Social capital, health and electronic community in public high-rise estates: An Australian case-study

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Introduction

Atherton Gardens in Melbourne’s inner northern suburbs is a typical high rise public housing development built in the 1970s at the tail end of the post war slum clearances. It consists of four towers, each twenty floors high, with ten flats to each floor, making a total of 800 dwellings and a population of between two and three thousand individuals. The estate is managed by the state government’s Office of Housing, and provides housing for public tenants who meet strict eligibility criteria and who have usually been on a waiting list for accommodation for some time. Whereas the original plan for these types of public housing estates was to provide high density housing for low income workers and families, over time, as pressure has grown both in demand for public housing and for governments to reduce welfare costs, public housing estates have shifted towards accommodating the poorest, most marginalised and disadvantaged groups in the community.

Broadly speaking, tenants in the high rise towers are not only amongst the lowest earners in society, with the overwhelming majority reliant on government payments as their only source of income, but also face multiple other factors of disadvantage. Many of the residents were born overseas and have come to Australia as refugees and asylum seekers from Europe, Southeast Asia and most recently Africa, with all the trauma of dislocation, displacement and uncertainty that that entails. They face barriers of language, literacy, lack of formal education, social isolation, cultural adjustment and racism in establishing a new life for themselves and their families. Other residents who were born in Australia find themselves living in public housing due to any number of factors which can include substance abuse, domestic...
violence, mental or physical ill health, unemployment, lack of education, crime and intergenerational poverty. Most of the families living at Atherton Gardens are headed by a sole parent. Tenants speak more than thirty languages and come from more than 70 different countries.

In the face of a rising tide of gentrification of the inner city suburbs which surround the high-rise estate, an innovative social enterprise decided back in 1999 to initiate a project to increase access to technology for public tenants. InfoXchange, a not for profit internet service provider, began working at Atherton Gardens, setting up a unique computer network initially known as Reach for the Clouds and now known simply as e-ACE (the electronic Atherton Community Enterprise). This project has grown and developed over the years, involving partnerships and contributions from all tiers of government as well as private businesses and not for profit organisations.

The project has involved the refurbishment of donated second-hand internet ready computers and provision of these to residents for free providing a certain minimum number of hours of computer training is undertaken. In addition, the entire estate has been wired with high speed data cabling, and free access to an estate intranet and world wide email has been provided. A helpdesk and computer workshop have been established in a vacant flat on the estate to provide ongoing hardware and software support. Training in the use of the internet is also available, and on completion, residents can establish a low cost internet connection from home. More recently, with an upgrade in the connection between the estate and the wider world, the low cost unlimited high speed broadband access which some online games and movies require has been made available. There is an ongoing attempt to establish a small enterprise using the infrastructure which has already been set up to provide a revenue stream to ensure the sustainability of the network.

The research
In 2001 Swinburne University began a three year study into the effects of the computer network on residents’ lives. Our research, called Wired High Rise, investigated not only the immediate impacts of computer access and network availability in the home, but also more diffuse and long lasting changes in aspects of residents’ lives which can be grouped under the rubric of social capital. The e-ACE project always had an explicit aim, not just to provide access to technology, but to increase opportunities for participation, to develop community networks both online and offline and to reduce social isolation. Our research has looked at how people on the estate are using the new technology in practical terms and also at how less tangible factors such as trust, community and cooperation have changed as a result of the opening up of online networks.

One of the themes which we have pursued as part of our research project is the impact on mental and physical health of the establishment of a computer network for a vulnerable population. As has been recently noted: 'Social exclusion ... is increasingly recognised as an important determinant of population health' (Reidpath et al 2005:469). Yet previous research has proved inconclusive in regard to the effects of time spent online on people’s mental health and feelings of connectedness and well being (Galston 1999; Howard et al 2001; Kraut et al 1998; Nie and Erbring 2000; Pew Internet and American Life Project 2000; Drentea and Moren-Cross 2005).

As part of our research we conducted a series of surveys of residents which examined people’s feelings of safety and well being using a model of social capital before the network was installed and again one year after it had been set up. We also asked people about their own health both before and after the network was established and once the network was in place we asked them whether they had used their computer or their internet connection to do any of a series of things relating to their own or their family members’ health.

The survey was first undertaken over six weeks starting in May 2002. At that stage the roll out of computers to residents had begun, the training program was in operation but the network connections were not yet in place. Interviewers who could speak Vietnamese, Cantonese, Mandarin, Macedonian Turkish and Arabic were
employed to administer the survey. This left a number of languages spoken on the estate not covered, including Spanish, Laotian, Khmer, Somali, Dutch, Greek, Afrikaans, Dari, Polish, Russian, Farsi and sign language. One of the computer training rooms on the estate was used to conduct interviews with residents, with some residents preferring to be interviewed in their homes. Interviews were generally arranged during daylight hours. The questionnaire was designed to provide the study with baseline data that could help us to quantify the social impact of the e-ACE project. Key topics covered in the questionnaire include:

- Basic household demographic information;
- Current media and technology consumption;
- Labour market and education information;
- Patterns of communication with family and friends;
- Involvement in groups and activities on and off the estate;
- Attitude to living on the estate including relationship with other residents.

The questionnaire was designed to be completed by one member of each household with the respondent answering questions about themselves, other individuals in the household and the household as a whole.

Two hundred and sixty-nine households were contacted, with around 70 declining to be interviewed, resulting in a total of 199 responses. The response rate to the questions was high: 74% for those households contacted. Most respondents answered most of the questions (respondents were advised by the interviewers that they could choose not to answer any or all questions). The only questions not commonly answered were those regarding personal income level and personal health. Some of the respondents were also reluctant to provide details about computer use by other members of their household.

In terms of ethnicity our sample broadly accords with the Office of Housing’s record of the population as a whole. Although we did not have interpreters for all of the languages spoken on the estate the sample did include people born in 31 different countries. Respondents were mostly female (62.3%) which is to be expected given the large proportion of female headed households on the estate and the time of day that most interviews took place.

The second round of the survey was conducted over a period of eight weeks in May–June 2004, after the connection of the intranet and internet for those residents who wanted it. There were six interviewers who conducted interviews in English, Vietnamese, Cantonese, Mandarin, Somali and Arabic. Interviews were again conducted in respondents’ homes or in the community centre on the estate with a small number undertaken in the InfoXchange office. The aim was to reach at least 200 households out of the approximately 720 flats on the estate which were occupied at the time.

The questionnaire used in the 2004 survey was similar to the one used in 2002 survey, with the addition of some more detailed questions regarding the use of the computers and the network itself. As was the case in the first survey these questions were designed not only to elicit information about the impact of the project on tenants computer skills, but also on less tangible matters such as social capital and personal and community empowerment.

The final sample size was 159, slightly lower than anticipated as a result of a number of factors. The first was a change in state government privacy legislation just after our first survey which meant that it was no longer possible for researchers to gain access to up to date tenant contact details. As with the first survey, making telephone contact to arrange the interviews was the most effective means of successfully arranging interviews, yet we were only able to contact around 10% of the flats this way.

Two of the interviewers chose to approach additional households by door knocking, whilst the others used a combination of word of mouth and approaching residents at events such as estate meetings, computer training classes and even in lifts and corridors. An electronic notice posted on the Atherton Gardens website elicited one response.
While some respondents had taken part in the earlier survey, high turnover of tenancies meant that many respondents answered the questions only in 2002 or only in 2004. Respondents included those with computers only, those with computers and network access and those without computers. A broad cross section of household types participated, including two parent families with children, single parent families, young singles, older couples and older singles. More than a dozen countries of origin were recorded.

Almost half the questionnaires were completed by Vietnamese speakers, reflecting both the predominance of that ethnic group in the estate population and the excellent work done by the two Vietnamese speaking interviewers. The two interviewers from Somalia also did an excellent job of making contact with the small but growing population of migrants from the horn of Africa. It was unfortunate that, for a number of reasons, we were unable to employ Arabic, Macedonian or Turkish speakers for this survey. Fortunately several interviews were conducted in English with residents from Turkish and Macedonian backgrounds. Other English speaking respondents came from a number of different ethnic backgrounds and included speakers of English as both a first and second language.

The majority of the respondents answered most or all of the questions, with the exception of the question about household income (which is consistent with the situation in 2002). The one area that is noticeably missing is the demographic details of household members other than the respondent. This was particularly the case with some African households, where the interviewer could clearly see that other people lived in the household, despite the respondents’ denials that this was the case. Respondents in this group also sometimes claimed not to have a television or other electronic goods, in case ‘the government wants to give us those as well [as a computer]’. However the interviewer would answer ‘yes’ to this question if she could see the items in the house, even if the respondent had answered no.

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Social capital as a research framework

Social capital refers to those features of social relationships – such as levels of interpersonal trust, and norms of reciprocity and mutual aid – that facilitate collective action for mutual benefit (Putnam 2000). It is a difficult concept to define (see Winter 2000:22), but social capital is believed to play an important role in the functioning of community life across a variety of domains, ranging from the prevention of juvenile delinquency and crime, the promotion of successful youth development, and the enhancement of schooling and education to the encouragement of political participation. More recently, researchers have begun to apply the concept to explain variations in health status across geographic localities (Baum 2000:250). In preliminary analyses, the higher the stocks of social capital (as indicated by measures of trust and reciprocity in social surveys), the higher appear to be the health achievements of a given area. Strengthening the social capital within communities may provide an important avenue for reducing socioeconomic disparities in health.

There is some debate, however, as to the usefulness of social capital as an explanatory catchall to fully explain the wellbeing of communities and their members (Bryson and Mowbray 2005). Despite problems with the concept or difficulties with the terminology, there continues to be a role for understanding and investigating the links between strengthening community capacity, increasing interpersonal communication and improving trust on the one hand and, on the other, improvement in health, well being and social participation.

It might well be expected that the establishment of an electronic network across the estate would have major implications for the way residents interact both with other residents and with the global networked community to gain information and support across a range of issues, some of which will impact directly or indirectly on health and wellbeing. Some of these will undoubtedly reinforce pre-existing social networks, as is the case with the initially most popular application, namely email access to
communicate with diasporic communities of family and friends which may be scattered across the globe. Others may be expected to facilitate the development of new friendships, new networks, new ways to communicate and receive information and new ways to participate in wider social, economic and civic society.

Health and social issues for the Atherton Gardens community
As in any community, the health and well being of themselves and their families are important considerations for residents at Atherton Gardens. There are a number of factors which impact directly and indirectly on residents' health, some of which arise in part merely from the fact of living in this environment. Whilst there are relatively few residents with severe physical disabilities, many residents rely on the disability support pension for a range of conditions including depression and anxiety, arthritis, diabetes, respiratory conditions and heart disease. There has been much research which shows a strong correlation between health and social factors such as income (Stolzenberg 2001:62), socio-economic status (House et al 1990; Adler et al 1993; Mulatu and Schooler 2002; Grzywacz et al 2004; Reid and Herbert 2005), family structure, social inclusion (Cohen and Syme 1985; Reidpath et al 2005; House et al 2001) and environment (Ross 2000; Latkin and Curry 2003; Whitley and Prince 2005). Any or all of these factors are likely to have an impact on the residents of Atherton Gardens, both in terms of physical health and wellbeing and on mental health and psychological distress.

In our first survey, almost 30% of respondents noted that they or someone in their household had suffered from at least one serious medical condition in the past six months. Allied with this high rate of ill health is a range of other factors which can have an impact on health and perceptions of health. Our early research showed that many residents on the estate are highly fearful of their neighbourhood, only feeling safe when actually inside their homes, and feeling unsafe in public areas such as corridors, lifts, foyers and playgrounds. Many did not know their immediate neighbours by name, or were unable to communicate with them in the same language. A high proportion said they feared drug users who were frequently seen coming onto the estate to buy, sell and use illicit drugs. Many people also feared the violence which they had seen and sometimes experienced, associated with illicit drug use in their laundries, stairwells and common areas. Most knew of someone who had been a victim of petty crime on their own estate, such as suffering the theft of a wallet, handbag or mobile phone.

The community is characterised by high levels of distrust, suspicion, fear, dispersal and fragmentation. Many residents' social networks are established far and wide around the globe rather than in the area in which they currently live. Some groups who have lived in the area for a long time have established strong, tightly knit groups based on language, ethnic and religious affiliations. The Vietnamese Mothers' group and elderly Chinese association are examples of this sort of bonding capital, which emphasises strong links within a small network of people all known to each other, at the possible expense of establishing ties with others outside the group. The estate population therefore is best seen as a series of small communities living in geographical proximity, rather than as an integrated community in its own right.

Computer usage: What are people doing?
In 2004 we conducted the second survey with residents about their experience and use of the e-ACE network once it had come online. The e-ACE initiative has not only raised rates of computer access and connectivity in the home, but has also made the use of online information and communication possible for educational, employment, informational and leisure purposes, and to enhance levels of social connectedness.

Thirty percent of respondents reported using the internet for a health related use. These uses included: seeking information about a health or medical condition; contacting a health service provider; finding out about health services or
To seek information about health or medical conditions
To contact health service providers
To find out about health services benefits
To find out about support groups
To contact others with similar condition
Any of these

Source: ISR survey

Figure 1: Main uses of computer, 2002 and 2004

Figure 2: Health related use of internet by access to internet at home, 2004

Other research data suggest that Atherton Gardens residents are using the world wide web to seek information about a range of health and medical issues. Health related sites which were

access had used the internet for any of these purposes. Residents were also making use of the internet to make contact and communicate with others online about health issues.
accessed by tenants include: blood donation at the Red Cross, a herbalists association, an American site on teenage pregnancy; Workcover/worker’s compensation and the Australian Health Insurance Commission. In addition, a very large number of sites were accessed which contained information in languages other than English. It is likely that at least some of these may have included health or medical information. Other health related sites which were accessed included those run by for-profit businesses such as drug and weight loss companies. There is of course no control over the quality, reliability or impartiality of the information received in this way.

The research findings about indirect health impacts of network access were also revealing. One of the most interesting findings related to reported improvements in feelings of trust and safety. Caution must be exercised here, of course, given that the electronic network was not the only intervention occurring on the estate during the period of study. Neighbourhood Renewal, the State Government’s program targeting particular disadvantaged communities, was also being rolled out at this time, along with an Office of Housing security upgrade and increases in security staff such as entry foyer concierges. Nonetheless, one of the originally anticipated spin-off benefits of the network was to increase people’s circles of friends and acquaintances through shared experiences in undertaking computer training and using the public access computer training rooms. This is precisely what did happen. Twenty nine percent of survey respondents reported meeting new friends through their attendance at e-ACE training sessions. Furthermore, 30% felt that attending the training had improved their English language skills and a quarter said that it had increased their chances of undertaking further training or study.

There was also felt to be a broader educational benefit for those who had gained access to new technology through e-ACE. The initiative offers important resources and opportunities to a population with high education and training needs, as Atherton Gardens residents tend to have low levels of education. Many also face barriers to further study including caring for family members, poor literacy or English skills and lack of money. However, they are strongly interested in gaining training and qualifications, in acquiring new skills and in promoting their children’s educational opportunities.

A high proportion of residents, especially those with children, said they wanted a computer for educational purposes. Over half of the families with school aged children who had received an e-ACE computer said that they used it to help children with their homework. Almost one third had used their computer to either investigate a course, contact an educational provider (school, college or university), find information about scholarships or other benefits or to communicate with other students. Thus the network is clearly meeting one of its original aims, which was to improve the educational outcomes for students and their families, thus perhaps helping some families to break out of the intergenerational poverty trap.

Employment and labour market participation is another area in which technology can have a positive impact on residents’ self-esteem and social inclusion. The e-ACE initiative has already helped Atherton Gardens residents, who have high rates of unemployment and underemployment, to seek work. The unemployment rate for Atherton Gardens residents is seven times the Melbourne average. Barriers to seeking work include family commitments, ill health or disability and the inability to speak English well. Eighty percent of unemployed respondents to our survey had used their computer to either look for a job, look for work information, contact an employment service or potential employer or to register with a job finding service.

If e-ACE achieves its long term aim of becoming resident-run and self-sustaining, those residents who are directly involved may improve their employment opportunities significantly. e-ACE may indeed become an enterprise that is able to generate employment itself. More indirectly, involvement in training, in refurbishing and maintaining computers and in managing the network may enable residents to build information technology skills, or become creators of content.
The Atherton Gardens Community Network (the intranet) is also consistently used, though it is not as yet central to life on the estate. Some elements of the network are widely used. Almost half the 2004 survey respondents had visited the news page, with more than a quarter using the network library, accessing housing information or contacting the helpdesk.

Internet use is consistent and diverse. In the month of June 2004, some 8 months after network connections were first made available in residents’ homes, server statistics show that nearly half a million hits were made to websites from computers linked up to the Atherton Gardens network. This includes public access computers in the training room on the estate, as well as computers in people’s homes. Over 9000 different domains were accessed during this month. A substantial amount of online material being accessed was in languages other than English.

Internet access is being incorporated into residents’ everyday activities: instant personal messaging, audio/video sharing, online banking, job search, shopping, and finding out about local businesses, airline deals, local films and entertainment options. Residents are using their computers to make contact with other people online, often in languages other than English. The internet is also being used by residents to enhance their leisure options and provide entertainment. Games sites, music, film and television sites are popular, both in English and in other languages. Online gambling sites and sites providing adult content were also extremely popular.

The data on residents’ patterns of network use indicate that a high proportion of sites being accessed in June 2004 were government web sites. Residents were accessing information from local, state and commonwealth government sites, as well as from some overseas government web sites. Over a quarter of respondents had used their computer to type a letter to a government service, nearly one in five had contacted a government office by email and nearly a third had used the internet to find information about a government service.

Over half of 2004 respondents with e-ACE computers and internet connections had used them to communicate with the Office of Housing or to find housing information. Nearly half had used their computer to type a letter to the Office of Housing, more than a fifth had contacted the Office of Housing by email and a third had used the internet to find information about public housing.

The e-ACE initiative has also substantially improved news and information resources for residents on the Atherton Gardens estate. Residents, especially those who have recently arrived in Australia, are eager for news from their country of origin and are dependent on finding newspapers and broadcasts in languages other than English. Many of these residents are dependent on long distance and international telephone calls to stay in touch with friends and relatives.

By 2004, 90% of those overseas born residents who used the internet to find out about news and current affairs in their home country were satisfied with the news available to them. This contrasts with strong levels of dissatisfaction which were expressed in 2002, before the computers were online. In particular, access to email was of significant benefit to the Atherton Gardens residents. In 2002, a high proportion of those who wanted e-ACE computers intended to use them to stay in touch with family and friends overseas. By 2004, respondents reported having high levels of email use, especially for staying in touch with family and friends interstate and overseas. This appears to be a supplement and alternative to high-cost international and interstate calls. Comparatively fewer respondents used the computer to email neighbours or other residents on the estate.

We expect the computer network to be used to supplement tenants’ existing ways of staying in touch with friends and relatives locally, nationally and especially internationally. Email and other forms of internet messaging offer cheaper alternatives to the telephone, but are more commonly used to reinforce existing relationships than to initiate new ones. However, while the pattern of phone use may change, it is unlikely to be replaced. Instead, the volume and frequency of communication are likely to increase.
Social connectedness

The e-ACE initiative has encouraged contact between residents, especially through the training activities and the processes of decision-making and community consultation associated with its establishment. The rationales for e-ACE from the very beginning have emphasised its potential to build community and increase social capital on the Atherton Gardens estate. One possibility was that the network could build greater contact between residents, both offline and online, and thus engender trust, reduce isolation and build a greater sense of security on the estate.

While there is no single community on the Atherton Gardens estate, there are very active community-based groups and a complex pattern of associational life which pre-existed the establishment of the e-ACE network. However, e-ACE should be seen as one of a number of neighbourhood renewal initiatives taking place over the last three to four years. The cumulative effects of these appear to have been very positive.

Survey results suggest general satisfaction with decision-making on the Atherton Gardens estate and with current information and consultation practice. This does not appear to have changed significantly over the two years between our surveys of residents. In both 2002 and 2004, an overwhelming majority of respondents felt that there was enough information about the estate and that the estate was well run and fair. Respondents also indicated high levels of confidence in their own ability to deal with government agencies or to speak their mind at estate meetings.

Security and safety was a concern for a majority of residents in 2002. By the second round of our survey, however, this appeared to have improved. By 2004, residents were more likely to feel positive about their community. Their reported level of trust in other residents had increased; residents were more likely to say that they felt part of the local community. Perceptions of personal safety and security had also improved significantly.

The most tangible aspect of the e-ACE program to have fostered group activities on the estate is the training program. A large proportion of respondents attended training sessions and of these almost a third had met new friends through these sessions. Informational sessions on basic computer usage are still being run after hours by volunteers on the estate.

Conclusion

The e-ACE initiative has enabled low-income people who previously had low rates of computer access and connectivity to make use of information and communications technology, to pursue educational and employment opportunities, seek information on social services and obtain news, information and entertainment from across the globe. The network will have subtle, long term and unforeseen consequences for a range of social issues including health and other indirect determinants of health including education, employment and social isolation. How these intertwined and interrelated aspects of health and well being will ultimately affect both individuals and the wider community is difficult to predict, and there can be little doubt that ongoing factors of disadvantage will continue to have negative impacts on residents of high rise public housing that will not be overcome merely by the introduction of new forms of technology into their lives. Nonetheless there is good evidence from the wired high rise study that people can and do take advantage of new technology to improve their own, and especially their children’s access to the technological underpinnings of the contemporary knowledge society.

Endnotes

1 For more details about the e-ACE project visit the website at http://www.atherton.org.au
2 For more information on the Wired High Rise project see our website at http://www.sisr.net/mac/projects/wiredhighrise/welcome.htm The full findings of the project may be accessed in the project final report at http://www.sisr.net/publications/0603wiredfinal.pdf
3 The full questionnaire used in the survey may be found at http://www.sisr.net/publications/03wired2_append.pdf
References


