political scientist Robert Putnam found frequent connections with friends, family and neighbours were "associated with systematically higher assessments of subjective well-

betterblock.org

¹¹⁵ New York City Department of Transportation (2011)

being". 116 Of course neighbours can be a source of tension and conflict too, which leads David Halpern to quote the idiom that 'good fences make good neighbours': we place a high premium on privacy and the ability to "withdraw behind our own front door" so as to avoid a neighbour we dislike or find tedious. 117

Halpern says that a street design that attempts to force neighbours to interact will fail by producing strategies of avoidance. The ideal design "creates easy opportunities for neighbours to interact with each other" but enables them "to choose when and where they will interact". 118 The Young Foundation proposes a model of modern-day neighbouring that has three characteristics:

- 1. Awareness of the situation of other residents
- 2. Respect for their privacy
- 3. Readiness to take action if help is needed 119

There doesn't seem to be a single street layout that consistently promotes neighbourliness. Several studies have found that grid layouts help people stay connected by maintaining lines of sight better than winding streets with cul-de-sacs. 120 However, other

studies suggest that different street layouts can work in different social, cultural and environmental contexts. 121

Nevertheless, we can identify particular factors that have a significant and measurable impact on neighbourly relations in residential streets: traffic volume and crime.

Traffic

In his pioneering work on streets, Donald Appleyard showed that residents in a street with light traffic flow (2,000 vehicles per day) had three times more friends living in the street (and twice as many acquaintances) than residents on a street with heavy traffic flow (16,000 vehicles per day).

The heavily trafficked street had little or no sidewalk activity while on the street with light traffic, front steps were frequently used for sitting and chatting, and there was play and casual conversation on the pavement. 122

More recent studies confirm the impact that traffic has on the time people spend on the street. In New York, 44% of people who live on streets with heavy traffic say they respond by going out less often. This compares to only 7% of people who live in medium traffic areas, and 3% of people in light traffic areas. 123 In Basel, people who live on streets with faster traffic are around half as

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¹¹⁶ Frequent interaction with friends was most important while family contact was only slightly more important than that with neighbours. Helliwell and Putnam

<sup>(2004)
117</sup> Halpern (2010) p.100
118 Ibid.

¹¹⁹ The Young Foundation (2010a)

¹²⁰ Speller and Twigger-Ross (2009) found that a UK mining community relocated form a traditional village with rows of terrace housing to a new village with a dendritic layout suffered unwanted isolation and lower social support due to loss of visual access. Lund (2003) found a link between grid layouts and social interaction in California.

¹²¹ Cozens and Hillier (2008). For a useful review of literature on this topic see Kent, et al. (2011)

Appleyard (1981) See also http://www.pps.org/articles/dappleyard/ Data are from 2005. Heavy, medium and light traffic areas have 16,000, 8,000 and 2,000 vehicles per day respectively. New York City Streets Renaissance (2006)

likely to spend time talking to other people on the street, or supervising their children on the street (see Figure 28). 124

Studies also support Appleyard's thesis that vehicle traffic crowds out opportunities to develop and sustain neighbourhood relationships. A recent study in Bristol found that people living on streets with heavy traffic have far fewer friends and acquaintances in the street than those living in quiet streets. The difference is particularly marked in relations between people who live on opposite sides of the road (see Figure 29). As participants in heavy-traffic streets said, "the traffic's like a mountain range, cutting you off from the other side of the road", and "people just go from their cars to their houses". 125

Anyone who both drives and lives in a city is conscious of the inherent trade-off between vehicle mobility and residential amenity. When we are behind the wheel speed is often important to us; at home, the speed of other drivers can be a neighbourhood curse. However, the benefits of lighter traffic for social connection gives weight to the argument that staying activities are more important that moving activities in residential streets: they are more like lounge rooms than corridors and we should furnish them accordingly.

Figure 28: Activities in public space by street type, Basel, 2005

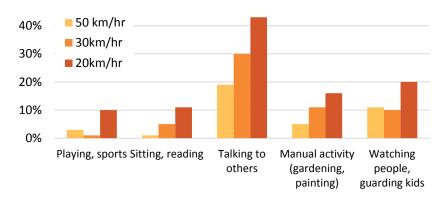
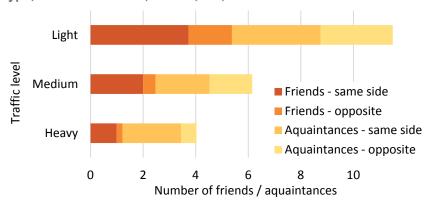


Figure 29: Average social connections by street traffic, connection type, side of the street, Bristol, UK, 2008



Sources: (Sauter and Huettenmoser, 2008); (Hart and Parkhurst, 2011)

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Sauter and Huettenmoser (2008).

Hart and Parkhurst (2011)

¹²⁶ Engwicht (1999) p.129

There are many ways to shift the role of streets from the cardominated default. The first and most obvious is to reduce speed limits in residential streets. In recent years the default speed limit in built-up areas in many Australian cities has been reduced from 60 to 50km/h. Road safety experts say Australia should follow the Swedish example and further reduce residential speed limits to 30km/h, a speed below which pedestrians have dramatically improved chances of surviving the impact of being hit by a car. Perhaps counter-intuitively, a significant reduction in speed limits is predicted to have only a minor impact on average travel times

Another approach is to create *shared streets*, where pedestrians, cyclists and drivers all have equal rights and streets are designed to reflect this. Forms of shared streets have been introduced in some Australian and New Zealand cities and in many European countries. ¹²⁹

Successful shared streets are clearly distinguished from other streets around them, with the entrance indicated by signs, plants, ramps, or narrowing. Within the shared space, speed limits are kept low, between 6km (walking pace) and 20km/h. Often, shared streets have no physical distinction between different surfaces for cars and pedestrians. This means that both drivers and pedestrians have to look out for each other and use eye contact and hand gestures when they negotiate the space, which in itself helps increase social connection.

Figure 30: Shared street roadsigns, Netherlands, Sweden, UK







Shared streets can increase safety and tend to be supported by locals, but the evidence of their impact on social connection is inconclusive. This may be the result of a lack of adequate data and suggests that further research is needed. While there have not been many detailed assessments of how shared streets affect social connection, as with many aspects of urban development, community engagement in planning and design, and active efforts to encourage changes in behaviour seem to help. ¹³¹

¹²⁷ Archer, et al. (2008)

¹²⁸ Ibid

European countries with priority pedestrian or shared zones include France, Germany, the Netherlands, Spain, Sweden, Switzerland and the UK.

¹³⁰ Ben-Joseph (1995) and Barrel and Whiehouse (2004) (cited in York, *et al.* (2007)); Moody and Melia (2011). Biddulph (2010) is the most recent meta-analysis of Home Zones (residential shared streets) in the UK. He finds a clear majority of survey respondents report no improvement in sociability. It is important to note, however, that: some survey response rates are low; only perceptions of social interaction are recorded; surveys occur soon after changes to streets; and the inclusion of deprived areas could skew results. Evaluation elsewhere in Europe is limited, Heydecker and Robertson (2009).

¹³¹ Biddulph (2010) notes that the only Home Zone where many residents reported improved sociability (over 40%) was for a less ambitious redesign, but one accompanied by extensive street events and consultations.

Figure 31: West Terrace Adelaide – a proposed redesign that creates better spaces for pedestrians



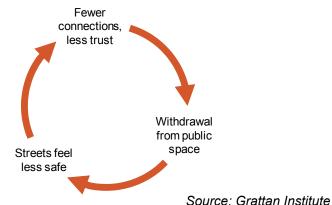


Source: HASSELL & Integrated Design Commission SA

Crime and violence

For many people a perceived rise in local threats – particularly to children – has shrunk the public space they regularly use. This limits the amount that people see each other, reducing the likelihood of widespread trust. In turn, this makes people feel less safe, and less likely to spend time in public places, creating a vicious cycle, as Figure 32 illustrates.

Figure 32: Feeling unsafe in the street - a feedback loop



The design and management of streets is just one of many factors that influence the incidence of crime, but it can have an impact. 132 Crime prevention through the design of the physical environment has become a prominent approach in Australia. All

¹³² A study of two areas in the Gold Coast found that crime prevention design at a street and dwelling level had an impact on crime rates, Minnery and Lim (2005). An international review, Cozens, *et al.* (2005), also demonstrates that it prevents crime.

states have some form of code or guideline aimed at reducing crime through the built environment, and there have been proposals to amend the building code to include crime prevention objectives. 133

One way streets can deter crime is by increasing visibility. Allowing people to see who is nearby makes people on the street feel more secure. It also makes people less likely to commit crimes because they feel a greater risk of being seen. Ways to increase visibility include ensuring clear lines of sight, making bus shelters transparent, making fences semi-transparent, and installing good street lighting. 134

Another approach is using symbolic or physical barriers to limit access to parts of the street. Examples include gating alleyways or entrances to apartment buildings, or demarcating private space with signs or changes in street materials. However, these approaches can also backfire. While they can create physical barriers to crime, they can also reduce surveillance and with it, deterrence against crime and support for social connection.

Streets where people feel a strong sense of ownership – personal ownership of their property and collective ownership of the street – also deter crime. In particular, well-maintained properties and

streets seem to reduce crime, particularly when combined with passive surveillance. 135

As well as street environments and lines of sight, the strength of relationships between neighbours also has an effect on crime and safety. As well as enhancing the amenity of residential streets to encourage activity and connection, informal events can help building neighbourhood networks.

In the UK, a Big Lunch is held every year, where neighbours eat lunch together, often in their street. The event was first held in 2009 and last year around two million people took part. When they were asked about the benefits of the Big Lunch, 89% of people said it encouraged a sense of community, 74% reported new relationships they would like to continue, and more than half the attendees said they felt less isolated. In October 2011, the second ever Big Lunch was held in Mosman, Sydney, as part of the Mosman Festival Open Day.

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¹³³ Cozens (2008). Clancey, *et al.* (2012) suggest that Victoria's guidelines are comprehensive and a good model for other jurisdictions.

As discussed in the chapter on neighbourhoods, improved visibility, particularly lines of sight, also facilitate connections between neighbours.

¹³⁵ See the literature review in Marzbali, *et al.* (2012), which also finds that in Penang, Malaysia, Crime Prevention Through Environmental Design (CPTED) reduced rates of victimization, which in turn reduced fear of crime.

¹³⁶ For more information, see www.thebiglunch.com

5. Buildings

There is no doubt whatever about the influence of architecture and structure upon human character and action. We make our buildings and afterwards they make us. They regulate the course of our lives.

Winston Churchill, 1924

Shelter is one of the most basic human needs. We spend most of our time in buildings, so they have a strong influence on how we live.

This chapter will consider both commercial and residential buildings; how they interact with their surroundings and how they are designed inside.

5.1 Commercial buildings

There is a body of literature that argues that buildings should be designed and constructed at a human scale. ¹³⁷ This is less a matter of how big or tall a building is than how a building 'lands' on the street.

Many landmark buildings make a dramatic architectural statement when viewed from a distance, but have a disappointing interface with the rest of the city at ground level. As described in the previous chapter, blank walls discourage people from spending time on a street; they tend to increase their walking speed and

hurry past. 138 This can be compounded by the canyon effect: stretches of tall buildings in a row funnel wind and limit the amount of sunlight reaching the street.

Zoning laws and planning rules can have a dramatic impact on the interface between building and street. For example, in 1957 Chicago imposed a cap on the floor-area-ratio (FAR) of office buildings – that is the ratio of total floor area to the size of the parcel of land on which the building is located. Developers were able to get a bonus on the FAR (allowing them to add extra height), if they provided sidewalk arcades and setbacks from the street. The system did result in some "civic space" amenable to pedestrian movement, but it also produced "barren" concrete plazas that were designed primarily to meet the criteria for winning a height bonus, without much consideration of how they would be used. 140

The Sears (now Willis) Tower in Chicago was the world's tallest building for almost a quarter of a century and a major tourist attraction. Yet the raised plaza at its base was "swept by high winds and inaccessible from three of its four sides", presenting passing pedestrians instead with blank marble walls. 141

Such problems arise when a building is considered in isolation rather than as part of the broader urban fabric, since the spaces

¹³⁷ See for example Gehl (2010)

¹³⁸ Ibid.p.79

This is also known as a 'floor space ratio', 'floor space index' or plot ratio.

Schwieterman and Caspall (2006) p.90

¹⁴¹ Ibid. Pp 91-92

between buildings can be just as important as the buildings themselves. Plazas fail when they are poorly integrated into patterns of pedestrian movement, and interrupt street frontages that have active shopping strips. There is also a risk of having too many plazas without enough activity to fill them. 142

Over time, Chicago's bonus system has been amended so that it is more like a restaurant menu. It offers developers a range of options that can be negotiated with the planning department – including winter gardens, riverwalks, public art and through-block connections. 143

The interior of buildings is also important to social connection. providing places for interaction in businesses and government offices.

Steve Jobs used building design to promote interaction and collaboration when he ran Pixar, an animation company. He believed the best meetings happen by chance, so he arranged Pixar's office around a central atrium to bring people from different areas together. However, he soon found that it would take other design features to encourage people to go there.

He used a series of escalating tactics to drive employees to the atrium. First, he moved mailboxes to the area, then meeting rooms, then the cafeteria, coffee bar and gift shop. Ultimately, he even tried to ensure that the only toilets in the building were

located there. According to employees, the approach worked and spontaneous meetings and information sharing increased. 144

A local example of innovative building design is the way in which the Youth Mental Health Centre was added to the Brain and Mind Research Centre in Camperdown, Sydney. The centre houses medical researchers, medical practitioners, social workers. community organisations and of course, it's open to clients.

Barriers between different groups of people are broken down as they enter the facility, without the security clearances common in medical facilities. Inside the building, shared spaces are prioritised over small, compartmentalised offices. There is an emphasis on creating spaces to interact; tea rooms and lunch areas are shared between patients, their families, clinicians and researchers. There is a strong emphasis on places for informal interaction, particularly the stairwells and bridges that link different levels and buildings because "most critical decisions in hospitals are made on stairwells", according to the Centre's Director.

These architectural decisions are reportedly helping to change clinical practices. The psychiatrists, psychologists, social workers, general practitioners and other staff are more likely to see themselves as part of a group providing care and support. Even more importantly, the Centre seems to be attracting many more people who are usually less likely to seek help – the Centre reports that around half of its patients are young men, as opposed to around one guarter in typical mental health facilities. 145

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¹⁴² Paumier (2004) p.74

¹⁴³ Schwieterman and Caspall (2006)p.94

 ¹⁴⁴ Isaacson (2011); Lehrer (2012).
 145 Martin (2011); Ryan (2011)

The experiences of buildings such as the Sears Tower, the Pixar building and the Brain and Mind Research Centre suggest that the standard practice of awarding architecture prizes when buildings are first completed might be reconsidered. It might make more sense to award a prize three or five years later, when it is possible to get a better idea of how the building, and the space around it, is inhabited.

5.2 Residential buildings

The interface with the street is just as important to residential dwellings as it is to commercial buildings, regardless of whether the housing stock in question consists of apartment blocks. terraces, or detached homes.

Studies in many different countries show that having 'soft edges' to residential buildings makes it more likely that people will see each other and interact. Characteristic features of soft edges are entrances that face the street, and a semi-private area (such as a front yard, porch or steps) that acts as a buffer residential buildings and public spaces.

These semi-private areas are places where residents, neighbours, and passers-by are all 'allowed' to be (see Figure 34). 146 As well as helping people connect with each other, they promote passive surveillance, deterring crime and increasing feelings of safety, security and community. 147

Figure 33: Hard and soft edges





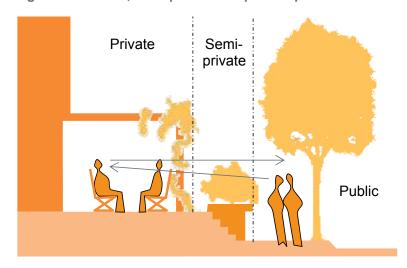
Sources: (Gehl, 2010); Grattan Institute

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¹⁴⁶ Jacobs (1961);Gehl (1986);Jacobs (1993);Gehl (2010) ¹⁴⁷ Macdonald (2005);Gehl (2010)

In Australia, these features are present in many sought-after types of housing, such as terraces. In these houses, semi-private places are a buffer between the street and the front door, which is the primary entry and exit. There are clear lines of sight into the street and front verandas can be personalised.

Figure 34: Private, semi-private and public space



Adapted from (Macdonald, 2005)

Efforts to promote buildings that link public and private spaces can increase social connection. In Vancouver's downtown area, there are several design requirements for large residential developments that promote safe, lively streets and social connection. They include individual entries for all ground-floor

homes, underground or hidden parking garages, and terraces or gardens at all ground-floor residential entries.

In a study of how these features work, Macdonald (2005) found that the small number of ground-floor homes (2% of the total) made a decisive difference in visual appeal, street life and social interaction. This is because the ground level is at eye-height and can work at a human, pedestrian scale, with a regular rhythm of gardens, entry steps and doors every seven or nine metres.

When residential buildings have 'hard edges' – when areas facing the street are minimal, sterile or dominated by closed garage doors – people's sense of community can suffer. A South Australian woman in one study explained:

"You don't get to see your neighbours at all... there are no gardens out the front, because everything is low maintenance and full of pavers ... Since the days of automatic roller doors, people just drive their car in, shut the door and go inside." 148

The essential design characteristics Macdonald identifies for maximising the use of private and semi-private space are shown in Figure 35. As these features show, it is important to balance an active, visible street frontage with enough privacy for residents.

If buildings fail to protect privacy and people have no options to

¹⁴⁸ Williams, et al. (2009)

A review of the literature on built environments and health (including social connection), found "there is a threshold to be found between high and low densities for the formation of social networks and social interaction generally. People need to be able to retreat to their private space, but they also require opportunities to randomly interact, Kent, *et al.* (2011),

escape into solitude, they tend to withdraw from interacting outside their homes.

Figure 35: Essential characteristics for ground-floor dwellings to promote life on the street and active semi-private spaces

Essential design feature	Benefits
Entry door raised above street levelBedrooms do not face the street	People cannot see too far into private areas – residents are less likely to screen off their terraces
Semi-private area includes garden and terrace	More activities (and usage) More personalisation
Front door looks like, and used as, a front door	More activity on the street People feel they are looking at the 'face' of the house

Source: (Macdonald, 2005)

In 'multi-unit dwellings' – buildings with more than one household - well-designed, shared private spaces can enable social interaction between residents. Observational research has shown which kinds of spaces work best. As with many previous studies. research in Taiwan found that places with a visual focus, seating, plants and play areas were much more likely to feature social interactions (see Figure 36). 150

Responding to the benefits of such shared places, some developments are making them a higher priority. Conventional apartment buildings can also provide more and better places for resident interaction. At M Central in Sydney, the 400 residents have a 2600 m² park-style roof garden, with green spaces, water features and a barbeque area.

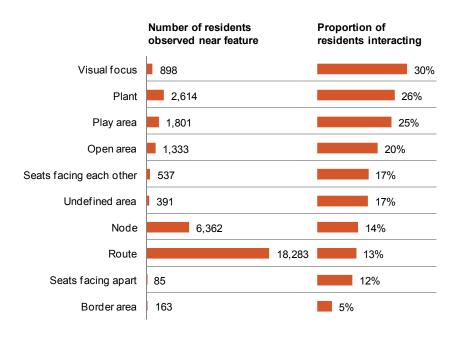
The distribution of such spaces within a building is also important. For example, residential aged care facilities with small lounges distributed through the development, or which include restaurants and cafes, have more social interaction among residents. 151

As well as the kinds of areas that are obvious places to connect, there is also potential to use more mundane places in shared buildings, such as corridors and stairwells. As Figure 36 shows, paths between places (routes) and where these paths intersect (nodes) are the shared area where people are most likely to be. However, interactions in these areas are low.

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 ¹⁵⁰ Whyte (1980); Kuo, et al. (1998)
 151 Evans and Vallelly (2007); Evans (2009)

Figure 36: Social interaction and design elements in three high-rise developments, Taiwan, 2005



Source: (Huang, 2006)

Enhancing these areas to encourage people to linger – for example by providing seating, plantings or a visual focus such as artwork – would increase opportunities for incidental social connection.

5.3 Innovation in residential housing

As noted at the beginning of this report, the fastest growing household type in Australia consists of people living alone. Average household size is declining and the demographic profile of the community is ageing, with the number of Australians aged 85 or over predicted to quadruple in the next four decades from 0.4 million (or 1.7% of the population) in 2010 to 1.8 million (5.1% of the population) in 2050. 152

Given these demographic trends, it is worth considering the potential to innovate in established housing systems.

There are many traditions of households living together with a combination of shared and private spaces – the most obvious being the large, multi-generational extended family. Increased mobility and declining family size means that such arrangements are rarer now than in the past, although it is worth noting that the number of multi-generational households in Australia – that is households that consist of two or more generations of related adults – has increased by 27% in the past 25 years. ¹⁵³

As the population ages, increasing numbers of older Australians will live alone in houses built to accommodate entire families. It is worth investigating whether there might be ways of facilitating and encouraging sub-lease arrangements that would allow older Australians to share their homes with tenants. The potential benefits might include extra income, extra support, increased availability of affordable housing, and greater social connection.

¹⁵² Productivity Commission (2011)

¹⁵³ Liu and Easthope (2012)

One contemporary example of innovation in residential arrangements is cohousing, which emerged in Denmark in the 1970s. Today around 10% of new housing in Denmark is cohousing, encouraged by policy settings and funding arrangements such as government-sponsored and guaranteed construction loans, and specific legislation that clarifies the legal basis for cohousing. ¹⁵⁴ Cohousing has spread beyond Denmark, particularly in northern Europe and America. ¹⁵⁵

The term 'cohousing' might conjure up images of communal living, but in practice cohousing is often very close to conventional household arrangements. In some cases, it is simply a row of houses where the fences between the back yards have been removed to create a shared garden, shed and laundry.

Shared facilities, shared paths and shared green spaces can bring people together, and provide a visual coherence that promotes a collective identity.

Just as in conventional residential neighbourhoods, however, successful cohousing often uses semi-private spaces, such as verandas and patios, as a buffer between private homes and common areas. This helps to balance community life with personal privacy. When these design features are combined with meetings to make decisions about the community, shared meals and social events, they can provide both incidental and structured social interaction, generating a strong sense of connection that increases wellbeing. ¹⁵⁶

Figure 37: Hearthstone Cohousing Community, Denver, USA



Source: Flickr copyright altopower

Cohousing gives residents opportunities for meaningful social interaction, but it doesn't need to dominate their lives. In a cohousing complex in California people spend on average just

¹⁵⁴ Williams (2005);McCamant and Durrett (2011), p. 35

¹⁵⁵ Williams (2005); Urban Coup (2010)

¹⁵⁶ Williams (2005)[b]; Brenton (1998)

under 6% of their time in communal spaces, and a little less that that interacting with other members of their community. 157

Retirement villages and independent living units in residential aged care facilities can be seen as contemporary examples of cohousing, where residents continue to enjoy the privacy of their own home, while sharing facilities, communities and services. In Europe and America, cohousing is becoming a prominent option for older people who want to maintain their independence, but also need greater support from others.¹⁵⁸

Cohousing is in its infancy in Australia, but communities have been established in Adelaide, Hobart and Perth and two new developments are nearing completion in Melbourne. 159

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 $^{^{157}}$ The figures are based on a study covering one month and are 5.9% and 5.4% respectively, Williams (2005), p. 209

¹⁵⁸ Brenton (1998), in Denmark a majority of the newest cohousing developments target older people, and senior cohousing is also increasingly popular in America, Abraham, *et al.* (2006)
¹⁵⁹ Holtzman (2011)

Conclusion

Without relationships we wither – individually and collectively. Yet our understanding of the human dimension of cities lags behind understanding of economic and environmental issues. The 'productive city' and the 'green city' are both further developed in thought and policy than the 'social city'. Of course economic activity and a clean environment are essential to thriving cities, but cities must also help people to connect with one another.

Social connection – meaningful, positive interaction – occurs at different levels, all of which are important: from the close, regular contact with loved ones to incidental interactions on the street.

If we lack the full range of social connection, then our basic psychological needs are not met, putting us at risk of suffering from loneliness – a condition that is linked to poor health and wellbeing. It's now recognised that loneliness is up there with high blood pressure, lack of exercise, obesity, and smoking as an indicator of shortened life expectancy.

This adds weight to our argument that we need to give greater weight to social connection in the way we build and organise our cities. The demographic changes underway in Australian society make the task all the more urgent and more challenging.

Already a quarter of Australian households consist of people living on their own and this is the fastest growing household type. Sole parent families are also increasing in number and the Australian population is getting older. People living alone, single parents and older people are all groups at higher risk of experiencing loneliness.

We are not suggesting that cities are the only important factor. There are many influences on the quantity and quality of social connection that are not related to urban form. Nor are we suggesting that there is a crisis – relative to many countries, indicators of social connection in Australia are generally positive. But if Australian cities are to absorb larger populations *and* improve quality of life for all residents, they need to do a better job of meeting our psychological as well as our material needs.

In planning, building and redeveloping our cities, we consistently consider such factors as financial cost, economic productivity and environmental footprint. The social impact of projects, however, is rarely given equivalent emphasis. Perhaps this is not surprising. Material needs like housing (shelter) and income (jobs) are more familiar and easier to quantify, yet there is strong evidence that an adequate level of social connection is just as critical to our wellbeing.

Many of the issues facing our cities are enormous, difficult, and expensive to tackle – and residents often feel they have no say about decisions affecting them.

However, improving social connection is not necessarily hard or costly. As many of the examples in the 'ideas' appendix to this report show, individuals and small groups can often make a real difference without massive investments of public money.

On the other hand, the loneliness and isolation resulting from neglect of our need for relationships with others will cost us dearly – as individuals and as a nation.

6. Appendix – ideas for social connection in cities

The challenge in identifying measures to improve social connection in Australian cities is that there is no single policy lever to pull and no single responsible authority. But this also means that social connection can be improved in many ways by many actors, without waiting for official stamps of approval or bucketloads of public money. Some projects might involve government at Commonwealth, state or local level but individual citizens, organisations or businesses can carry out others independently.

The list below is not intended to be prescriptive, because what works in one place may not be appropriate in another. Nor is it an exhaustive catalogue of what is possible. Rather it is intended as a prompt: examples of initiatives from around Australia and the world, to stimulate ideas, research and action.

Ideas are clustered under the themes:

- changing the urban landscape;
- bringing people together;
- · moving people; and
- · learning more.

To avoid a list cluttered with 'www's all references are hyperlinked, so if you are reading a printed copy of this report please refer to the online version at the Grattan Institute website (www.grattan.edu.au) to follow the digital trail.

Each initiative has also been tagged with a code, suggesting who might carry it out:

A = anyone LG = local government

B = business SG = state government

CO = community organisation FG = federal government

6.1 Changing the urban landscape

Official pop-up parks (LG)

Under-used or derelict spaces are converted into a temporary public park with the approval of local government. The project may be a test run for a permanent public park as happened in Brooklyn, it may take over a street during warmer months of the year, as is the case in Yarraville or it may constitute the 'meanwhile' use of an area that is slated for redevelopment in the longer term, such as the pop-up park in Dandenong.

Figure 38: Pop-up park, Yarraville, Melbourne



Source: Simon Leo-Brown, ABC Online

Unofficial pop-up parks and gardens (A, LG, CO, B)

Public artists and social activists combine to bring people together to re-imagine a city space as in Beirut's <u>Green the Grey</u> project. Every year International <u>PARKing day</u> is used to draw attention to the city space occupied by motionless vehicles, metered on-street car parks are transformed into temporary gardens, art installations, picnic spots and play-spaces. Many Australian cities, including <u>Adelaide</u> and <u>Brisbane</u>, have PARKing day activities, sometimes with the <u>support</u> of local government.

The <u>guerrilla gardening</u> movement has a similar philosophy, encouraging anyone "interested in the war against neglect and scarcity of public space" to get involved in planting and cultivating edible or decorative gardens on land that has been abandoned or neglected by its legal owner. Some guerrilla gardens work clandestinely under the cover of night, while others garden openly to encourage public participation.

Pavements to parks (B, LG)

In New York, cafes and restaurants can sponsor the conversion of on-street car parks outside their premises into temporary outdoor seating areas. The business owners essentially lease the parking spaces from the city, and are responsible for the associated costs and maintenance. However, anyone can sit in the space, regardless of whether they buy something from the restaurant. The idea <u>questions</u> "whether the highest and best use for street space along narrow sidewalks is storing cars".

San Francisco's streets take up a quarter of the city's land area, more space than all of the city's parks. The "Pavement to Parks" project temporarily reclaims "wasted space" on "excessively wide" streets and quickly and cheaply converts it into public plazas and parks. The success of these temporary parks is then evaluated to decide whether the temporary closure should be a long-term community investment. While business owners sometimes fear that the loss of street-side car parking will reduce trade, the opposite often happens, with increased pedestrian and bicycle activity more than compensating.

Figure 39: PARKing Day



Source: Tom Hilton

Bring activity to under-used spaces (A, B, CO, LG)

The <u>Renew Newcastle</u> project was set up to help solve the problem of Newcastle's empty city centre. While there were long-term prospects for the redevelopment of the Newcastle CBD, in the short term many sites were boarded up, falling apart, vandalised or decaying. Renew Newcastle encouraged artists, cultural projects and community groups to use and maintain these

buildings in the short to medium term. By generating activity, the project brings new life to a neglected and run-down area, and thus increases the commercial viability of permanent redevelopment.

The Renew Newcastle model has been expanded into a national project, Renew Australia, which works to find short and medium term uses for buildings that are currently vacant, disused, or awaiting redevelopment. Artists, cultural projects and community groups are engaged to activate and maintain these buildings until they become commercially viable or are redeveloped.

The <u>Creative Spaces</u> initiative in Melbourne helps visual and performing artists to find suitable and affordable spaces to develop, exhibit or perform their work. Creative Spaces acts as a broker, linking artists with building owners who are willing to hire out, lease, or share under-utilised spaces for a limited period of time (such as an office building or warehouse that is temporarily or partially vacant pending re-development). Creative Spaces helps to maintain activity in areas that might otherwise become empty and neglected.

The <u>Better Block Project</u> in the US also sets out to transform previously abandoned city areas into active centres, although it opts for more guerrilla-style tactics. Rather than wait for detailed site analysis, funding, or long-range plans, the project takes a single city block and redesigns it for a day. The redesign is done with as little money as possible and often subverts regulations: local small businesses and artists occupy empty storefronts, temporary awnings and seating are constructed on footpaths, and bike lanes are painted on the street. In some cases, the changes become permanent.

Provide more games and activities in parks (LG)

Australian parks tend to be supplied with play equipment designed primarily for children and/or fields for organised team sports. However adults of all ages can also be encouraged to share games and exercise. The St Kilda Botanical Gardens has a giant chess set and several table-based chess boards. In Beijing, many parks and many courtyards in housing compounds have public table tennis tables, which are used by young and old. Beijing's residential areas are also scattered with simple-to-use equipment designed for gentle aerobic and muscle-building exercise suitable for people of all ages.

Figure 40: Public table tennis in the park



Source: Grattan Institute

Figure 41: Urban exercise equipments, China



Source: (Gehl, 2010)

Public and community art (FG, SG, LG, B)

Public art can help to make spaces distinct and interesting, add character to neighbourhoods and provide a focus that draws people together. Anish Kapoor's 'Cloud Gate' is one famous (and expensive) example, but public art need not be permanent or costly. By transforming familiar local landscapes, temporary interventions can be bring people together and spark conversation and debate.

For 12 days during the 2006 Commonwealth Games, a tram decorated in the style of a Karachi bus circled Melbourne, carrying 80,000 passengers for free. The W-11 Tram project was so popular that the tram was brought back for a second series of Friday afternoon journeys, with on-board hosts engaging in conversation, performance and hospitality.

The New York Public Art Fund sponsors a range of temporary projects such as Olafur Eliasson's Waterfalls. Public art can also be sponsored by private and corporate philanthropy or enshrined in building codes. 'Per cent for art' programs require major construction projects to commit up to 2% of the budget on art.

Community arts projects can also help to make public spaces safer and more sociable. The arts organisation Contact Inc. was contracted to run a project with young people at a North Lakes Westfield mall in Queensland in response to increases in racism and violence. Up to 250 young people participate in a weekly program that includes hip-hop workshops. Since the project began there has been a significant reduction in theft, graffiti and violence in the mall.

Figure 42: W-11 Tram



Source: Mick Douglas

Promote active street fronts (SG, LG)

The design and development overlay for Melbourne's CBD requires buildings with ground-level street frontages to provide "at least 5 metres or 80% of the street frontage as an entry or display window to a shop and/or a food and drink premises". Such rules ensure ground floor frontages are pedestrian-oriented, add interest and vitality to city streets and contribute to city safety by providing lighting and activity. As discussed in the chapter on buildings, design standards to encourage active streets can also be set for the ground floor of residential developments.

Promote mixed-use streets (LG, SG)

Strict zoning laws designed to protect residential amenity can lead to perverse outcomes that discourage walking and increase car traffic by squeezing out neighbourhood businesses such as milk bars or corner stores. More flexible regulations can support small-scale, low-impact local retail or commercial activity (e.g. art studios, shoe repairs, cafes).

Slow traffic in residential streets (SG, LG)

The strong evidence that high traffic volumes reduce neighbourly interaction and friendships is an argument for trialling and evaluating reduced speed limits of 30 kilometres an hour and/or shared activity zones in residential streets.

Walking audits (A, CG, LG)

Assessing the urban environment from the perspective of pedestrians can identify changes to improve walkability, often at low cost (such as re-programming a pedestrian crossing light to reduce waiting times).

<u>Victoria Walks</u> provides a guide to conducting walking audits. Walking increases opportunities for face-to-face social contact and helps people to map their neighbourhood in social terms. Improved walkability also enhances the social life of people with limited mobility and increases property values (as reflected in the increasing use of '<u>walk scores</u>' by real estate agents).

Figure 43: Pedestrian activism to enhance walkability



Source: Celia Wade-Brown, Living Streets Aotearoa

Urban land conservancy (A, B, LG, SG, FG)

Australians are familiar with organisations such as <u>Trust for Nature</u> that set aside private land in perpetuity to protect environmental assets. An urban land conservancy works in a similar way, except that the land is set aside for *social* purposes. The <u>Denver Urban Land Conservancy</u> uses a mix of private, philanthropic and public money to acquire, develop, and preserve urban land as "community assets". The land could be used for affordable housing close to public transport, for schools, or office space for non-profit organisations.

6.2 Bringing people together

Out-of-hours use of schools (CO, SG, LG, B)

Increased evening, weekend and holiday use of school buildings and sports grounds would create new opportunities for social connection. Policies exist to promote this idea, but implementation is complicated by overlapping jurisdictions (Commonwealth, state, local) and by issues such as insurance and liability.

The <u>NSW guidelines</u> for community use of public schools are dauntingly detailed. Funding under the Commonwealth's BER (Building the Education Revolution) required schools to provide community access to new libraries and multipurpose halls "at no, or low, cost", yet there was little or no public engagement on the design of these facilities to ensure they would actually meet community needs. Research suggests that it takes an active process of community engagement to achieve shared use of school buildings.

Sharing household resources (A, B, CO, LG)

According to one estimate, the drills in private homes are used an average of 12 to 13 minutes over their lifetime. ¹⁶⁰ People in the same neighbourhood might have tools they rarely use, or a garden they don't have time to cultivate. Under the rhetoric of 'collaborative consumption', websites such as Share Some Sugar in the US or Open Shed in Australia match locals to share resources (either for free or for a modest rental).

Sharing Homes (A, CO, LG)

Many older Australians live alone in large homes and need just a little support and companionship to remain independent. The Wesley Homeshare program matches older householders with a reliable and friendly person, who shares their home rent free in return for assistance in the home. Many successful matches have involved international students. By swapping a room for some support the model allows older people to stay in the community where they have established social connections and helps to break down cultural and generational barriers.

Personalised care networks (A, CO, LG)

The social networking application TYZE was developed in Canada as a way to coordinate support around a vulnerable individual, such as a frail older person or someone living with a disability or chronic illness. TYZE can be used to schedule visits, doctors appointments, meals etc. in a way that links neighbours, family, friends and helps combats isolation and loneliness.

Hyper-local websites and other online networks (A, B, LG)

A great deal of online communication takes place between people who are already in close proximity to one another. Hyper-local websites encourage neighbourhood social connection by sharing local news, posting information about events, debating planning issues and lobbying government. A hyper-local website can be an online, interactive version of an old fashioned notice board.

Hyper-local websites such as <u>Kings Cross Environment</u> in London or <u>Fitzroyalty</u> in Melbourne began life as the initiative of a single energetic resident. Others are started by community groups or by

¹⁶⁰ Botsman and Rogers (2010)

property developers keen to build social links in newly established neighbourhoods such as <u>Caroline Springs</u>. Email lists and social networks can augment local websites. Experience from <u>Singapore</u> shows a virtual community can be created even before the physical neighbourhood is built, enabling people to get to know one another before they become neighbours.

In the US, <u>EveryBlock</u> is a platform for hyper-local news and information – local residents can use it without someone having to design and maintain a separate website. EveryBlock combines media coverage of neighbourhoods, civic information, and discussion boards.

Big Lunches (LG, CO)

The Big Lunch is an annual <u>event</u> designed to encourage as many people as possible to have lunch with their neighbours "in a simple act of community, friendship and fun".

Neighbourhood clean up days (A, CO, LG, B)

Clean up Australia Day is a national event organised by neighbourhood, which brings local residents together for the common purpose of enhancing the environment. A similar initiative is adopt-a-park, a program that encourages local residents to become park 'guardians', assisting with maintenance, enhancement and passive surveillance of nearby green spaces.

Figure 44: Clean up Australia Day



Source: Hocking Industries, Flickr

Walking Groups

The Heart Foundation facilitates <u>walking groups</u> in local neighbourhoods. Led by volunteer organisers the groups aim to promote social as well as physical activity. <u>Some groups</u> walk in shopping centres because they provide safe, comfortable all-weather environments, which can be important for some older walkers.

Walking school bus (A, LG, SG, FG)

A way of walking primary-age children to and from school that also encourages neighbourhood cooperation and increased social contact. The 'bus' is supervised by a minimum of two parents – one 'driving' the bus from the front and another 'conducting' from the rear. Children can 'catch' the bus at points along the route.

Dog walking areas (LG)

Designated dog-walking areas can provide more than just exercise for pets. The shared interest (dogs) encourages conversations and interaction. At Semaphore Beach in Adelaide, dog walkers have formed a club that produces a calendar, raises funds and donations of pet food for animal shelters. The club also provides mutual support, walking dogs when owners are unwell, or finding new homes for dogs whose owners can no longer look after them.

Community gardens (LG, SG)

Community gardens are often "more about community than they are about gardening". They offer places where people can "gather, network, and identify together as residents of a neighbourhood". A study on the Waterloo Public Housing Estate in Sydney found that community gardens "contribute to a positive sense of community", are "a place for friendship" and "provide opportunities for gardeners to show their generosity towards each other in different ways". The benefits go beyond the gardeners themselves, and extend to others on the estate, providing "many positive opportunities for cross-cultural interactions". An evaluation by Urbis found that the benefits of garden projects on public housing estates included reduced vandalism and other opportunistic crime, higher feelings of safety, improved health and well-being.

Creating shared histories (CO, LG)

Local history projects can take help residents in a local area to develop neighbourhood identity and a shared sense of belonging. Projects can include guided historical walks, talks, recording oral histories, guided podcasts, memorials and signage.

¹⁶³ Urbis (2004)

¹⁶¹ Glover (2002)

¹⁶² Bartolomei, *et al.* (2003)

Figure 45: Princes Pier piles preserved as sculptural heritage, Port Melbourne



Source: Grattan Institute

6.3 Moving people

Investment to expand and upgrade urban public transport would enhance mobility and social connection, particularly for those who cannot drive or afford a car. Given the long lead times for infrastructure development and the commitment of governments to balanced budgets, there is little prospect of a transformation of existing networks in the short term. It is therefore worth trialling and evaluating other, more immediate, measures to see whether they can improve the public transport experience at relatively low cost. They might include:

- increase efforts to give buses and trams <u>greater priority</u> over other vehicles on city roads (e.g. separate lanes, priority traffic signals);
- employing public transport greeters at stops and stations;
- re-orienting schedules to meet social needs (e.g. more weekend and night services);
- mapping the mismatch of between public transport need and supply in order to better fill the gaps;
- spreading peak traffic to stagger commuting and reduce rushhour crowding (e.g. discount early bird tickets, staggered starting times for schools and businesses); and
- decentralising employment from the CBD to suburban public transport hubs (this is policy in Brisbane and Perth).

6.4 Learning more

This report brings together a lot of what we know about social connection. But there is much more that we can learn. For example by:

- measuring access to places that are good for social connection (including parks, shopping areas, cafes, and sports facilities) and using this to inform urban planning – <u>WalkScore</u> could be a starting point;
- identifying and publicising the characteristics of successful shared spaces in multi-unit residential buildings and office buildings (so that developers and consumers can understand what works);
- implementing and evaluating training programs, such as those provided by the <u>US Project for Public Places</u>, which are used to build skills in creating successful public spaces;
- auditing planning laws, credit rules and other regulations to ensure that they do not inadvertently discriminate against innovative housing arrangements such as co-housing;
- evaluating public spaces using observational study (of the kind pioneered by William H Whyte) to determine how those spaces are used and consider whether improvements are needed; and
- developing new ways to measure social interaction for example automated video analysis, analysis of smart phone data, or research using smart phone apps, such as <u>Mappiness</u>.

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