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Extending Australia's digital divide policy: an examination of the value of social inclusion and social capital policy frameworks

Tanya Notley & Marcus Foth

Institute for Creative Industries and Innovation

Queensland University of Technology

Introduction

When digital divide policies were first developed, they were established under the rubric of much larger information society and knowledge economy policy visions, which set out that, as tradable commodities, 'information' and 'knowledge' were increasingly the drivers of economic growth (ed. Webster 2002). While a whole host of social, cultural and economic benefits of information and communication technology (ICT) access were often imagined within early digital divide policies, without high levels of internet dispersion and with limited access quality, these benefits tended to be futuristic or based on the experiences of internet 'early adopters': an elite minority. Following a decade of internet dispersion, user rates are now close to or exceed 75 per cent in many countries, including Australia[1] (ABS 2007a). This puts policy makers in a much better position to examine the benefits internet users are actually enjoying and how policy can interact with and better capitalise on these benefits.

In this paper, we argue that the network society thesis extends the information/knowledge society credo by providing a way to understand and value new forms of internet participation. Within the network society thesis, social capital and social inclusion can be understood as two frameworks that can be used by policymakers to define the social benefits of internet participation and focus funding and initiatives on ensuring these benefits are strengthened and are more equally dispersed. While this paper explores the development of the policy concept of social inclusion, we define it here as a coordinated affirmative response to the complex system of problems that are known as social exclusion. Social capital refers to a person's relationships, connections and social ties with trusted others such as family, friends and peers. Both concepts present new opportunities for excluded individuals or groups to participate in social, cultural, economic and/or political processes. While both social inclusion and social capital have been used as a way to value ICT use in Australia and elsewhere for some time, this paper posits both frameworks within the current Australian policy context.

The digital divide in Australia

The Australian Bureau of Statistics (ABS) has monitored technology access and use in Australia since 1996 and has reported on developments through their annual *Household use of information technology* report. The latest report indicates that household computer and internet access has steadily increased in Australia since this time (see Figure 1).

Figure 1: Household computer and internet access, 1998–2007 (%)
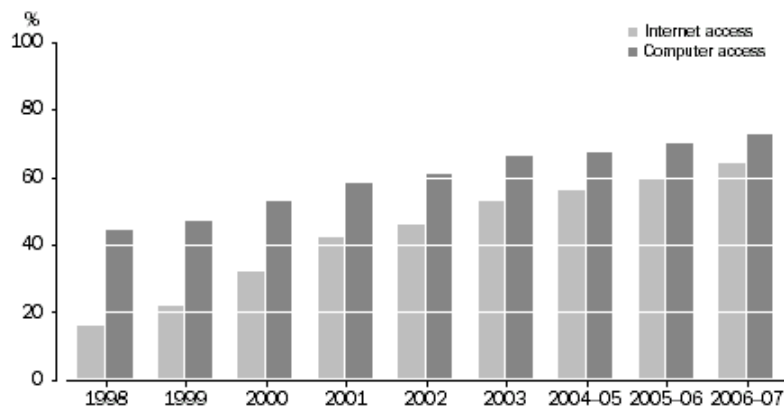
Source: Australian Bureau of Statistics 2007, *Household use of information technology, Australia, 2006–07*, Canberra.

The 2006–07 ABS report found that 64 per cent of Australian households had home internet access and 73 per cent owned a computer. The number of households with broadband access in 2006–07 had more than doubled from 2004–05, with over half (68 per cent) of all households with internet access through a broadband connection. As with previous years, the percentage of households with home computer and internet access continued to be higher for households with children under 15 years of age, households in the highest income quintile, and households in metropolitan areas and major cities (ABS 2006; ABS 2007a).

The annual ABS *Household use of information technology* reports are useful in terms of providing up-to-date data on household internet access, as well as some information on internet use and non-use. However, this survey is limited in terms of its scope. The socioeconomic determinants considered in these reports are limited: the impact of important variables such as ethnicity (including Indigenous status), geography, disability and education are not always examined. Further, as a general population survey, the report is unable to map 'pockets' of low access across the country or measure access disparities both across and within the states. Instead, the richest picture of internet access inequalities in Australia emerges from national household census data.

In 2001, the ABS Australian national household census included a series of questions to assess computer and internet use for the first time. The analysis of this data, published in *Australia online: how Australians are using computers and the internet* (Lloyd & Bill 2001), was the first real attempt to consider a comprehensive range of socioeconomic and geographic factors that may be impacting upon access to computers and the internet in Australia. The report found that use of computers and the internet tended to increase with income and educational qualifications, and decrease with age. People from Indigenous or non-English speaking backgrounds, those born in southern and eastern Europe, the elderly, and those not in the labour force were more likely to be unconnected to the internet. Those living in metropolitan areas were more likely to use computers and the internet than those living outside of these areas, and a small gender gap was also identified with women slightly less likely than men to use computers and internet in the home (Lloyd & Bill 2004). The report

was the first ABS publication to use the term 'digital divide' and this term was defined as 'the degree of exclusion from the information society', (Lloyd & Bill 2004, p. 1). The report stipulated a need to address this exclusion:

> Use of the Internet is rapidly becoming an increasingly common and critical part of commerce, education and social participation. Groups that do not have the opportunity to participate in the services provided by new telecommunications technology will be increasingly disadvantaged socially and economically. (Lloyd & Bill, p. v)

In line with international trends, the next census sought to focus on household internet access rather than individual computer and internet use. The 2006 census questionnaire asked households if they had access to the internet and if so, what type of access (broadband, dial-up, wireless, other or unknown). The ABS (2007b) report based on this data, *Patterns of internet access in Australia*, revealed that, despite increases in internet access for all groups, very little had changed in terms of the nature of internet access disparities[2]. In 2001, 35 per cent of Australians had accessed the internet from home the week prior to the census. In 2006, 63 per cent of all households had access to the internet with 40 per cent connected through broadband. The only gap identified in the 2001 census data report that had been resolved was that pertaining to women; in 2006, women aged between 25 to 54 years had greater access to the internet at home and to broadband than their male counterparts, but less access when aged 55 years and over. The study also investigated access for those with a disability and found these people to also be significantly less likely to have access to the internet and to broadband in the home.

Some of the starkest inequalities identified include:

1. **Indigenous Australians** were 69 per cent less likely than non-Indigenous people to have any internet connection and were about half as likely to have broadband access.

2. **Geography** continued to impact on household internet connectivity. For example, 66 per cent of dwellings in major cities have access to the internet, compared to 42 per cent for very remote Australia (see Table 1 below).

3. **Educational attainment** influenced overall and broadband internet access. For example, when controlling for other factors, persons with postgraduate qualifications had about 3.9 times the likelihood of having broadband compared with those without these qualifications. People with certificate level qualifications were about 1.2 times more likely to have access to any internet than those without.

4. **Income** was considered the single largest determinant of internet access and broadband, with results showing that higher income increased the likelihood of a person having any internet connection. When all other variables were held constant, the likelihood of having any internet access for persons with the equivalised household income of $1,000 to $1,999 per week were about 2.7 times more than those earning less than $1–$599 per week.

5. **Disability**: only 28 per cent of people requiring assistance with core activities had broadband access, in comparison with 48 per cent for people not needing assistance.

6. **Single parent households** with dependent children under 15 years had 77 per cent internet and 52 per cent broadband access compared with 92 per cent and 68 per cent respectively for comparable dual parent households.

Table 1:   Broadband access rates by region (per cent)

Geographic area	Internet access	Broadband access
Major cities	66	46
Inner regional	56	32
Outer regional	52	27
Remote	53	28
Very remote	42	24

While it is disappointing that Australia's digital divide persists, this in itself is not surprising (compare with Selwyn 2004). Studies across the globe have repeatedly underscored that access disparities continue to exist within and among most, if not all, countries in relation to income, education, ethnicity and geography (Bauer, Berne & Maitland 2002; Chen & Wellman 2005; International Telecommunications Union 2000). The 2001 and 2006 census data support an extremely detailed picture of Australia's access inequality. Regression analysis and statistical mapping at the detailed level of postcodes has enabled socioeconomic, ethnic and geographical determinants of low access to be very clearly identified. It is important that future digital divide initiatives overtly respond to this analysis, while a policy framework should set targets to reduce the gaps identified.

In the following sections, we examine how the Australian government has responded to the technology access disparities identified by the 2001 *Australia Online* report and we suggest how Australian policy might better respond to 2006 census data.

Australian digital divide policy 1995–2007

The first significant national digital divide policy intervention in Australia was announced by the Coalition government in 1996 before the release of any detailed statistical reports on the Australian digital divide. *Networking the Nation* (NTN) aspired to enhance telecommunications infrastructure and services; increase access to, and promote use of, services available through telecommunications networks; and reduce disparities in access to such services and facilities. A total of $351 million was allocated to 762 projects across regional, rural and remote Australia during 1997–2004 using funds allocated from the sale of the national telecommunications carrier, Telstra (DCITA 2006b).

Very few academic or independent studies have critically assessed the NTN program's impact comprehensively. However, the initiative did receive some criticism as an inadequate response to the Australian digital divide (Daly 2007; Consumers Telecommunications Network 2002) that did not operate from an informed needs assessment (van Vuuren 2007).[3] At the same time, the Regional Telecommunications Inquiry reported that by 2002 **all** Australians were able to access at least a dial-up Internet Service Provider (ISP) for the cost of a local untimed call and at equitable charges. This was partly due to the establishment of ISPs through the

NTN program. The report also identified the 'moving target' of the digital divide by acknowledging that, 'dial-up technology is [now] becoming inadequate to meet the service needs of users' (DCITA 2002a, p. 130). Thus, access quality (broadband) needed to be added to the digital divide policy agenda.

NTN was followed by the 2004 *Co-ordinated communications infrastructure fund,* which committed $23.7 million in funding to encourage health, education and other sectors of public interest to maximise opportunities for improved broadband access and services in rural, regional and remote Australia. In addition, two larger initiatives announced in 2005: the establishment of a $2 billion *Communications fund* comprised of money from the sale of Telstra that would be used 'to future-proof telecommunications services in rural, regional and remote Australia' and *Connect Australia* with a commitment of $1.1 billion over three years to rollout broadband to people living in regional, rural and remote areas, extend mobile phone coverage, build new regional communications networks and set up telecommunications services for remote Indigenous communities (DCITA 2007, 2008a; Coonan 2005). Two more government initiatives specifically focused on the infrastructure needs of Indigenous communities. The 2002 *Telecommunications action plan for remote Indigenous communities,* pledged $8.3 million over three years, and telecommunications access funding included the 2006 *Backing Indigenous ability* with funds of $36.6 million that sought to redress low levels of telecommunications access and access quality in Indigenous communities (DCITA 2002b; DCITA 2008b).These initiatives were largely informed by ABS data and the Regional Telecommunications Inquiry (2002), which identified that, while overall access disparities appeared to be closing in many areas, access quality (broadband) remained highly stratified between urban and non-urban Australia and between Indigenous and non-Indigenous Australians.[4]

While telecommunications infrastructure is a vital issue in terms of addressing the 'supply-side' issues of the digital divide, it has been argued that the Australian government has remained too singularly focused on broadband rollout 'in the bush' at the cost of addressing more complex 'demand-side' (social and economic) barriers such as low income, a lack of technological skills and support, and a lack of relevant and appropriate content. These demand-side issues will continue to inhibit household ICT uptake and use even when the appropriate infrastructure is made available (Daley 2002; Holloway 2003; Goggin 2003a, 2003b).

To be fair, some Australian government infrastructure initiatives have gone beyond only discussing the issue of broadband rollout. For example, the current *Australian broadband blueprint* acknowledges that there are three 'vital layers' to further extending Australia's adoption and equitable access to broadband: infrastructure; content and services; and effective use. The document pledges that the national government will work with the states to coordinate and strengthen the technical infrastructure for broadband, but no such promise is made for content, training and support services or for effective use (DCITA 2005a, pp. 44–53).

The November 2007 election in Australia of a new Labor government suggests that some changes are likely to be made to policies relating to broadband and internet. During the 2007 election period, Australia's poor broadband quality become a fairly significant election policy issue (Hoy 2007). The Labor Party announced *A broadband future for Australia* in March 2007. This policy pledged an additional $2.7 billion to the existing two billion dollar *Communications Fund* to build an optical fibre network that the Labor Party claimed would reach 98 out of 100 households in

Australia and offer speeds over 40 times greater than the current average (Rudd, Conroy & Tanner 2007; Hoy 2007).

Broadband policies are obviously crucial to addressing Australia's poor internet access quality. In a recent study by the Organisation for Economic Co-operation and Development (OECD), Australia ranked well (third) in terms of overall internet dispersion, but ranked 23rd out of 32 developed countries for broadband cost and second last for download speed (OECD 2007). However, policy debates about broadband during the recent election did not constitute a comprehensive strategy for addressing the digital divide. The only other policy with a digital divide focus promised by the new Labor government also focused only on the issue of technology access. During their election campaign, the Labor government pledged $2.3 billion to provide significant tax rebates for low-income parents of school-aged children who purchase computers and internet connections (Franklin 2007; ALP 2007b; Australian Coalition Government 2007). While this policy may go some way to addressing income-related demand-side barriers to internet connectivity, there was no evidence provided by the Labor Party to show that this plan would benefit those least able or likely to purchase home computers and the internet. Nor was there any mention of how the proposal would support more equitable benefits of use.

One of the most difficult things about assessing the impact of Australian digital divide policy is that both policies and initiatives have been implemented by local, state and national governments as well as third sector organisations. The Online Communications Council (OCC) is the Australian body charged with ensuring that Australian ICT policies are cohesive and complementary across the three tiers of government. The OCC meets once annually and membership comprises the Australian Government Minister for Communications, Information Technology and the Arts, the Australian Government Special Minister of State, a senior Minister from each state and territory government and the Australian Local Government Association. Third sector organisations and research bodies are not included as members.

While the OCC may play an important role in terms of ICT policy rollout in Australia, it does not have any formal rights and responsibilities as a council. Rather than setting the digital divide policy agenda, the OCC's annual meeting tends to be concerned with reviewing a broad range of national ICT-related policies —both proposed and in place — with the aim of ensuring the relevant state ministers are aware of and understand them, and are willing to collaborate (OCC 2007). In 2002, the OCC made a recommendation that a national 'Digital divide forum' be established in Australia that would include the three tiers of government as well as representatives from research and non-government bodies (Online Council of Australia 2002); however, the recommendation was never implemented.

Without a strategic national body and framework to connect local, state and national digital divide policies and practices, overall investments and progress are very difficult to assess. Without a body with a specific mandate to ensure that policies are adaptive to changing needs, cohesive and complementary across the states and most importantly, are effective, digital divide policies will remain fragmented. At the national level, policy appears to be almost solely focused on supply-side issues of infrastructure. At the state and local level there is neither a coherent framework to guide initiatives which attempt to address 'demand-side issues', nor is there any documentation or exchange of experiences to assess how approaches differ across the

states. This sort of knowledge exchange and policy coherence will become even more important as we begin to learn about the social value of new forms of internet use.

New patterns of internet use

Academic debates have long emphasised that the 'digital divide' is about more than the provision of access to technology. Different demographics ICT needs, capabilities and skills need to be better understood if they can be married with realistic social policy goals (Mansell 2002; Warschauer 2003; Nakamura 2004; Chen & Wellman 2005; Norris 2001).

When digital divide policies were first developed, they were established under the rubric of much larger information society and knowledge economy policy visions that set out that 'information' and 'knowledge' were the new drivers of economic growth (ed. Webster 2002). While a host of social, cultural and economic benefits of ICT access were often imagined within these early policies, without very high levels of internet use and with limited access quality, these benefits were perceived or experienced only by the internet 'early adopters'. Having now achieved ubiquitous internet access in Australia, we are in a much better position to examine what benefits users are enjoying and then to assess how policy can interact with and better capitalise on these benefits.

To date there has been no longitudinal statistically significant study carried out in Australia that has considered nuanced changes in internet use.[5] The last ABS *Household use of information technology* report considered simplistic categorisations of use: 'personal/private'; 'work/business'; 'study/educational'; 'voluntary/community' and 'other'(ABS 2006). This information will not provide a picture of evolving internet use (or non-use) patterns and does not explore the social benefits of internet use.[6]

Recently, the ABS released a report, *The social impact of ICT: a proposed framework for identifying indicators* (De 2007a), which identified the need to measure the social impacts of ICTs in Australia. The report stated that, 'Policies relating to impact of technology generally focus on the economic impacts such as effects on productivity' and cited Roberts' (2007) assessment that these benefits are measurable and are generally well defined and understood in Australia (De 2007a, p. 1). The ABS report emphasised that far less was known about the everyday uses of ICT, which can impact on a range of issues 'such as education, teleworking, health, service delivery, virtual communication between communities, digital divide, globalisation and even democracy' (De 2007a, p. 1). The report proposed that a conceptual framework be established to measure the social impacts of ICTs in Australia and to inform government policy.[7]

Elsewhere, statistical research is already playing an important role in developing ICT policy and discourse. In the United Kingdom (UK), the bi-annual *Oxford Internet Surveys*[8] have become well-cited studies reporting on British citizens' changing use of the internet and a range of studies have been funded by the UK communications regulator—OfCom—including *UK children go online*[9] and the *Media literacy audit.*[10] In the United States (US), the *Pew internet and American life project*[11] has been conducting nationally representative surveys that monitor evolving uses of the internet across sociodemographic categories since 1999. Also, the *Digital future project*[12] at the Annenberg School, in the University of Southern California, has

conducted a longitudinal annual internet use survey since 2000. The US Pew studies provide the most comprehensive data on a broad range of **social benefits** that internet use offers, specifically in relation to social inclusion and social capital.

The 2004 Pew study, *Internet penetration and impact* (Fallows 2004) found that 88 per cent of online Americans felt that the internet played a role in their daily routine and nearly all internet users conducted some of their ordinary day-to-day activities online, from mundane tasks to social arrangements to personal recreation. Over time, internet users have reported increasing positive impacts of their internet use in areas including hobbies and interests, shopping, work, employment, and health care information (Madden 2006). Impressively, almost half of all of internet users in the US (45 per cent) say that the internet has helped them make big decisions or negotiate their way through major episodes over their lives in the previous two years (Horrigan & Rainie 2006).

In *The strength of internet ties* (Boase et al. 2006), Pew researchers find that internet use provided online Americans with 'a path to resources, such as access to people who may have the right information to help deal with a health or medical issue or to confront a financial issue'(p. ii). These results indicated that those connected to the internet were more likely to seek assistance on health, education, employment and financial issues, and for nearly one-third of those surveyed, the internet had played a 'crucial' or 'important' role in helping them sort through their options on at least one of these issues. This 2006 figure had increased one-third since 2002 suggesting that internet use **increasingly** enhances opportunities for social support. The report also found the social network of internet users to be significantly larger than non-users.

In addition to this international research data that provides clear evidence of the social value of internet use (see also Crump 2006; Hick 2006), there is a small but growing body of empirical work in Australia that is highly relevant. While the ABS data on households' use of technology is limited, some qualitative studies have explored how people use the internet in projects intended to address social inclusion. For example, one Australian study of a wired-community initiative that sought to address the digital divide in a Victorian residential housing estate suggested that internet use may have more benefits in terms of educating individuals rather than building a traditional notion of 'community' (Meredyth, Ewing & Thomas 2004; Meredyth et al. 2002; Hopkins 2005). However, in another study Fernback found that, 'inner-city residents find ICTs to be a key element in neighbourhood and community revitalization' (Fernback 2005, p. 482). Together, these studies suggest that it is not an 'either/or' equation: ICT use can have a positive impact on an individual's social inclusion and on a community's collective social capital. Fernback, as well as others in an Australian context (Foth & Podkalicka 2007; Arnold, Gibbs & Wright 2003), argue that the identification and measurement of impacts depend on the definition of suitable performance indicators as well as the purpose and context of ICT use.

The new Australian government is yet to take a clear position on how they understand the value and significance of changing patterns of ICT use and usefulness in policy terms. One way to progress public debate on this issue is to discuss how the internet offers new opportunities to interact with economic, social and cultural resources and institutions. This is a topic firmly inscribed in the network society thesis.

Valuing new patterns of internet use: the network society thesis

The central idea of the network society thesis is that contemporary social, political and economic practices, institutions and relationships are organised through and around network structures (Barney 2004; Castells 2000). The network society thesis is a useful tool to understand new forms of internet use because it connects with and then extends the concept of the information society, which was taken up widely by both national governments and global institutions since the 1990s and was the political impetus for early digital divide policy.

The concept of the information society establishes that information flows have accelerated and that these flows have an economic value. The network society thesis extends this concept by interrogating the ways in which information flows are constructed and operate (through a network model). Thus this thesis provides room for a discussion about the ways in which participation and power become (re)structured, not only in economic terms, but also within social and cultural domains.

> The word 'network' describes a structural condition whereby distinct points (often called 'nodes') are related to another by connections (often called 'ties') that are typically multiple, intersecting and often redundant. A network exists where many nodes (peoples, firms, computers) are linked to many other nodes, usually by many ties which cross the ties connecting other node. (Barney 2004, p. 2)

Castells (2001) found that three core factors were brought together to establish the current transition to a new societal structure based around networks. First, economic agendas strived for the globalisation of capital, production and trade and thus for management flexibility. Second, societal processes were mobilised by demands that privileged individual freedom and open communication; and third, technological advances in computing and telecommunications enabled, supported and developed this process.

While the human use of networks for information sharing has a long history, networks have been given a 'new life' through the proliferation and use of the internet (Wellman 2001; Castells 2001). Networks provide extraordinary advantages as organising tools because of their 'inherent flexibility and adaptability'—both 'critical features' for survival in today's rapidly changing globalised environment (Castells 2001, p. 1).

The idea of ICTs propelling both the social and economic use of networks is not an entirely 'new' or independent phenomenon. The role of modern communications media can be traced to the period after the first World War when electronic media such as the telegraph and telephone first made it possible to communicate in real time across vast distances and thus 'helped to shrink geographical space and speed up time to the point of spontaneity' (Hjarvard 2002, p. 69). This process was further accelerated with the development of technologies such as the television and radio. However, the most significant and rapid impulsion of this process today is a result of the development of the internet as a tool for one-to-one, one-to-many and many-to-many information and communication exchange in both synchronous and asynchronous time. Castells (2001) found that where Marshall McLuhan claimed the Gutenberg printing press created the 'Gutenberg galaxy' that defined modernity and

social development we have now entered a 'new world of communication' in the 'internet galaxy' (Castells 2001, p. 3).

The network society has both positive and negative repercussions for citizens, communities and nations. Depending on the nature of each network, network components (the nodes, the ties and the flows that move between them) can be centralised, decentralised or distributed; hierarchical or horizontal; bounded or boundless; finite or proliferating; accessible or inaccessible; inclusive or exclusive; intensive or expansive; and interactive or non-interactive (Barney 2004). In *The rise of the network society,* Castells forecasted that, 'inside the networks, new possibilities are relentlessly created—outside the networks, survival is increasingly difficult' (Castells 2000, p. 187).

At this relatively early stage of the development of the internet and of ICT-mediated networks, it may be too early to make claims of a complete transformation in the way society functions, but we can say, at least in affluent societies like Australia, that ICTs like the internet now 'form the necessary infrastructure of everyday life' and that these ICTs are increasingly used to build, grow and sustain networks (Barney 2004, p. 178). In a society where principal economic, political and social activities are organised or mediated by networks, inclusion and exclusion, and power and powerlessness, become a function of both access to networks and control over flows within them (Barney 2004).

It is within this understanding of the network society thesis that we now examine two frameworks that provide policy makers with a way of valuing new online participation and of intervening in inequalities of use. The first—social inclusion—provides a way to address the online needs of specific disadvantaged groups and the second—social capital—offers a framework through which policy can provide all citizens with online opportunities to collectively build social, cultural and economic capital.

Digital divide policy and a social inclusion framework

The concept of social exclusion was first developed in policy terms in France in the mid 1970s by the Chirac government to define social categories of people who were unprotected under the government's social insurance system (de Haan 2001; de Haan 1999; Silver 1994). In the 1980s, under Miterand's socialist government in France, the concept was transformed into a new model of anti-exclusion social policies. Since this time the concept has become enshrined in the UK and the wider European Union (EU) through dedicated policy units; albeit with different philosophical foundations, objectives, targets and performance measurements.

As a policy concept, social exclusion/inclusion has supported the debate about what it means to be excluded from society and how different political and social structures should address this in a consistent way. While different definitions and applications of social exclusion have been developed in the UK and in other EU countries, two central principles are generally shared. First, social exclusion is defined as being **multi-dimensional**. That is, social exclusion is understood as something that can happen in the economic, cultural, social and political spheres and people may be excluded from different things at the same time (de Haan 2001). Second, the concept puts a focus on the **processes** that cause deprivation and exclusion (Jones & Smyth 1999; de Haan 1999). For example, governments may exclude particular groups from

legal rights; landlords might exclude people from access to land; or minorities can be excluded from expressing their identities by the law, the mass media, or schools (de Haan 2001). People can be excluded by different groups, often at the same time.

It is the emphasis on these two factors that distinguish the social exclusion academic and policy literature from that on poverty and deprivation. By opening up debate about the many ways in which people are excluded from participation in society, the concept has successfully been used to contribute to **context-specific analysis** of what Sen (2000) refers to as the 'root causes of deprivation'. The multi-dimensional and historical aspects of the social exclusion framework analysis also support complementary and integrated policies that cut across sectors including health, housing, employment and education.

It has been argued that, in a similar way, the concept of digital inclusion can be used to extend the notion of the digital divide away from a singular focus on technology access and towards a focus on the way technology access **and use** can impact on different forms of deprivation and disadvantage (Warschauer 2003).

In the UK, social inclusion has been used for some years to develop a concept of digital inclusion. For instance, in 2004, a committee of government, research and non-government agencies argued the need for a governmental 'Digital Inclusion Unit' and outlined the issues and specific sociodemographic categories that would need to be considered in designing a comprehensive national digital inclusion strategy (Bradbrook & Fisher 2004). The UK government subsequently published the report *Inclusion through innovation* in 2005 and funded a Digital Inclusion Team to implement the report's recommendations. The Digital Inclusion Team defines digital inclusion as: 'The use of technology either directly or indirectly to improve the lives and life chances of **disadvantaged** people and the places in which they live' (Digital Inclusion Team 2007).

The concept of digital inclusion has provided EU researchers, policy makers and civil society organisations with the opportunity to engage in an ongoing debate about what the term means, why it is important and how it should be addressed. Two national digital inclusion strategies have now been created in Scotland: the most recent goes well beyond issues of infrastructure and access to stress specific social needs and to articulate policy goals, initiatives, targets and timelines (Scottish Executive 2006). In England, healthy debate continues in academic, government and civil society sectors about how national digital inclusion strategies should be financed, monitored and structured (Social Exclusion Unit 2005; Selwyn & Facer 2007; Fresh Minds 2007; Bradbrook & Fisher 2004; Livingstone & Helsper 2007).

It is likely that one reason that the Australian government has not yet adopted the concept of 'digital inclusion' is that the recently defeated but long-serving Coalition government had never used the concept of social exclusion/inclusion in key policy frameworks (Saunders 2003). However, the incumbent Labor-led Australian government put the concept of social inclusion firmly on their policy agenda during the 2007 election campaign. Their policy document, *An Australian social inclusion agenda* (ALP 2007a), stated:

> Social exclusion is the outcome of people or communities suffering from a range of problems such as unemployment, low incomes, poor housing, crime, poor health and disability and family breakdown. In combination, these problems can result in cycles of poverty, spanning generations and geographical regions ... Labor's social inclusion agenda aims to launch a new era of governance to mainstream the task of building

social inclusion so that all Australians can share in our nation's prosperity. (ALP 2007a, pp. 1–3)

The recent creation of a social inclusion portfolio, and the appointment of the Deputy Prime Minister as the Minister for this portfolio, further emphasised that the new Australian government will be developing this policy concept. If the Australian government follows the UK policy path, social inclusion will also be used to develop a policy concept of digital inclusion.

There has been very little Australian academic research that has explored the use of the concept of social exclusion in an Australian context. One key exception is Peter Saunders (2003) who analysed the relevance of the evolving UK, France and EU concept of social exclusion and concluded that the international literature offered 'some valuable new insights' for Australian policy makers (p. 9). An alternative view was expressed by a different Peter Saunders (same name but clearly very different political views[13]) and Kayoko Tsumori (2002) who both attacked the social exclusion concept in an article in *Policy* claiming that it 'can mean almost anything and can be applied to almost anybody' while it simultaneously 'signifies victimhood' (p. 32).

> To identify somebody as 'poor' is to leave open the question of responsibility and fault; to identify them as 'excluded' is to pre-empt it … So who is to blame for excluding people? The familiar culprits are in the frame—the government, the rich and 'society' in general. Social exclusion is something that is caused by 'society', must be rectified by government, and that will be paid for by increased taxation on higher income earners. (Saunders & Tsumori 2002, p. 36)

The discourse of social exclusion is clearly the centrepiece of Saunders and Tsumori's article but as Peace (2001) explained, for better or for worse, the concept of social exclusion has undergone a complex linguistic shift since its introduction in France that now affects what policy makers tend to 'do' with the concept. Through a semantic process of nominalisation, 'excluded' as an active verb (for example, 'he excluded her from…') became a passive verb (for example, 'social exclusion affects their life chances of…'). In this process of nominalisation, agency disappeared—whoever is doing the 'thing' is rendered abstract or invisible and the action itself becomes a 'thing' in its own right (Peace 2001, p. 21). This is an unfortunate shift in the use of the social exclusion concept because understanding the 'root causes of deprivation' is not about assigning blame, but rather recognising the historical causes for a situation so that they can be acknowledged, understood and then (hopefully) addressed. We would argue that a 'strong' use of the social exclusion concept will not shy away from identifying the multiple and linked root causes of that exclusion.

The only significant work on measuring social exclusion in Australia has been carried out by the Social Policy Research Centre at the University of New South Wales (Saunders, Naidoo & Griffiths 2007). The centre's *Left out and missing out* research project compared survey data from 2,700 adult Australians drawn at random from the federal electoral roll and an additional 700 clients of community sector welfare services. Drawing from influential UK research, the survey developed indicators for poverty, deprivation and social exclusion to investigate the degree of overlap between the three concepts in the Australian population.

The research findings indicate that the three concepts affect different groups in the population and remain significantly distinct and independent. The report recommends that Australian policy makers should consider the use of these three different concepts

and their respective indicators to develop a broader Australian specific measurement for social disadvantage.

Despite not taking up the policy concept of social exclusion, a discussion of digital inclusion appeared on the Department of Communications, Information Technology and the Arts (DCITA) website well before the 2007 election:

> Current research indicates that the 'digital divide' is best understood as part of a socio-economic context and related to the issue of social exclusion. As such, solutions need to go beyond technology. Furthering digital inclusion will require a detailed understanding of the relationships between information, people and technology. (DCITA, p. 2006a)

While this statement appears promising, if the concept of digital inclusion is to be progressed by the new Australian government, it will first need to be clearly defined and a policy framework and targets established. In the UK, the concept of digital inclusion is embedded within the broader policy concept of social inclusion in order to ensure ICT policies are integrated with broader cross-sector social policy goals. In Australia, the recent announcement of a policy focus on social inclusion suggests that this sort of policy integration may be possible. From the perspective of understanding the social impact of ICTs, the key question that will need to be answered is: how does the adoption or use of ICT, or barriers to it, affect the social inclusion of people, or of particular subgroups of the population?

Digital divide policy and a social capital framework

In recent times, the concept of social capital has started to be popularised in a variety of policy contexts, as a way to acknowledge, appreciate and support the impact of extra-market, in-kind reciprocal actions of people on the basis of social ties and connections (for a comprehensive review see Cavaye 2004). Although the concept can arguably be traced back to earlier ideas and works, Pierre Bourdieu presented the first seminal conceptualisation of social capital when he broadened the notion of capital to include non-financial forms such as social, cultural and symbolic capital (Bourdieu 1986). He defined social capital as 'the aggregate of the actual or potential resources, which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition' (Bourdieu 1986, p. 249). The increasing ubiquity of the internet and related ICTs impacts on the way social relationships and social networks are created, mediated and maintained. If a majority of people communicate and connect online, this in turn impacts on the way they accumulate social capital.

In policy terms, social capital is a way to more broadly value internet use at both a community and an individual level—not just for defined disadvantaged groups. However, some of the conventional policy interpretations divert from the original concept. Some commentators subscribe to a purist's collective and communitarian understanding of society (Etzioni 1995; de Tocqueville 2000) rather than a more contemporary, broader definition that takes other views into account, such as, for example, networked individualism (DeFilippis, Fisher & Shragge 2006; Wellman 2001; Sprigings & Allen 2005). The latter recognises the value of what Bourdieu termed 'less institutionalised relationships', that is, the informal, transitory and everyday nature of personal social networks. Yet, some policy interpretations of social capital are prone to turn a blind eye to the new patterns of internet use outlined

above and are therefore unable to appreciate them and the notion of networked individualism adequately.

One of the most influential political positions is claimed by Putnam (2000). He used statistical data analysis and anecdotal evidence to argue that the spirit of community and civic engagement is declining and on the brink of collapse and that members of (the US) society have increasingly become disconnected from one another, which leads to a loss of social capital. This image of society's condition is somewhat ironic insofar as society has never been so well connected through means of the internet and other network ICTs as it is now.

Looking at traditional expressions of community, Putnam (2000) rightly argued that community and social relationships are losing importance or even vanishing. In fact, he acknowledged a shift in community and social relationships away from local anchors and towards the internet that has the potential to revive social capital. He concluded that:

> … the Internet will not automatically offset the decline in more conventional forms of social capital, but that it has that potential. In fact, it is hard to imagine solving our contemporary civic dilemmas without computer-mediated communication. (Putnam 2000, p. 180)

People are starting to realise the opportunities that the internet, mobile phones and other electronic tools provide for a seamless transition between global and local networks, online and offline communication and collective and networked interaction (Foth & Hearn 2007). Putnam (2000) used conventional sources of statistical data about community—memberships of political parties, volunteer organisations and church attendance—to suggest a disappearance of community. We argue that by examining new patterns of internet use and adopting a holistic perspective, new forms and expressions of community and social formations can be taken into consideration.

One example of an arguably new social formation is Watters' (2003) conceptualisation of 'urban tribes'—social clusters of under 35 year-old urban dwellers. They represent a social network, a 'swarming' group of friends who live in the same city and who are connected through a meshwork of 'strong' and 'weak' network ties. The face-to-face interaction between members of urban tribes is supplemented by the use of new media and ICT applications. Watters' analysis of urban tribes provides further evidence for the shifting quality of community formations in urban settings towards social networks. Several writers (Florida 2003; Fischer 2005; Sobel 2002; Uslaner 2000; Watters 2003; Wellman 2001) critique Putnam's (2000) narrow interpretation of social capital. Watters argues that:

> … social capital comes from much more fluid and informal (yet potentially quite close and intricate) connections between people. Social capital could as easily accrue among a tight group of friends yet still have an effect on the community at large. (Watters 2003, p. 116)

We therefore argue that a successful digital divide policy approach requires a social capital framework, which recognises that community assets include not only the formal skills of individuals and the tangible associations and institutions in a given locality, but also the informal proximity-based social clusters and intangible networks of 'weak-tie' relationships that people build and maintain through new media and network ICTs. A greater understanding is required about how these tacit and soft assets can be elicited, connected, networked and harnessed to become 'smart' assets

in the service of both social and economic innovation in both metropolitan and non-metropolitan areas in Australia.

Optimistic and pessimistic positions have been postulated to explain the new manifestations of community and society in a networked world. Putnam's (2000) dramatic picture of a collapse of community is set against historic reports that contain similar protests and objections as far back as ancient times (Arnold 2003). This evidence suggests that the notion that the purely philanthropic and altruistic view of community has often been maintained by a minority of society—it has not been a mainstream idea. Arnold (2003) pointed out that 'community is dynamic, and much angst is no doubt driven by nostalgia that fails to recognize the strengths of contemporary communities and the changing forms of contemporary communities' (Arnold 2003, p. 78).

Furthermore, social capital can be a 'double-edged sword'. According to Portes (1998), an increase in social capital can lead to exclusion of outsiders, excess claims on group members, restrictions on individual freedom and downward levelling norms. Both Florida (2003), referring to a city or region, and Watters (2003), referring to social networks of friends, claim that social capital may also lead to high barriers of entry and can thus be counterproductive in ensuring permeability and sustainability in communities:

> The high social capital communities showed a strong preference for 'social isolation' and 'security and stability' and grew the least—their defining attribute being a 'close the gates' mentality. The low social capital communities had the highest rates of diversity and population growth. (Florida 2003, p. 15)

In recent years, the Australian government has made at least one significant attempt to broaden the debate about how digital divide policy might be progressed by identifying the way social capital can support social policy goals. In 2005, DCITA simultaneously released two discussion papers: *The role of ICT in building communities and social capital* and *Information and communication technology transforming the nonprofit sector* (DCITA 2005c; DCITA 2005b) The former argued—in line with other studies (eds Huysman & Wulf 2004; Gaved & Anderson 2006)—that:

> … as the use and impact of ICT increases, so does the prospect that ICT can play a role in shaping the nature of community development and contributing to the building of social capital.

This report represented a valuable and significant attempt to support a public discussion about the ways ICTs can be used to support and strengthen communities in Australia, while the latter report considered the value and challenges ICTs provide for the country's third sector organisations.

These reports were followed by a DCITA commissioned *Report on a model for a national nonprofit ICT coalition*, published in 2007. The report outlined a model for a 'national, networked, project-orientated organisation' that would 'link the nonprofit sector into policy debates about the potential of technology to impact Australia's social, environmental and economic development' (CISA 2007). If adequately resourced, the proposed *ICT nonprofit coalition* would have provided an important opportunity for the Australian government to move digital divide policy beyond supply-side infrastructure needs and towards a discussion regarding the ways in which new patterns of internet use could be married with social policy, structures and initiatives.

If the Australia government is to embrace an understanding of the social benefits of ICTs based on a social capital framework, the key question that will need to be answered is: how does the adoption or use of ICT, or barriers to it, affect the social capital of people, or of particular subgroups of the population? The ABS have developed a social capital framework and measurement indicators that could be used to inform the development of indicators to assess this policy issue (see De 2007).

Conclusion: from digital divide to digital inclusion

Like Manuel Castells and Darin Barney, we do not advocate for the naturalisation of the network society because, increasingly, commercial interests, national government policy and global institutions regulate, impact and change network dynamics. Policies and regulations can and will continue to have both positive and negative repercussions for the citizens, social movements and organisations that operate through networks and are impacted by them. The key point is that the network society offers new opportunities for both inclusion and exclusion in social, economic, political and cultural domains. A prerequisite for inclusion is access, but the use and exploitation of networks also requires specific skills, literacies, information and knowledge. These need to be accompanied by structural policies and programs that enable and support inclusive networks and thus create an inclusive networked society. The application of **both** social inclusion and social capital policy frameworks offers the Australian government a valuable opportunity to extend our understanding of the digital divide away from a narrow focus on issues of access and towards a broader understanding of the way the internet and other ICTs can be used to increase and strengthen socially beneficial forms of online participation within the network society.

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1 The ABS found that in 2006–07, 69 per cent of Australians over the age of 15 years had used the internet from any site. The use figure for young people aged 8–15 years not included in this study is likely to be considerably higher. The figure of 75 per cent comes from Internet World Stats (2007).

2 It is important to note that the 2001 census and the 2006 census are not directly comparable, because in 2001, the census asked each member of the household if they had used computers or the internet in the home and in other locations the week before the census while the 2006 census asked households if they had the internet at home and what kind of access (broadband, dial-up, wireless and other). The ABS 2006 census report cited ensures a close comparable match with the 2001 Census internet question by assuming use at home by individuals equates to dwelling internet access. With technologies such as mobile Broadband not being in existence in 2001, this assumption is considered to be realistic. The same gaps that applied to households cited here also applied to individuals (ABS 2007b).

3 It should also be noted that the government did release its own evaluation report of NTN following some criticism that they had not done so (for example, see Shauder et al: 2005, p. 18). This evaluation can be found at <http://archive.dcita.gov.au/2006/06/networking_the_nation>.

4 This list includes key significant national government initiatives that have been explicitly focused on addressing the digital divide in Australia since NTN. Several other smaller and related initiatives may have been implemented over the years.

5 The Institute for Social Research at Swinburne University, Melbourne conducted an internet use survey in 2007, which is expected to provide some valuable insights into the way Australians are using the internet. This research project is part of the World Internet Project. See <www.worldinternetproject.net/>.

6 In recent years, the ABS has produced or collected a range of statistics that relate to social impacts of ICT use but none of these are comprehensive and they have not been sustained to ensure longitudinal analysis. For example, De (2007) notes that: the ABS labour force statistics measure employment of ICT skilled personnel by industry; the 2006 *Time Use Survey* provided estimates for the proportion of time Australians spent on ICT related activities, the *Household Expenditure Survey* (2003–04) collected information on expenditure on ICT goods and services and asks respondents to indicate if they had ordered goods or services using the Internet; the 2006 *Children's participation in Culture and Leisure Activities* survey provided information on how children use the Internet; the annual HUIT survey provides information on the proportion of population purchasing goods and services over the internet and the types of things they buy; and the General Social Survey (GSS) has collected information on teleworking, as well as on use of email or telephone to contact family and friends. De (2007) also noted the need for a clear framework for measuring social impacts of ICTs and recommended ways of achieving this.

7 In recognition of this, the ABS acknowledge a gap in their ability to provide statistical information about the social impacts of ICT and in this light they propose that the concepts of wellbeing and of social capital may both offer useful frameworks for measuring and assessing the social benefits of ICT and the ways in which these benefits are dispersed (see De 2007)

8 <http://www.oii.ox.ac.uk/microsites/oxis/>.

9 <http://www.children-go-online.net/>.

[10] <http://www.ofcom.org.uk/advice/media_literacy/>.

[11] <http://www.pewinternet.org/>.

[12]<http://www.digitalcenter.org/>.

13 The first Peter Saunders mentioned here is a Professor at the Social Policy Research Centre at the University of NSW (<http://www.sprc.unsw.edu.au>) while the second is Director of Social Policy Programmes at the policy think-tank, The Centre for Independent Studies (<http://www.cis.org.au>).