Sustainability Through Community: Social Capital in Australia's Inner Urban Eco-communities

Liam Cooper, University of Melbourne

Abstract: While much of the urban sustainability debate often focuses on technical systems and the built form the purpose of this paper is to explore the role of social capital – the social structure, networks and relationships within a community of people - in moving towards sustainability. It is these social aspects that are overlooked or misunderstood by developers and not valued by financial institutions and the market. Inner urban eco-communities can offer important insights in terms of design, materials and technologies, and the practice of living in 'community'. Drawing on social capital theory, and using qualitative ethnographic research undertaken at two Australian inner urban eco-communities as part of a doctoral thesis (in progress), this paper explores the ways that social capital is enacted in these eco-communities and how such mechanisms impact the movement towards sustainability.

Introduction

'Sustainability' and 'community' are contested concepts (Fitzsimmons, 2000; Swyngedouw, 2010; Vallance, Perkins & Dixon, 2011), yet they remain axioms for addressing crises and improving society. The complexity of our social-ecological system, Meltzer (2005, p. 15) argues, means we must recognise the "ecological interconnectivity" of the "social and environmental dimensions of sustainability" if we are to truly address crises like climate change, resource depletion and loss of biodiversity. Appeals to abstract notions of a 'sustainable society' and abstract mechanisms like emissions trading schemes (although potentially important components for the transition of a society away from fossil fuels) are, arguably, meaningless to the day-to-day life experience of individuals (Bridger & Luloff, 2001, p. 461). While often vague, the intersections of community and sustainability are perhaps best articulated in ecologically-concerned intentional communities as they provide "unique entry points" where the "meaning and practice of both sustainability and community are made more explicit" (Lockyer, 2010, p. 17). Communities acting at the local level, at the level of people, can help realise greater sustainability outcomes through empowerment and social interaction, re-invigorating the notion of the 'civil society', albeit on a small scale.

This paper addresses two research questions: how is social capital enacted in Australia's inner urban eco-communities (IUEs)? And, how does the production of social capital contribute to the sustainability goals of these eco-communities? These questions are addressed using the case studies of Christie Walk in Adelaide, South Australia, and Westwyck in Melbourne, Victoria. The remainder of the paper is structured as follows. The next section sets out the concept of eco-communities, and profiles their development in Australia, in particular the two case study sites. This is followed by a brief discussion of the methodological framework used. The paper then explores the various ways social capital is constructed in these communities and the impact on community sustainability. The paper concludes by identifying research limitations and a proposal for further research.

The Inner Urban Eco-community

Often maligned as fringe, utopian and ephemeral, eco-communities are important social laboratories (Metcalf, 1995) with much to add to a sustainability debate that is often highly technocratic and managerial (Bridger & Luloff, 2001). Eco-communities, often referred to as 'eco-villages' are sustainability-oriented intentional communities (Lockyer, 2010). These communities are formed by an association of families and individuals that reside in separate private households (Metcalf, 1995) who share a vision, alternative to societal business-as-usual (Miller, T, 2010). They share resources and strive for some measure of self-reliance in the provision of food, energy and water (Dawson, 2006; Gilman, 1991). Self-sufficiency is rarely achieved, and the spatial constraints associated with inner urban environments makes self-sufficiency all but impossible. These eco-communities are predominantly found in rural areas and on the urban fringe and have historically viewed sustainable living as necessarily requiring a break from 'city life' in an effort to get 'back to the land'. Over the past 20 years, however, an increasing number have begun to be constructed in the inner urban areas of major cities. Indeed, the two eco-communities that are the subjects of my research share similar attributes with other inner urban eco-projects around the globe (Bundale, 2004; Downton, 2009; Jarvis, 2011; McCamant & Durrett, 1994; Sargisson, 2012) and with Australian cohousing communities (Crabtree, 2005; Meltzer, 2005; Urban Coup, 2013).

For the purpose of this research, an IUE is located in a city's central business district (CBD) or surrounding inner suburbs and residents are largely motivated by a desire to incorporate environmental and social sustainability into a modern urban lifestyle. IUEs exist within a very 'broad church' of intentional communities in Australia and globally, from inner city communes and shared households, to rural survival communities and eco-villages in rural areas and the urban fringe (Cock, 1979; Metcalf, 1995), to the proliferation of cohousing communities that began in Scandinavia before spreading across Europe, North America and Australia and New Zealand (Sargisson, 2012).

Case Studies
The IUE is an emerging phenomenon in Australia and as such there are a limited number of communities to be included in this research. The two communities at the centre of this research were chosen for their proximity to the centre of their respective cities and their focus on ecological development. Christie Walk in the central business district of Adelaide, South Australia, consists of 44 residents living in 27 dwellings ranging from apartments to three-storey townhouses and includes community facilities such as communal gardens, a community room (with meeting space, kitchen and library), shared laundry, bike and tool shed and an office housing the Centre for Urban Ecology. Westwyck in the inner Melbourne suburb of Brunswick West, Victoria, consists of 24 residents living in 12 dwellings ranging from apartments to three-storey townhouses and includes community facilities such as communal gardens, outdoor barbeque area and bike shed. The age of residents across the two communities ranges from young children to 87 year old retirees, although the average age of residents would be over 50 years of age. Residents are highly educated and largely politically progressive. Occupations have tended primarily toward the public, non-profit, professional or academic sector. While income varies considerably across the two communities, individuals could be considered broadly 'middle class'.

As demonstration projects, Christie Walk and Westwyck, make an important contribution to the urban sustainability debate by exhibiting how individuals can lead more socially and environmentally sustainable lives in inner urban areas. Their constructions are attempts to disrupt development-as-usual in Australian cities and the "perceived rapacious nature of the conventional development industry" (Downton, 2009, p. 286). Their construction is the culmination of a determination that the only way to change that situation is to put new and innovative models of development on the ground. In line with eco-city principles (Downton, 2009) they are illustrations of how to build vibrant, ecologically-focused communities in spatially-constrained higher-density environments, rather than on the urban fringe or in rural locales. These projects engage the city directly, reconfiguring eco-community structures and values for the urban environment as a response to the growing ecological crises that humanity faces and in recognition of the reality of a highly urbanized global population.

Methodology
This paper stems from qualitative ethnographic research undertaken at two Australian IUEs. The primary method of data collection was participant observation. As an embodied activity, participant observation permits accumulation of "experiential knowledge" (Bernard, 2002, p. 322). The participation in community meetings, shared meals and working bees (in addition to time living within the community, in the case of Christie Walk) provided significant insight into the social dynamics of the communities in great detail. This was considered of critical importance in order to move beyond abstract understandings (Miller, D, 1998, 2000) and to the heart of the ways of life of actual people in the contexts of their everyday life experiences (Crang & Cook, 2007).

To augment data collected through participant observation over 40 interviews were carried out across the two eco-communities. The semi-structured interviews were largely open ended and focused on the intersection of a participant's sense of the community, the networks of trust and reciprocity that are produced, and notions of social and environmental sustainability. The open ended nature of the interviews was implemented in an effort to draw out the 'long stories' (Katz, 2001), reflecting a much richer and deeper understanding of a participant's experiences. A thematic approach to qualitative data analysis (Ritchie & Spencer, 2002) was then used to identify and explore themes that could inform debates on social capital and urban sustainability.

Discussion
Building Social Capital in the Inner Urban Eco-community
The concept of social capital has a long history in the social sciences (Woolcock, 1998). Seminal research by Bourdieu (1986), Coleman (1988) and Putnam (1996, 2000) provide the theoretical framework through which much of the social capital research takes place today. It has since been invoked by a range of disciplines including economics (Fine, 2000; Harriss, 2002), social work (Aguilar

& Sen, 2009), public health (Szreter & Woolcock, 2004), community development (Mayer & Rankin, 2002) and governance and civil society (Edwards, Foley & Diani, 2001). Broadly speaking, social capital refers to the social networks that connect individuals and the trust, cooperation and norms of reciprocity that are established and nurtured within them, both formally and informally. This can include the strong, inward-focused connections of a particular group, known as *bonding* social capital, which forms the indeterminate 'glue' that binds people together. Or it may concern the networks and relationships that link socio-demographically different groups, known as *bridging* social capital (Putnam, 2000; Szreter & Woolcock, 2004)[1]. Individuals may use social capital as a resource, but it is ultimately the property of the relations of a network of individuals and, consequently "trans-individual" (Szreter & Woolcock, 2004, pp. 655-6) and a public rather than a private good (Putnam, 2000).

Social capital research has attracted much criticism over the years as a neoliberal concept and argument for dismantling the welfare state (Spies-Butcher, 2006; Szreter & Woolcock, 2004), as a re-invention of the romantic notion of 'community' (Fitzsimmons, 2000) and as providing a means for social exclusion and control (Fitzsimmons, 2000; Somma, 2009). Like any other form of capital, social capital, as a resource, can be deployed for nefarious means, but the resource itself must be considered distinct from the endeavours to which it is deployed (Portes, 1998; Szreter & Woolcock, 2004). Like concepts such as 'race' and 'class', note Szreter and Woolcock (2004, p. 654), social capital may ultimately remain a contested concept as it is "too politically and ideologically important for those at any point on the political spectrum to concede a definition of the term that they do not see as squaring with their own beliefs, assumptions and principles". My purpose here is not to enter into such debates; rather simply acknowledge the concept's contested nature and argue that it has value.

Christie Walk and Westwyck incorporate intentional social contact design, similar to most cohousing developments and eco-villages. Designed as pocket neighbourhoods (Chapin, 2011), these eco-communities incorporate compact housing clustered around communal gardens and shared open space with an internal pedestrian street that runs like a spine through the developments. This is, at least partially, a response to the perceived fragmentation and isolation of the urban environment. Explicit within the IUE is a desire to re-establish the *Gemeinschaft* social relations (Tönnies, 1963) ascribed to the village, where elements of an idealised "community of the past" (Participant, Westwyck) are transplanted into the inner urban landscape. The design aims to encourage social contact, whilst maintaining the necessary private space for individuals to retreat to when needed (Holtzman, 2012). Private dwellings are similar to conventional homes, albeit of a smaller size to allow residents access to communal open space and common facilities. Christie Walk includes communal gardens, sandpit, community room with kitchen and library, shared laundry and clothes lines, and shared tool and bike sheds. Westwyck includes communal gardens and barbeque area, a shared clothes line and there are plans to include a shared eating space, meeting rooms and a community baker's oven in the second stage of the development that is to begin construction soon (Westwyck Development Manager, pers. comm., September 2012). Car parking is situated at the edges of the developments. Site walkability is crucial to allow residents to 'bump into' each other and has a positive impact on social capital (Leyden, 2003; Rogers et al., 2011). Further, the effect of the car on the sociality of places and the formation of social capital is well known (Burton, 2000; Buys et al., 2007; Freeman, 2001) and both communities resolved to 'get the car out of the way' and create the space for people to interact.

Participants often made comparisons with the dearth of space provided by the vast majority of high-density developments, where residents are "geographically close but suffer from a tyranny of social distance" (Participant, Westwyck). The aim of these developments is to be high density, but not high rise. As one participant at Christie Walk put it:

> "Fostering community requires appropriate space for interaction. A hallway or car park is not spaces conducive to strong social connection. Unless you sit in a chair in the hallway, you'll never really meet anyone." (Participant, Christie Walk).

The provision of common facilities and shared open space create opportunities for convivial social interaction, whether at the letterbox or washing line, the barbeque area, or around the communal gardens. These gathering places are informal settings of sociability that allow for strong bonding social capital to form in a relaxed social environment. For example at Christie Walk, particularly during the summer, residents will often gather around the gardens for a glass of wine a couple of times a month. Numbers at these impromptu gatherings can quickly swell to more than 10 to 15 residents.

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1 Szreter and Woolcock (2004, p.655) also identify another form of social capital. *Linking* social capital comprises the "networks of trusting relationships" that interact across "explicit, formal or institutionalised…'vertical' power differentials", with a particular focus on the role of the State.

Over time these social relations build that patterns of trust and mutuality, producing the indeterminate social 'glue' that characterises successful communities.

The provision of shared space and incorporation of common facilities were often met with derision by the development industry, financial institutions and regulatory bodies. When the plans for Westwyck were taken to the bank the original funding application was rejected because there were too many shared facilities, and that is "not how Australian's live" (Participant, Westwyck). Even estate agents seemed to struggle to get their heads around how communal spaces and facilities were to be carved up. As one participant recounted:

> "They always asked how much land belongs to each house to which the reply was: 'here's the floor plan for each house and then just add 1/12 of the common space'. Estate agents were astounded by this and basically told us they couldn't do that to which we replied, 'you'd count it if it was full of houses'. For some reason it's anathema to suggest that residents can co-own the gardens and other shared facilities." (Participant, Westwyck).

The development of social capital cannot rely simply on the design of its built environment. Constructing some buildings and asking people to live there and mingle does not necessarily lead to productive social networks. There is a strong place-based sense of community inherent within these communities, actively built through collective engagement in placemaking. A high degree of participation in managing the affairs of the community does exist, whether it is through attendance at formal meetings of the body corporate or actively contributing to the maintenance of the site. However, it should be noted that participation in community activities is encouraged at Christie Walk and Westwyck, but there is no obligation - outside of formal body corporate meetings. Social activity is encouraged but largely informal. In this sense they can be differentiated from other eco-villages and cohousing communities where participation can be highly structured and mandatory. In an attempt to prevent 'meeting fatigue' (Williams, 2005) and unsustainable workloads these communities have devolved the decision-making process a little by empowering working groups to act on behalf of the community, within certain budget constraints, without having to seek approval from the body corporate. At Christie Walk there are working groups that manage the gardens, site maintenance, the shared laundry and the community room. Westwyck currently has only one formal working group related to site works; however, working groups are formed as required to address issues that arise within the community.

Community events are also critical to social capital production. Their celebratory and inclusive nature cultivates community sociability. Both eco-communities often celebrate birthdays and hold an annual Christmas party. At Westwyck the community will hold a social barbeque a couple of times a year and celebrations when there is something to harvest in the community garden, such as pumpkin and apple-picking parties, or impromptu gatherings hosted by a resident. This is similar to Christie Walk; however, in 2012 Christie Walk decided to formalise a monthly shared meal as a means to get people together, although there is no expectation of attendance. Participants noted that these 'leisure episodes' (Glover, Parry & Shinew, 2005) are an important source of social capital, and act as a social lubricant to help strengthen the ties between residents.

Further, working bees are another important social mechanism. These community events revitalise the community through collective action and are an inclusive and visible means of nurturing a sense of belonging among residents. While Westwyck will hold working bees to share some of the gardening and maintenance tasks, these are less formalised than at Christie Walk and arranged on an ad hoc basis, generally by email as tasks arise. At Christie Walk, the working bee has become a formal event. Both the monthly working bee and monthly shared meal, which (usually) attract between 20 and 30 residents, have become focal points for community interaction and are opportunities to reconnect with each other, gossip and informally raise and discuss issues within the community. In fact, most residents at Christie Walk identified the working bee, where residents gather to work in the gardens and carry out other maintenance work, as the most important community event. It has evolved into the arena where many community decisions are made and has proved particularly useful for those residents who are not interested in attending formal body corporate meetings. In this sense working bees are less a collective means for maintaining Christie Walk than they are about strengthening community. As one participant explained:

> "The morning tea following the conclusion of the working bee is the real hotbed for discussion. Even if residents can't make the actual working bee, they always try to get to the morning tea – no one wants to miss out on the goss." (Participant, Christie Walk).

At Christie Walk working bees and shared meals grew out of the necessity of having to finish off the landscaping of the site due to financial constraints. The strong social bonds that were developed through the act of working and eating together are considered by Christie Walk residents to be crucial to the community's strength and sense of itself and powerful mechanisms for bringing residents together. Two participants articulated the value of this forged solidarity:

> "The example of the ['eco' development] down the road is a useful contrast. It should have worked, but as we said to the council people that came around and said: 'you'd better help them make a community'… 'You've already done everything. It's all been done; the garden's been done…they need something to do together'. The fact that everything has been completed for them prior to moving in has resulted in attempts to get people together that have seemed a little artificial and as a result people are less likely to attend. I often wonder if it wasn't such a struggle to get Christie Walk off the ground, whether it would have ultimately worked as well as it has." (Participant, Christie Walk)

> "Christie Walk is different because intimacy is often derived from working together. Eco-developments sold as finished products cannot replicate the bonds forged through adversity and working together to overcome challenges. We moved in to a place with a culture and a heroic history, so there is a depth there. I think that leaving part of a new development for the prospective residents to complete is a good idea and I think more people would be happy to be a part of that process than you might initially think. Creating a platform for people to meet is really important." (Participant, Christie Walk).

Indeed, the social value of resident participation, however small, in the design, building or landscaping process cannot be over-emphasised. Such communal 'struggle' fosters a deeper sense of belonging and collective identity. However, these participatory processes may have limited scope and ready-made developments are likely to have wider appeal in a society that consumes real estate like it does any other product.

Social Capital's Role in Social and Environmental Sustainability

Similar to the vast majority of eco-communities, Christie Walk and Westwyck consist of medium to high-density clustered, compact dwellings that have a significantly smaller footprint than the Australian average. However, density alone does not necessarily result in better sustainability outcomes and reduced resource consumption. A report by the Australian Conservation Foundation (2007) found that any sustainability benefits arising from compact living in inner urban areas were ultimately outstripped by the consumptive demands of urban living associated with air conditioning and household appliances. Further, Newton and Meyer (2012) found that high-density affluent areas, and in particular single-occupant households within them, were responsible for greater consumption of water and energy and greater accumulation of household items. Both Christie Walk and Westwyck have prioritised ecological aspects of building design and incorporate technologies and systems for efficiently capturing energy and water and treating waste that may not necessarily be viable for larger inner urban developments or detached housing. Dwellings incorporate passive solar design and significant thermal properties through double glazed windows and insulation, reducing the energy demands pertaining to heating and cooling. The developments also include onsite energy generation through photovoltaic technology, stormwater harvesting and integrated grey water and black water (in the case of Westwyck) treatment systems.

Yet, as Allison (2012, p. 46) notes, "Designing eco-friendly buildings and neighbourhoods is an important first step, but the behaviour of the occupants is at least as significant when it comes to the overall impact". Indeed, evidence of a reduction in car use from living in the inner city and surrounding suburbs, in closer proximity to public transport alternatives remains equivocal (Davies, 2011). Both eco-communities have prioritised a move away from personal vehicles which has been met with concern by financial institutions and regulatory bodies. Christie Walk intentionally provided just 11 car spaces for 27 dwellings. This was a contentious issue during the planning approval process but it was successfully argued that proximity to the city and access to public transport reduced the need to provide a car space for each dwelling. Residents largely walk, catch public transport or use one of two carshare vehicles that reside out the front. Similarly, Westwyck is taking active steps to reduce car use. Although residents at Westwyck are arguably more reliant on personal vehicles, many residents use the many public transport options situated close by. With the construction of the second stage of the development soon to begin, the community has plans to include carshare options and (potentially) include the compulsory funding of Myki passes for public transport through the owners corporation (Westwyck Development Manager, pers. comm., September 2012).

Urban sustainability strategies focusing primarily on the direct energy consumption associated with electricity and car use do nothing to address the embodied energy indirectly consumed by households as part of the ravenous "consumptive neoliberal lifestyle" (Gleeson, 2008, p. 2664). A more sustainable lifestyle requires more than simply residing within an eco-friendly built environment. It remains easier to revert to the 'normal' way of living, with its emphasis on short-term gratification and its culture of disposable consumption. It is at this disjuncture of the sustainability debate where the experience of these IUEs can offer some insight; potentially solving some of the "problems of 'excess' in a culture emphasising privacy and individualism" (Jarvis, 2011, p. 574). And it is the shaping of these behavioural characteristics where the community's social capital is instrumental. The networks of trust and norms of reciprocity that are nurtured in these communities, both formally and informally, allow residents to cooperate effectively, provide support, share information and access equipment and skills. And, as a consequence, can have a cumulative impact on sustainable behaviour.

The clustering of housing and the incorporation of shared facilities encourages sustainable behaviour. Arguably the most significant of these is encouragement of sharing. At both Christie Walk and Westwyck, the disposition of community members toward resource sharing is greatly enhanced by their participation in community life. The social connections formed and sustained through this active engagement increases the trust between residents that is crucial to the act of sharing. There is a means for sharing equipment such as tools and gardening implements, appliances, bikes, cars, clothes lines, washing machines and food (through communal produce gardens and sharing of leftover food). The greater sense of the "common wealth" (Allison, 2012, p. 45) means that individuals actively substitute social capital for physical capital and "convert private goods into public goods" (Mulder, Costanza & Erickson, 2006, p. 20). Through sharing these communities reduce the need for the private accumulation of goods. The number and type of resources available to each individual is increased but the overall consumption of the community is reduced:

> "The provision of shared facilities and equipment means that we can live quite comfortably in a smaller house…you actively get rid of stuff because you realise you don't need it." (Participant, Christie Walk)

By encouraging a culture of cooperation and affinity, the social capital that is a product of living within communities like Christie walk and Westwyck opens up opportunities for sharing time and integrating 'the infrastructures of daily life' (Jarvis, 2011). Indeed, many research participants acknowledged the benefits of living within an active community that is co-located. The high level of social capital provides a means of social support for childcare, gardening, repairs and maintenance, care for the sick and care for the elderly. Further, a number of participants suggested that such models of development had the considerable potential to add to debates on 'aging in place'. The connections forged in these communities, the sense of belonging to a collective unit, meant that residents could rely more on their neighbours rather than simply family or friendship circles that may not be close by. It is important to note that this is less likely to be the case for individuals who place less importance on community interaction. Yet, the experience at both Christie Walk and Westwyck suggests even those that may not actively participate in the community still benefit from this.

Finally, Newton and Meyer (2012) found that inner city residents, in particular apartment dwellers, had the least knowledge of water and energy conservation. The high levels of social capital at Christie Walk and Westwyck make it easier for residents to access knowledge and information that can help them learn new skills and reinforce or change behaviour. For example, the connections created by living in community can facilitate behaviour change with regards to energy use through education and the exchange of ideas on how to be more efficient, and through discussions on which energy provider has (the least worst) environmental credentials. Similarly, at Christie Walk, water use is split equally between the 27 dwellings making residents aware of their water use and its impact on other residents. Further, at working bees and other community gatherings individuals can learn more about gardening and food production, appropriate composting and recycling techniques, and how the various energy and water systems function. At formal and informal gatherings can put questions to other residents on issues of concern to them, and importantly seek advice from peers.

Conclusion and Further Research

This paper is by no means an exhaustive analysis; rather it provides an indication of how social capital is produced within these communities and its impacts on sustainability. Developing generalisations from two case studies is indeed limited; however, the inductive process in qualitative research can permit the illumination of the general through a focus on the particular (Denscombe, 2010). In many respects themes uncovered here are comparable to common features with other forms of intentional

community. A comparison of the sustainability outcomes of these IUEs and comparator 'non-eco' communities is outside the remit of this research and remains an inherent limitation. Further research is required to not only better understand the role of social capital in the development of sustainable communities but determine whether these eco-developments indeed operate more sustainably than conventional residential developments. It is hoped that an exploration of the themes identified in this paper can add to the development of a framework for which this further research can be undertaken. At the very least, it is hoped that a greater appreciation for the value of IUEs to the debates on sustainability and urban transition has been achieved.

Notions of 'social capital' and 'community' are not panaceas to the complex issue of sustainability. And yet these terms, however problematic, have value. The social and environmental aspects of sustainability are mutually reinforcing, and effective action ultimately requires the agency of individuals and the collective efficacy of communities. The difficulty of finding affordable and appropriate land in inner urban areas, inflexible building codes and unsympathetic regulatory bodies and financing institutions make it difficult for grassroots groups to undertake such development. The fact that those who set out to build such communities, and those who seek to live in them, are well educated and have access to relatively substantial financial resources should also not be overlooked. In the case of Christie Walk, dozens of people volunteered much of their spare time over many years in order to construct 'a piece of eco-city'. Yet, if these eco-communities are going to fill more than a niche of the inner urban landscape, then developer-driven projects and support by government and the non-profit sector is arguably necessary.

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