

MACHINERY AND COMMUNITY: THE ATHERTON GARDENS COMMUNITY NETWORK EXPERIMENT

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1. Introduction

This paper is concerned with the expectations associated with a current example of social partnerships oriented to 'community-building' through the social use of technology. Our central case study is provided by the Reach for the Clouds project being undertaken at Atherton Gardens, a high rise public housing estate in inner Melbourne by InfoXchange Australia, a not for profit enterprise, working in conjunction with Government departments, private companies and other third sector agencies. The paper explores some of the issues which are raised when a large, complex project with social justice aims is initiated as a social partnership, discussing some of the challenges and complexities of managing a project with numerous stakeholders across the public, private and not for profit sectors.

Reach for the Clouds is a project aimed at addressing the so-called 'digital divide' between Australia's information 'haves' and 'have nots' by providing second hand computers free of charge to public housing residents, along with software, computer training, wiring and network access.¹ Each household of the estate will be given a free personal computer (if they want one), on completion of a ten hour training module. The machines are second hand reconditioned models, donated by business and state government departments when those organisations upgraded their own hardware. Computers, monitors and printers are refurbished through a program called "Green PC", funded through the State Government Community Jobs Program and employing long term unemployed people to carry out the work. Training in the use of the computers is carried out by a large pool of volunteer trainers drawn from the estate and the wider Melbourne community.

The project is still in the early stages of development. Nevertheless it has seen some success. Many tenants have expressed strong interest in having a computer and in undertaking training. Over 300 residents have been trained, 250 computers given out, servers have been installed in each building, wiring has been connected to all apartments and the intranet is under development.

¹ See the electronic-Atherton Gardens Enterprise website at <http://www.highrise.infoxchange.net.au/> See also <http://www.infoxchange.net.au/> to investigate the background to InfoXchange's activities. Publicity from partners in the project can be found at Victorian Department of Human Services <http://www.dhs.vic.gov.au/peoplefocus/mar01/website.htm> and on the City of Yarra site: www.infoxchange.net.au/yarraweb

It remains to be seen whether the project will meet its initial aims of developing into a resident run and resident owned initiative.

According to InfoXchange, Reach for the Clouds is a “a community building project” designed to “assist the development and maintenance of community capacity and cohesiveness at the Atherton Gardens estate, by utilising new technologies.” (InfoXchange, 2001). Atherton Gardens consists of four twenty storey tower blocks, with ten flats on each floor, comprising a total of eight hundred dwellings, housing some two thousand individuals. Whilst a significant minority of residents on the estate have arrived in Australia from Vietnam and speak Vietnamese as their preferred language (~40%), other residents speak more than thirty languages and come from countries including Turkey, the former Yugoslavia, Spain, Greece, Iran, Iraq, China, Laos, the Philippines, Somalia and Ethiopia. Less than thirty per cent were born in Australia, and of these, a significant proportion suffer from problems of substance abuse, mental or physical ill health and social isolation. The estate is surrounded by a welfare complex: not for profit agencies involved with or working on the estate include the Brotherhood of St Laurence, Outreach Victoria and Jesuit Social Services, each of whom were involved in the developing initiative. A pattern of disadvantage also characterises this community. The residents are generally on very low incomes, with 80 per cent receiving some form of income support from the Government and only 20 per cent having private or other income sources. Weekly incomes vary from \$150 to \$399 per week. Problems around the estate include a flourishing and visible drug trade, graffiti and vandalism of public areas and fear of personal violence.

The Reach for the Clouds project is designed to make an intervention in this complex, building on partnerships between the not-for-profit and community sector agencies, business, local government and state government agencies. The Victorian State Government Office of Housing, which is responsible for managing the estate, has paid for the network wiring to be installed, as well as providing flats for use as training facilities and some operational funding. The City of Yarra provided workshop space for the Green PC program to operate in. Two major private companies were instrumental in the establishment of the project. Microsoft Pty. Ltd. donated site licences for Windows 95 and Office 97 to be loaded onto all the donated computers. Hewlett-Packard Australia Pty. Ltd. provided hardware in the form of new computers, printers, scanners and a digital camera for use with training the residents and also donated four servers, to be located in the basement of each of the four tower buildings on the estate, through which intranet and internet access could be provided. The not-for-profit enterprises mentioned above have provided support to the project in various ways. The project is also linked to Commonwealth government research funding through an Australian Research Council grant won by Swinburne University researchers in partnership with state government Primary Health Branch and Office of Housing. This grant supports a continuing evaluation of the social impact of the community network, as a case study of arguments on wired community, e-government, social capital and the digital divide.

2. Background: Reach for the Clouds

The Reach for the Clouds scheme has been in development for three years. The project has grown out of a long term commitment by InfoXchange Australia to the provision of access to online information for public housing tenants, particularly access to information relating to tenancies, such as Office of Housing policies and procedures. In 1999 the Y2K bug scare meant that suddenly there were a lot of reasonably new, internet ready computers being discarded by businesses and bureaucracies. InfoXchange had devised a project called “Green PCs” which received state government Community Jobs Program funding to employ long term unemployed

people to undertake the renovation and refurbishment of the discarded computers and on sold them at low cost to community groups and low-income individuals. With the sudden accessibility of large numbers of computers and at the same time a commitment from the state government Office of Housing, landlord of the high rise housing estate, to wire all the apartments on a single inner urban high rise estate ahead of the installation of a concierge type security system, the pieces were in place for the creation of a very large and ambitious project. A personal, working relationship had already been established between senior bureaucrats in the Office of Housing and staff of the InfoXchange so that a decision was made to proceed with the Reach for the Clouds project on the Atherton Gardens estate. What followed was nearly three years of negotiation and hard work,² culminating in the official launch of a three year funded project on June 23rd 2002 by the Victorian Community Services and Housing Minister Bronwyn Pike.

The broad range of government, private and not for profit agencies interested and involved in Reach for the Clouds indicates the appeal of this type of project to a diverse range of bodies with an array of agendas and goals for the estate and its residents. The initiative is a creature of the “new” government rhetoric of joined up government and community development; its stated aim of building social networks and trust as a means to combat social and economic marginalisation fits squarely within the Blairist models of social policy current in the Labor-governed states, models which counterpose mutual obligation and participation to the passive receipt of welfare. The Victorian government has embraced public/private partnerships and the concept of joined-up government, in addition to the key concept of community building; since 2001, the state has had a Minister for Community Building, who happens also to be the Minister for Housing; it has also established a community building unit within the Department of Human Services, to assist in putting the new social policy agenda into effect.

Despite the eventual success of the project in gaining support though, much work remains to be done, especially in negotiating between the different expectations and priorities of the partners concerned. Right from the beginning, it was clear that one of the risks entailed in garnering support from so many quarters was an increase in the number of stakeholders involved, each with expectations of a return on substantial public investment. It was always going to be difficult to articulate the link between giving low income people free access to technology, establishment of a resident-run intranet and training schemes and developing a more cohesive community at less risk of social exclusion. As Andrew Maher, the Director of InfoXchange Australia commented, most of the partners and parties involved “make the right noises [but] I don’t know that many of them understand it. We haven’t really been able to articulate the vision, so they don’t really understand it. The highrise web site and Yarroweb site haven’t really been utilised.... There is a need for service providers to start providing their services in a different way. It will need a major mind shift. They can’t see that yet, so they can’t really understand what this project is about.”

3. Partner expectations of the project

As part of the evaluation of Reach for the Clouds, Swinburne University conducted a series of semi-structured interviews with the key partners who were involved in the early stages of the project. The interviews asked about views and expectations, successes and frustrations. The idea was to ascertain the different views of various players and to see how well the members of the steering committee understood each others’ visions for the project. One of the key questions asked what, in the respondent’s view, would constitute success for the project. The range of answers given to this question demonstrates the difficulties of evaluating a project where project

² See InfoXchange (2001).

³ See InfoXchange (2001).

partners have varying expectations and performance indicators, many of them directly linked to the scope of their own agency's interests and priorities.

This need to articulate the project's aims and outcomes also became apparent when the search for a funding home for the project was being undertaken. The technology side of the project was initially of interest to the state government body Multimedia Victoria, who provided \$10,000 towards the development of a business plan. Once the plan was developed, however, Multimedia Victoria decided the project was less about technology than about community building, and referred the partners to the Community Support Fund. The CSF initially were willing to provide a further \$10,000 essentially for the development of another business plan. When this was presented, however, they decided the project was more about technology than about community building and hence refused further funding. It took a personal intervention from the director of the Office of Housing to overcome this obstacle and eventually the CSF agreed to fund the project for three years.

At first glance, the project does seem to be about access to technology. According to Andrew Maher, though, the project was always conceived as "a way of looking at changing the way community development happens, and services are provided. It's about giving residents some power over how services are provided." For InfoXchange's director, the success of the project will come from the handover of the network to the community as a sustainable operation after the three years of initial funding. Key indicators of success would be "that the building is wired, there is a computer in everybody's flat that wants one and the people in the community have been trained. Once that's happened it's up to the community".

The view of the InfoXchange staff on the ground is more pragmatic and more closely tied to the infrastructure of the project and the delivery of services to residents. For one staff member, a sign of success would be "that the computers get used a lot. That tenants enjoy having them there and use them for good reasons. You do worry about whether people are going to use it for things that cost money and then we have to ask 'what have we set them up for?'" Another staff member assessed the success of the project as "awareness of the technology. People being able to use it in the way that they see fit – and even if they don't use it, but have been trained, then that is an outcome. It's only a tool – its effectiveness is only if the community embraces it as something that they want to use. Young people aren't that interested in using the technology, except to send email and play games. Older people have more interest in the technology as a tool for accessing information. It is a success if people are using the technology." He also added that it was an expectation of InfoXchange that the project would "lead to training and jobs for residents. Technology is not the be all and end all, it is only a tool for access to what the communities need – education, training, employment. [We expect] that the community and communities will get what they want and what they need, based on what they say they want and need." He went on though to comment that the community building side of the project "could be assessed through greater community employment on the estate and community participation in estate events. People [will] have the opportunity to communicate directly with one another. They also want to communicate with friends and relatives overseas via email and to access foreign language newspapers and news services." Over the longer term, the project "involves employment and training, creating a self-sufficient enterprise. There is no one point where it can be seen to be finished and successful. The timeframe is a 3-4 year plan. In that time period, InfoXchange will step away and the community will take over the project."

The Office of Housing staff member interviewed about reasons for supporting the project placed some emphasis on community renewal objectives, but others on the extent to which Reach for the Clouds was "consistent with government's aim to do business on line by a certain date, and

[being] able to address differences between school children's access. Also because of the different communities, it could improve communication both on and off the estate and between tenants and the Office of Housing." Despite the cost advantages for the Office of building the project infrastructure into the planned rewiring of the Atherton Gardens buildings, there were "considerable unknowns with the project". One risk was that the project would come to be seen as "an extension of the tenants rights like access to a laundry or heating". The Office was reluctant to be responsible for the costs of computer access: "[g]overnment does like to be acknowledged for putting money into things, but equally we like to have things owned by the local community and if it has Office of Housing written all over it, that tends to take away from that ownership." The rationale for the project articulated by this public sector manager chimes with Andrew Maher's:

I try to describe this as an innovative project in public housing around the digital divide that is giving access to the internet or intranet to people who would otherwise not have it at a cost they can afford. I also talk about its capacity as a community development tool and something which could potentially over a period of time strengthen what is largely an alienated and in some ways alienating community. It gives it an opportunity to make decisions about interacting with the broader community. I also talk about the opportunities to create a business that a community owns and that the community might at some stage develop the capacity to make some local money out of to put into other projects or issues that they identify that need attention

Peter McNicol interview, Office of Housing

The local government partner, the City of Yarra, is also enthusiastic about the potential benefits of the project, citing not only access to computers and to content in the tenants' own languages, but also the prospect of achieving educational, employment and training outcomes, behavioural change for young people, and increased use of council facilities and services, through communication and advertising on the intranet. Indicators of the project's success as a community building tool would be "reduced violence, increased social events, communication between neighbours, and [getting] democratic representation on council by low income people." Initially, however, the Council was cautious and keenly aware of potential risks:

It was hard to grasp the concept and why it might work. It seemed like a lot of money for something that seemed like it might not get off the ground. Everyone was saying 'this is very pie in the sky'. It's not a traditional model of community renewal. It also seemed very expensive. Initially we went in just with a watching brief, we didn't commit a lot in terms of financial contributions, it's mostly been in kind. We weren't holding our breath that it would come off. Once there were the 800 computers then we know that at least there would be a computer for every flat and that would be a fantastic outcome, even if none of the rest of the project eventuated.

There were also delicate issues involved in establishing understanding between the agencies involved. Initially, for instance, the Council was resistant to the "knee jerk" requests and planning processes of the not for-profit sector partner, feeling that its own procedures were under appreciated, as for example when a request was made for funding for a coordinator for Reach for the Clouds: "We don't have a slush fund that we can just find money from. We need to plan these things well in advance, get them into the budget."

. The InfoXchange also established working relationships with a range of other not for profit agencies, despite apparent differences in their views of the benefits of the project. For Outreach Victoria, the project "was going to do all sorts of things – provide access to computers that people

wouldn't have had, give kids access to computers to do their homework and teach their parents things, integrate the community by giving people a reason to go into the community centre through the training facility." However, the Outreach Victoria interviewee was sceptical about the potential of online communities, which "are for people who know what they want and how to use the technology". At Atherton Gardens, face to face communication "is much more important because people are isolated. It [Reach for the Clouds] could provide useful, up to date information for those people, but bringing them out to share experiences is more important." Reach for the Clouds posed risks for the tenants if it built up expectations and failed to deliver. Tenants were likely to be "fearful of surveillance", of "being watched." Nevertheless, there were potential benefits for Outreach Victoria, which aims "to give people information and the confidence and skills to tackle their own problems", because the computer network presents a chance to "put information out there...in community languages". If the project were successful in making people on the estate happier, then there would be less pressure on Outreach Victoria "to help people out who have complaints driven by a lack of satisfaction about living on the estate."

The Jesuit Social Services Community Development Worker on the estate expected a similar range of positive outcomes from Reach for the Clouds, placing strong emphasis on the project's potential to help resolve safety issues and enhance community contact -- though the risk factors included the possibility that residents would either sell the computers or use them subversively , for instance to facilitate drug trading. The Brotherhood of St Laurence, by contrast, was the least interested of all the partners in its success or otherwise and the most hands off in its approach, despite providing financial and advisory assistance. The Brotherhood provided a steering committee representative, but he described himself as "lukewarm on the project", partly because it was slow to start ("spinning its wheels for a bit"), but also because of scepticism about how much computer access is likely to achieve. As he put it,

The theory is that this is an incredibly empowering tool and maybe it will be, but it feels like space age technology in a stone age environment. I think it might be stillborn. Most people on the estate aren't ready for it. I think it won't have much of an uptake. This may be different further down the track, but people aren't ready for it yet. It has potential for the future -- if you had sufficient literacy and interest it could help engagement across cultural groups, across the estate, helping kids with their homework, and could have security impacts. It has lots of potential but people have to have the right mindset and I don't think they do.

Does this comment indicate that the partners concerned "can't really understand what this project is about", as Andrew Maher put it? Have they failed to make the "major mind shift" required to understand the social potential of computer access and networking? It might seem so, from the perspective on the enthusiastic and philanthropic InfoXchange.

One difficulty with a project of this complexity is having a lead agency able to clearly articulate its vision for the project and then finding partners committed to the same vision. This is particularly so when partners are drawn from across the spectrum of government, private and not for profit agencies and further, when more than one tier of government, more than one government department at a state level and several other agencies are involved. Given the success of the Reach for the Clouds project to date, it is clear that large, complex partnerships can accommodate a diversity of roles and needs from a variety of partners. In fact it may even be of benefit to have some room for conflicting or at least diverging opinions about a project's aims, outcomes, risks and benefits. There is still a question though of who is keeping track of whether

partners expectations are being met. This is where the need for an independent, ongoing evaluation of the project is critical.

One problem lies in being able to show that the social use of technology delivers identifiable social outcomes, of the kind to which these non-profit groups are committed.⁴ Is communication the same as community? The classic sociological definitions of community involve groups which have more than just a single strand of interest to bind members, but consist of a network of people linked by a shared set of interests and concerns.⁵ If the residents do involve themselves in shared online activities will this make them into a community of interest, or will they just remain linked by location, circumstance and chance? This is likely to depend on whether or not the on-line resources and activities provided by the community network replicate the make-up and concerns of the resident population on-the-ground. This may be the case, if the intranet features information about local facilities, local issues and local events. However, this is a diasporic population, deeply connected to a variety of homelands and cultures, with links to other places and other societies. Given the diverse and fragmented nature of this group of residents, uses of the hardware and the network are likely to be complex and unpredictable.

Tracking such unpredictable social uses of the network, and their flow on effects in social relationships, economic circumstances, skills and attitudes, will form the basis for much of the ongoing evaluation of Reach for the Clouds. Part of the problem lies in working with fuzzy concepts such as 'community', 'connectivity', and 'social networks'. Some measures and indicators can be used: they include social capital matrices, longitudinal surveys of patterns of technology use, interviews and focus groups to track changes in household behaviour, attitudes and expectations and aggregated data from the server. One model for understanding how healthy, vibrant and successful communities function is that of social capital. In the rest of this paper, we discuss the process of evaluating the project -- and communicating its successes and impact to the different partners involved -- using social capital indicators.

4. Evaluating outcomes

Despite some years of debate in Australia and elsewhere about the efficacy of social capital as a policy term, there is no consensus about what it means in practical terms. It is unclear whether social capital exists as the property of individuals or groups: does social networking improve an individual's social capital by enabling them to draw on the collective resources of others, or is social capital the collective product of social relations between people? Can social capital be generated through any type of social interactions, or is it limited to social interactions that have beneficial outcomes? Is social capital increased or lessened when there are beneficial outcomes for participants but not for the wider community (an instance might be a residents' group which acts to protect existing housing forms, but which may adversely affect those who cannot afford such housing). To overcome this difficulty, it has been suggested that there can be both "bonding capital" (social interactions in which members provide mutual support and reinforce social solidarity), and "bridging capital" (in which groups may encourage members to seek or establish relationships with others outside the group).⁶ Finally, can governments help create the conditions in which social capital flourishes? Do governments sometimes create social capital as the unintended outcome of their policies? For example, local protests about the location of a prison or a toxic waste dump create may create social capital and strengthen a community, but are a

⁴ See Wellman et al 1996, Rheingold 1994, Stoll 1995, Doheny-Farina 1996.

⁵ Bender, 1982, cited in Galston, 1999, p. 8

⁶ Woolcock (1998).

perverse outcome of a government policy. These definitional difficulties extend to the problem of measuring social capital. Putnam's work monitored factors such as declining membership of organisations, voter turnout, volunteering and religious participation. But these may well be caused by other factors. For example, a decline in membership of playgroups and babysitting clubs may be due to an increase in paid employment amongst women. It is unclear whether one form of participation (unpaid) creates more social capital than participation in the paid workforce and the well-documented social relations inherent in work.⁷

What might a model of social capital look like at Atherton Gardens, where the 'community' under discussion is a complex configuration of language groups, cultures and faiths? The idea of the traditional community tends to feature small-scale, closely knit groups of people residing in close proximity to each other and co-operating to tackle issues of local import. Not only is this rare in post-industrial societies, but the conception of social cohesion and harmony is somewhat romantic. Even where such circumstances exist, social life can be characterised by "gross inequalities, rigid status groups, blood feuds, persecution, intolerance, bondage and ignorance" as much as by co-operation and harmony.⁸ In a multicultural, heterogeneous society there may be several, overlapping levels at which community might be seen to exist. Communities of interest may well be centred on very localised issues such as urban redevelopment (Save our suburbs, anti-freeway protests), or around global concerns such as nuclear disarmament or preserving biodiversity. Place based communities such as a local council area or suburb may be as much characterised by their diversity of communities (the Turkish community, the local school community) as by their unity or cohesion at an area level.

Identifying the relevant communities and their local leaders is an important first step in understanding how areas function and what the power relationships are within a regional or suburban context. Communities are also acted upon and react to people and events that are external to them. Non-residents with an interest in a place might include people who work there such as teachers, health workers, local government employees and social workers, or visitors including tourists. Private businesses with substantial investments in a region may exert a powerful sway over local opinion and behaviour. It is important, then, to identify not only residents in a community, but other stakeholders with interests in the events and outcomes for that community (or communities). The geographical definition of a community as a group of people living in the same area becomes even more inadequate when online and virtual communities come into being.⁹

Some of the more simplistic adoptions of the social capital model have proposed that only social relationships that have a positive outcome can be considered to be social capital¹⁰. A more sophisticated response, however, is to see that some dimensions of social capital impact on other dimensions, and to understand that social networks may have both positive and negative outcomes.¹¹ From this perspective, the strong, mutually supportive and self-sustaining small ethnic communities on the Atherton Gardens estate can be seen to be high in social capital at one level (what Granovetter calls strong ties and Woolcock calls bonding capital) as they support their

⁷ Despite these difficulties, the Australian Bureau of Statistics is working on incorporating measures of social capital into its community surveys and the Australian Institute of Family Studies has published measures of social capital within the Australian communities. See Stone 2001.

⁸ Bryson and Mowbray (1981) p.256.

⁹ See Meredyth, Hopkins and Ewing (2002), Hopkins and Thomas (2002).

¹⁰ Eg: Cox and Caldwell, 2000

¹¹ Woolcock (1998).

members and reinforce social solidarity among them.¹² On the other hand, such groups may be both exclusive of outsiders and unduly restrictive of members seeking or establishing relationships with others outside the group (Granovetter's weak ties (1973), or Woolcock's bridging capital [1998]). Thus the ethnically or linguistically based social groups can be seen to be low in bridging social capital at the estate community level. Attempts at "community strengthening", "community building" and "community renewal" need to take these different levels of social capital into account if they are to contribute to building healthy, inclusive communities.

5. Conclusion

The Reach for the Clouds initiative, as we have noted, is in its early stages. It is difficult to predict the achievements or limits of the project. It remains to be seen whether the Reach for the Clouds model is applicable beyond Atherton Gardens, although there is evidently considerable enthusiasm for drawing on it as a model, both in Victorian housing initiatives and more generally. In the meantime, research and evaluation will need to tackle the difficult question of how to monitor the outcomes of the computers, training, network and other social exchanges on individuals and community groups on the estate.

At the simplest level of the initiative, enabling people with limited prior access to information and communication technologies to gain access to computers and to become confident and skilled users of the hardware and software is a major step in contributing to social inclusion for a disadvantaged group. In particular, improved educational outcomes for school aged children given access to computers at home would be evidence of a positive outcome to the project. Other indicators of success would include improved opportunities for adult education, employment and training, as well as increased opportunities to participate in civic and political life.

Taking a more complex view, indicators of successful outcomes at the community level would include a range of elements. These might include self-reported increases in neighbourhood trust, communication and social networks within and beyond the estate, or improved levels of empowerment and participation by resident groups in running their own affairs. Other indications might include increased levels of communication between individual residents and between groups of residents, or increased participation in the affairs of bodies that have an impact on tenants' lives (such as local kindergartens and schools, local, state and federal governments, cleaning, maintenance and other contractors on the estate). It might also be possible to track changes in the degree to which tenants report having a sense of ownership of estate affairs, or a sense of control over their own lives.

It is clear that crude measurement of social capital will make it difficult to evaluate subtle changes in people's perceptions of trust, satisfaction, levels of participation and interest. Even very small increases in people's satisfaction with life on the estate, or their sense of personal safety or interaction with neighbours would be a positive outcome from the Reach for the Clouds project, even if overall, corporate community identity fails to materialise across the entire estate. It is also clear that many of the changes that are likely to result from the implementation of a project such as this are difficult or impossible to predict, and that the unexpected results will be at least as interesting as some of the effects which might have been anticipated. Finally, the case study helps us appreciate that social change is a long term phenomenon, whose effects and results may be observed years and even decades from now, as the next generation matures and realises its potential among the wider community.

¹² Granovetter (1973), Woolcock (1998).

6. References

- Bryson, L. and Mowbray, M. (1981) "'Community': The spray-on solution" *Australian Journal of Social Issues*, 16, 4: 255-267
- Cox, E. and Caldwell, P. (2000) "Making social policy" in Winter, I. (ed.) *Social Capital and Public Policy in Australia*, Australian Institute of Family Studies, Melbourne, pp. 43-73
- Doheny-Farina, S. 1996 *The Wired Neighborhood*, Yale University Press, New Haven, Connecticut.
- Galston, W. A. 1999 Does the Internet Strengthen Community?
(http://www.puaf.umd.edu/IPPP/fall1999/internet_community.htm) (accessed Jan. 2002).
- Granovetter, M. (1973), 'The strength of weak ties', *American Journal of Sociology*, 78, 6: 1360-1380.
- InfoXchange (2001) *Reach for the Clouds: Reach for the Clouds*. Application to the Community Support Fund, November 2001.
http://www.highrise.infoxchange.net.au/library/contents/reports/reports_eACEReachfortheCloudsReport0.pdf
- Hopkins, L. and Thomas, J. (2002) '[Building community through electronic networks](http://www.highrise.infoxchange.net.au/library/contents/reports/reports_Buildingcommunitythroughtheelectronicnetworks0.rtf)'
http://www.highrise.infoxchange.net.au/library/contents/reports/reports_Buildingcommunitythroughtheelectronicnetworks0.rtf
- Meredythy, D., Hopkins, L., Ewing, S. (2002) 'Measuring social capital in a networked housing estate', unpublished conference paper presented to the 2002 Cultural Attitudes towards technology and communication (CATaC'02) 12-15 July 2002, Montreal, Quebec, Canada. See <http://www.highrise.infoxchange.net.au/>
- Rheingold, H. 1994 *The Virtual Community: Finding Connection in a Computerised World*, Secker & Walburg, London.
- Stoll, C. 1995 *Silicon Snake Oil: Second Thoughts on the Information Highway*, Macmillan, London.
- Stone, W. 2001 *Measuring Social Capital: Towards a Theoretically Informed Measurement Framework for Researching Social Capital in Family and Community Life*, Australian Institute of Family Studies, Melbourne.
- Wellman, B., Salaff, J., Dimitrova, D. and Garton, L. 1996 'Computer networks as social networks: Collaborative work, telework, and virtual community', *Annual Review of Sociology*, 22, 213-238.
- Woolcock, M.: 1998, 'Social capital and economic development: Towards a theoretical synthesis and policy framework', *Theory and Society*, 27, 2: 151-208.