SOCIAL CAPITAL AND THE DIGITAL DIVIDE: implications for online health information

by

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACCHS	Adelaide Central Community Health Service
AGIMO	Australian Government Information Management Office
AIHW	Australian Institute of Health and Welfare
APEC	Asia-Pacific Economic Cooperation
BEV	Blacksburgh Electronic Village
BF	Benton Foundation
CALD	Culturally and Linguistically Diverse
CITU	Central Information Technology Unit
COTA	Council on the Ageing
DAIS	Department of Administrative and Information Services
DCITA	Department of Communications, Information Technology and the Arts
DHA	Department of Health and Ageing
DH	Department of Health
DHS	Department of Human Services

DPC	Department of Premier and Cabinet
DSS	Department of Social Security
HREOC	Human Rights and Equal Opportunity Commission
ICT	Information and Communications Technology
NESB	Non English Speaking Background
NOIE	National Office for the Information Economy
NTIA	National Telecommunications and Information Administration
OECD	Organization for Economic Cooperation and Development
SEU	Social Exclusion Unit
SIU	Social Inclusion Unit
UKCO	United Kingdom Cabinet Office
WSIS	World Summit on the Information Society

ABSTRACT

Access to online health information is not necessarily about better health but it is about citizenship and access to information that may promote social opportunity. This thesis argues that the concepts of social capital and the digital divide are linked and that they impact on policies for electronic government service delivery and provision of online health information to citizens. In contrast to the body of literature on the digital divide which focuses on material access to the Internet, this thesis focuses on subjective meanings about Internet use and access by questioning the use of information and communications technology (ICT) for health information. It analyses egalitarian approaches by government entities for universal access, and explores how the phenomenon of the Internet is claimed to be a potential conduit for social inclusion to reduce health inequalities. This is done by exploring how the link is made between accessing online health information and the development of social capital for individual benefit and population health and well-being. Identifying which social groups miss out on that information is important in the critique of e-government policy intent. Also important are the political environment and the cultural factors impacting on the intended and unintended policy outcomes.

The key research questions for this study are: (1a) Is social inclusion enhanced by the Australian Government and related South Australian Government policies for online health information? (1b) If so, how?; (2) What can be learned from the links between social capital and the digital divide that informs and challenges electronic government and health policies and the body of social knowledge?; and (3) Are Internet Users with access to online health information more likely to have higher social capital and, potentially, better health and well-being than Internet Non-Users? That is, how does the relationship between Internet use, social capital and health have an impact on social capital for Internet Users and Non-Users?

The method used was to survey individual participants and conduct focus groups with a selected sample of 68 adult South Australians, selected for aspects of potential ‘disadvantage’ relative to structural barriers to Internet usage as informed by the literature review. The focus was on perceptions and attitudes towards access to the Internet, government online services and health information. The data were analyzed using interpretive qualitative methodologies from the perspectives of: first, theories of social capital; second, the digital divide; and third, government

policies and official documents about electronic government service delivery and online health information.

The major findings of this thesis are: first, Internet Users, particularly those who use the Internet to access online health information, are likely to have higher social capital than Internet Non-Users because the former have more opportunities for wider social networking as well as organization and information interaction; second, the digital divide premise that 'have-nots' want to 'have' Internet access but are being denied the opportunity, is contradicted in that the reasons for not using the Internet were found to include personal choice due to lack of interest and relevance; third, not all people defined as socio-economically disadvantaged are Internet Non-Users, and Internet Users may also be people who are socio-economically disadvantaged; fourth, whereas the body of literature on the digital divide has typified the young, employed male as the most likely 'Internet User' there is no single profile of an 'Internet User' and the data were found to support other research findings on usage and barriers to the Internet; fifth, sources and quality of online health information and relevance to individuals are major determinants of access; and sixth and finally, there are policy implications from this research that may shape future policy development and inform the body of social knowledge about access and online health information.

This thesis contributes to knowledge about the digital divide, social capital and public health and builds upon the body of knowledge that links information policy to social policy. In doing so it contributes to the policy debates about electronic government service delivery and online health information.

DECLARATION

I declare that:

this thesis presents work carried out by myself and does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; to the best of my knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text; and all substantive contributions by others to the work presented, including jointly authored publications, are clearly acknowledged.

Signature

Iolanda Principe

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CHAPTER 1: INTRODUCTION

This thesis addresses the implications of Australian and South Australian Government policies for the provision of online health information. It does this by arguing that there is a link between the concepts of social capital and the digital divide that impact on these policies and their intended and unintended outcomes. In contrast to the body of literature on the digital divide which focuses on material access to the Internet, this thesis focuses on subjective meanings about Internet use and access by questioning the use of information and communications technology (ICT) for health information. It analyses egalitarian approaches by government entities for universal access and explores how the phenomenon of the Internet is claimed to be a potential conduit for social inclusion to reduce health inequalities. This is done by exploring how the link is made between accessing online health information and the development of social capital for individual benefit and population health and well-being. The aim of this study is to contribute to policy debates regarding government applications of ICT to service delivery, the creation of an information-enabled society and equitable public access to online health information resources, for example by identifying and exploring the barriers to access and the policy intent for universal access. Policies are instruments for risk management in contemporary society. The policies addressing social capital and social inclusion, bridging the digital divide and population health aim to create an information society, which is deemed to be socially and economically beneficial, and will lead to better health outcomes and reduced financial burden on the public health system. Further, this thesis builds upon the body of knowledge that links information policy to social policy, and explores whether Internet Users, particularly those who access online health information, have the potential for higher social capital than Non-Users.

Additionally, it examines the intent and outcomes of policy to provide universal access using the conceptual frameworks of social capital and the digital divide, and analyses people's attitudes and perceptions regarding access to the Internet and online health information. Government online health information services were selected as a particular area of electronic government service delivery due to the stated responsibility of government to service 'all' citizens (DPC, 1994; DAIS, 2002; DHS, 2002; DHA, 2003) and address the issues of social inclusion and equity of access to social services. These services also provided the context to address the policy intent for social inclusion and equity of access to social services. Access to online health information is not necessarily about better health but it is about citizenship and access to information which may

promote social opportunity. Identifying which social groups miss out on that information is important in the critique of e-government policy intent. Also important are the political environment and the cultural factors impacting on the intended and unintended policy outcomes.

This thesis integrates social capital theory with knowledge about social inequalities. Social capital is understood as the aggregate value of the networks and relationships of individuals and communities (Putnam, 1993; OECD, 2001a; ABS, 2003: see Chapter 3). The digital divide is operationally defined as the divide between people with access to new information and communications technology (ICT), specifically the Internet and the networked web of information services, and those who do not have such access (ABS, 2000; NOIE, 2001, 2003; AGIMO, 2005b: see Chapter 2). Inequities in access to information for public consumption have historically been based on structural differences such as language, education, race, class, gender, income, and for the (dis)abled and people living in rural communities (Loader, 1998). The same could be defined for inequities in access to online information. In contrast to the structural differences represented in research on the digital divide, this thesis explores the subjective aspects which impact on access to the Internet and to online health information and, potentially, on social inclusion or exclusion. Social exclusion is theorized as the core problem of the digital divide, and includes lack of access to information-based resources for citizens, as there is a link between information policy and social policy. The concepts of social capital and the digital divide are related in that they represent the tension between social cohesion and connectedness and on the other hand social fragmentation or isolation – the lack of connectedness.

The contemporary social policy theme of social inclusion is relevant to the concepts of social capital and the digital divide and is evident in the social liberal policies of British Labor and Australian State Labor Governments. For example, the Labor Party policies of the South Australian Government (2002) and the United Kingdom (Social Exclusion Unit, 1998; 2005) for social inclusion/exclusion aim to improve social connectedness, civic participation and community engagement in public service planning and decision-making and to improve government service delivery by 'joined-up' approaches. While the political agenda for social inclusion is a Labor Government policy initiative, in relation to electronic government, the Australian Liberal Government has even gone so far as to state that it will "never tolerate the emergence of an information underclass" (DCITA, 1997).

Differential access to the Internet is not caused by technological developments in ICT. ICT is somewhat incidental in the analysis of social diversity and inequalities that have helped to shape the digital divide. That is, social inequalities are a cause rather than an effect of the digital divide yet the digital divide is another manifestation of inequality and diversity with social implications. However, ICT is relevant to the social objectives of social capital which include the development of social connectedness in order to build resources that, among other anticipated social and economic benefits, may improve health and well-being. As the digital divide may simply represent another manifestation of social inequality – the divide between opportunity and lack of opportunity - government policy that only considers material access (e.g. purchase of personal computers and Internet access) and development of relevant computer skills for bridging the divide may prove ineffective for pre-defined 'at risk' groups. These 'at risk' groups may be predominantly low-income communities or groups with other characteristics, perceptions or attitudes. Subjective reasons may exist that may impact on individual access to the Internet generally and, specifically, to online government services and online health information.

Although ICT may be incidental to the digital divide and its relationship with social capital, i.e. it has not created the social inequalities that have led to the digital divide, it may have a role in building social capital and social connectedness and potentially reducing inequity. This may have a positive impact on the quality of life for individuals and communities, and has implications for policy regarding public information services, social inclusion and the rights and obligations of citizenship. My employment for over fifteen years as a Public Servant with experience in ICT, online government service delivery and human services and health, as well as my experience as a graduate and post-graduate student of social sciences and communication studies, have fuelled my interest in the research questions for this study.

The key research questions explored are:

(1a) Is social inclusion enhanced by the Australian Government and related South Australian Government policies for online health information?

(1b) If so, how?

(2) *What can be learned from the links between social capital and the digital divide that informs and challenges electronic government and health policies and the body of social knowledge?*

(3) *Are Internet Users with access to online health information more likely to have higher social capital and, potentially, better health and well-being than Internet Non-Users? That is, how does the relationship between Internet use, social capital and health have an impact on social capital for Internet Users and Non-Users?*

The sub-questions that contribute to the key research questions are indicated in Chapter 4 (Methodology). The two major sub-questions are:

(1) *How does the inability to access the Internet contribute to social exclusion, particularly in regard to knowledge about health?*

(2) *How do subjective meanings about Internet use and access (as opposed to material access) contribute to social policy and government policy outcomes regarding online health information?*

The thesis is divided into two main sections and has a total of eight chapters. The first section focuses on the literature review and the methodology and the second section focuses on the research results.

Chapter 2 (Electronic Government) outlines the context for online health information services provided or facilitated by government organizations. The chapter investigates the intent of enabling policies and legislation for electronic government as the background to public information services and online health information services. The context of this is the transformation of government and other domains in the information and knowledge age. Chapter 2 also explores the notion of 'universal access', an 'information-enabled society' and the aims and approaches of public health policy and online health information service delivery to citizens by national and state Departments of Health and Human Services. Chapter 2 introduces the concept of the digital divide and presents the body of literature that provides evidence of the digital divide (NTIA, 1995, 1998; BF, 1998, 1999; OECD 1998, 2001b; Lloyd & Hellwig, 2000;

ABS 2000; NOIE, 2001, 2003; AGIMO, 2005b); it also examines its major causes and effects, including its potential impact on the aims and functions of electronic government. The literature review of the digital divide directed the research methods for this study to the material barriers to access, such as income and levels of formal education. Other material barriers to access included aspects that pointed to categories of 'at risk' groups of potential 'disadvantage' regarding access to the Internet, electronic government services and online health information. These were people aged over 50, from culturally and linguistically diverse backgrounds, with a (dis)ability or living in a rural or remote location. Consequently, in the method and research design, these aspects of potential 'disadvantage' were considered in addition to: firstly, the general socio-economic inequality measures of income and levels of formal education; and secondly, gender.

Chapter 3 (Social Capital) explores the multi-dimensional and abstract concept of social capital and its applicability to social services including health. The chapter describes the complexities of the theoretical perspectives on social capital and examines their relevance to the digital divide through the contrasts of social cohesion, connectedness and access to resources. It raises the notions of 'trust' and 'risk' as fundamental to social capital producing networks based on reciprocity, which emerge as major themes in the data analysis for discussion in Chapter 7 (Trust and Risk). The chapter also investigates the intent of government policies for social inclusion/exclusion and electronic government that have relevance to social capital through social connectedness and cohesion with inherent network relationships of trust and reciprocity. The notions of 'community' and 'citizenship', and the inherent rights as well as obligations for active individual and group civic and social participation are also presented. The chapter investigates the potential of ICT as a conduit for social inclusion. Its potential to minimize social exclusion and build social capital is considered in the context of the digital divide and social inequalities.

Chapter 4 (Methodology) presents the key research questions and sub-questions and the rationale for the research design and methods chosen. The chapter outlines the process of literature review, data collection methods used and the approach to analysis. The literature review focused on the policies and official government documents regarding electronic government, online health information, the digital divide, social capital, social inclusion and exclusion and ICT, and relevant scholarly research. The literature review also informed the research questions, data collection for quantitative and qualitative data and used an ethnographic approach based on deductive and inductive analysis, reduction and interpretation. A South Australian sample was

used for a case study on access to government online health information. The recruitment process for the sample involved approaches to community groups and telephone contact by community representative organizations (e.g. Deaf SA, Council for the Ageing). A target sample of eighty (80) people resulted in 68 actual participants for the study. Each participant was required to complete a written survey and to participate in one of eight focus groups. The total sample, which was deliberately gender balanced and divided into Internet Users and Non-Users, is presented in a table stratified into major characteristics and attributes of the sample (Table 4.1). Both qualitative and quantitative methods of data collection were used. Data were collected in two stages. Firstly, the survey for individual information and, secondly, eight focus groups for guided, open discussion using a schedule of semi-structured questions. Quantitative data were collected using the survey with information including each participant's age, employment, levels of income and formal education and responses to questions about Internet use, mostly requiring a yes/no answer. This was used to build a profile of the participants and to find out if there were any demographic or other differences between Internet Users and Non-Users. Qualitative data were collected using focus groups to find out the perceptions and attitudes of participants, Internet Users and Non-Users, to access to the Internet and access to online health information. The data from the focus groups was organized around key themes shaped by the literature and evidence in the data together with emergent common themes, patterns and contradictions within and across groups. Interpretation of the data involved making decisions about relevance of the emergent themes and drawing conclusions relevant to the research questions.

Chapter 5 (Profile of Users and Non-Users of the Internet for Health Information) is the first of the results chapters. The chapter stratifies the total sample by gender, age, employment status, income, levels of formal education, cultural and linguistically diverse background and (dis)ability, within the two major categories of Internet Users and Non-Users. This approach was informed by the literature review regarding aspects of potential 'disadvantage' relevant to access to the Internet. The chapter explores the participants' reasons for Internet Use or Non-Use, including what they use it for and why they do not use it. A distinction is drawn from results between the material access issues and the subjective aspects of access to the Internet and public information resources. The reason for this is to understand the complexity of access found to be a gap in the literature which remains relatively structurally focused. The chapter also explores the perceptions and attitudes of Internet Users and Non-Users regarding access to the Internet and to online health information services and explores their general health information-seeking

behaviour. The findings from the profile of Internet Users and Non-Users of online health information services are discussed principally in relation to the literature on the digital divide although these findings contribute also to the body of social knowledge and understanding of the policy outcomes of electronic government and online health information services.

Chapter 6 (Access, Social Inclusion and Citizenship) examines the subjective issues of access to the Internet and online health information services in the context of expectations of equity and social inclusion. A discussion on the perceived value of health information generally and online health information specifically is included. The chapter examines the relationship of access to perceptions and experiences of citizenship, empowerment and social connectedness and the implications of access on health and well-being and other social benefits. Of importance here are the context of policy directions for social inclusion and universal access, citizenship and the potential role of ICT as a conduit for social inclusion and as a support for social connectedness.

Chapter 7 (Trust and Risk) explores the notions of 'trust' and 'risk' as emergent themes from the analysis of subjective responses in relation to access to, and interactions with, government, health information service providers and social networks. 'Trust' and 'risk' were found to be relevant also to attitudes towards technology and perceptions of online health information. The literature review points to 'trust' as a pertinent indicator of social capital but empirical research so far has not adequately addressed the complexity of the concept of trust which appears to lack an integrative theory (Volkens, 2002). The chapter explores perceptions and attitudes about individual choice and control associated with access and non-access and explores participation in social networks (ICT-mediated or non-ICT-mediated social networks). The chapter also discusses different types of 'trust' in the context of social capital and 'risk' in the context of health policy and practice ((Toffler, 1980; Giddens, 1990; Beck et al., 1997; Lupton, 1999). 'Risk' is relevant to subjective analysis of access to health information, regardless of the means of access, and is relevant to contemporary life and health. There are multiple intended policy outcomes from the provision of online health information services that involve risk, for example, the reduction of health risk, achievement of budgetary efficiencies and improvements in service quality and access. There are also multiple unintended policy outcomes that involve risk, such as risks associated with technology, including patient/client information privacy and security and resistance to technological developments that are perceived to 'de-humanise' interactions.

Chapter 8 (Conclusion) presents the overall findings and considers the findings in the context of the research questions for this study. It presents the implications for government online health information policy and summarizes the findings that contribute to policy and theoretical debates about electronic government service delivery and online health information. The concluding chapter also summarizes how this thesis contributes to knowledge about the digital divide, social capital and public health and raises questions for further research in these policy and theoretical areas.

CHAPTER 2: ELECTRONIC GOVERNMENT

2.1 Introduction

This chapter explores the promise and delivery of electronic government, specifically how the contemporary public service uses ICT to potentially improve citizens' health and wellbeing, as well as improving the efficiency and effectiveness of institutional government business processes within and across government organizations. The aims of electronic government extend to electronic democracy (or 'e-democracy') for online participation in civic society and interaction with government. The application of information technology in the public sector has the potential to transform government and society (Fountain, 2001). Relevant research and evaluation, however, has shown that although some administrative efficiencies may have been achieved, transformation has not occurred on all levels quite to the extent promised by the e-government approaches in Australia, the United Kingdom and the United States, and as outlined in policies and official documents discussed in this chapter. This is likely to be due to complex human and organizational factors (Garson, 1995; CITU, 2000; Levine, 2002; Chadwick & May, 2003; AGIMO, 2005a).

An exploration of electronic government is necessary as part of the framework for analysis of the concepts of social capital and the digital divide because the common strategic context for electronic government's public interface includes the use of ICT for service delivery, particularly the Internet and web portals (or gateways). It includes the broad aims for universal equity of access, community participation and development of social capital. A major feature of government online service delivery is information about health and health services accessed by the public via the Internet, which is the focus of this thesis. As well as information services, electronic government service delivery includes transaction-based services such as payments of motor vehicle licences and electricity and water accounts. The strategic context for electronic government for institutional or organizational transformation includes aims for cross-organization integration and collaboration, efficiency and effectiveness, through cost savings and increased responsiveness and improved communication that complement citizen-based, streamlined service delivery. The implementation of these aims involves complementary federal and state policy and legislation, new governance arrangements, changes to government structures, re-engineering of business processes and improved decision-making.

This chapter will show that, generally, individuals and communities disadvantaged due to lack of economic resources to purchase personal microcomputers and Internet access are also disadvantaged because they lack computer skills and confidence in using ICT. While there are benefits resulting from the use of ICT in the delivery of government services, including access to public health information, there is also an amplification of inequality producing a new societal divide - the 'digital divide' (NTIA, 1995, 1998; Loader, 1998; BF, 1998, 1999; Lloyd & Hellwig, 2000; Norris, 2001). The digital divide is a metaphor for social exclusion relevant to ICT access and use or, specifically, exclusion from infrastructure and services to which people have rights as citizens in a democratic, information-enabled society. An inherent assumption which may be drawn from this perspective of the digital divide is that the people without access to the Internet desire it and will benefit from access. The notion of 'exclusivity' may assume the desire of those excluded to be included and benefit from inclusion. Social inclusion or exclusion is a contemporary social policy theme demonstrated by the British Labor Government and the Australian Labor Party, and at a state level, the South Australian Labor Government (SEU, 2000; DPC, 2002). Social exclusion or inclusion policy and its relevance to social capital and the digital divide will be discussed in Chapters 3 and 6.

This chapter will discuss Australian Federal Government 'electronic government' policies and initiatives outlined in official documents as well as related South Australian policies and strategic directions spanning the last decade, along with local evidence and knowledge of the digital divide. This chapter will also discuss the consequences of the digital divide for social exclusion and the relationship between ICT, social capital and health.

2.2 Transformation of Service Delivery

Global trends in the transformation of information and service delivery to electronic media are revolutionising the way government interacts with and serves people (OECD, 1998, 2001b; Norris, 2001; Garson, 1995). Over the past two decades in particular, via developments in telecommunications and computer networks, the world has seen dramatic changes in the way people communicate with each other in the information age as a result of advances in information and communications technology. These advances have had a significant impact on communications and service delivery in many different fields, including government, education and business.

Two major characteristics of an information age are an information-enabled, computer-literate society where people use information technology for communication and knowledge, and an information economy based on technology and knowledge-based businesses and services. Implicit in the concept of an information-enabled society is universal access to information and services and willingness and ability for citizens to participate. Since the 1980s, government organizations in major Western countries have been using electronic information and communications technologies for transactions with the public, information retrieval and communications with the broad aim of improving the delivery of government information and services (OECD, 1998, 2001b).

Electronic government information and services are digitally prepared information and services provided by government for access by the public via computer, usually as an alternative means of access to the existing methods of telephone and face-to-face services. Increasingly, some information and services may only be available electronically or 'online' and can no longer be accessed via other means. The infrastructure that enables online access comprises of telecommunications and computer networks managed by government organizations and/or by private service providers. Information provided includes information about government organizations, their particular services and other information sought by the general public, including information about health, public housing and community services. Services provided by government include information referral services, payment of water and electricity accounts, licence registrations and payments and other direct or indirect services available from government organizations within the three tiers of Australian government: local, state and federal.

In the early 1990s, Western government electronic government strategies included the development of public information networks comprising also of delivery via multimedia 'kiosks' (Sewards & Patrick, 1996). These kiosks did not use the Internet and were designed for public places to provide services to people without a computer. They were based on information storage and retrieval systems, pre-packaged for information interactivity and simple transactions such as payment of accounts and forms processing, for example the request for a birth certificate. In Australia, while there is evidence of 'touch-screen'-style multimedia computer kiosks mostly in tourism and retail settings, with the proliferation of the Internet and web-based technologies, kiosks are not used widely as a public information utility.

2.2.1 Australian E-Government

In 1997 the Australian (Coalition) Government announced that it would build Australia's capacity to contribute and to benefit from the global information age (DCITA, 1997). The National Office for the Information Economy was established in 1997, followed by local counterparts in each state and territory. Equity of access to information and services by citizens has been a major focus of this organization, along with economic development, technological

innovations and more efficient and collaborative governance. The imperatives for online service delivery, therefore, have been political, economic, technological and social.

Government service delivery via the Internet presents both significant opportunities and challenges in delivering Australian Government online services. The Internet allows government organizations to publish information, interact with clients in the exchange of information, and transact business electronically. The Australian National Audit Office (1999-2000) announced that the Internet has the potential to:

> improve public access to a wide range of government services, especially by people who live in regional and remote areas; provide access to certain government services 24 hours a day, seven days a week; reduce the cost of delivery of some government services; and improve the quality of certain government services.

In the context of a national policy to have all major "appropriate" government services accessible online by 2001 (NOIE, 1999), Australian states and territory governments have accelerated efforts to deliver online services. The federal government strategies for e-government appear to have been largely successful, as the use of online government services has grown from 20% of adult Internet users in 2000 to 36% in 2002, representing a growth of 133% on 2000 figures.

At the launch of the Australian Government's electronic government strategy, titled *Better Services, Better Government* (NOIE, 2002), Senator Richard Alston claimed that:

> E-government is the term that describes the use of available and emerging technologies to create seamless, responsive and citizen-focused government for the benefit of all Australians. The quality and efficiency of government services and information will improve to create broader and faster access to integrated, flexible and more customised services. In this way, e-government contributes to Australia's future national prosperity.

An assumption is implicit in this statement that access is equitable and that 'all' Australians have the capacity to participate in electronic government.

An analysis of relevant policy documentation, including an information policy framework from the Human Rights and Equal Opportunity Commission (HREOC, 2000), has resulted in warnings that online service delivery should consider the needs of diverse communities in the design, development, implementation and evaluation of electronic service delivery systems (Garson, 1995). Also evident is the expectation of improved social opportunities: that equity of access to

information and services by all people would be improved by online service delivery. The document *Better Services, Better Government* (NOIE, 2002) claims that online service delivery enables government to be more responsive to requests by the public for a more coordinated approach by government organizations to provide services. For example, the establishment and use of a 'one-stop-shop', being a single point of access to all government services, is considered to be achievable through an information portal where the bureaucratic workings of government, potentially, become transparent to citizens.

Electronic government or 'e-government' policies formulated by the Australian Government put ICT in a position to effectively deliver services, including online health information, to the public (NOIE, 1999, 2002). That is, online services are presented as a solution to many of the problems that citizens experience in their interactions with government – as a panacea to the existing problems of access to resources, particularly information and community services. Online health information has been generally embraced by health promotion and public health practitioners as a means of effecting improved population health outcomes through mass communication and education on preventive health care, especially if made available to those populations that are most 'at risk' of disease and death from preventable illness (Starfield, 1994; Hawe & Shiell, 2000; Healy, 2001; Detels et al., 2002; Wanless, 2004). Government online health information services will be discussed further in section 2.4.3. In concert with the Australian Government, British and American electronic government policies enthusiastically announce that ICT has brought about revolutionary changes by enabling citizens to access information, communicate and share knowledge (OECD, 2001a, 2003; CITU, 2000; Lloyd & Hellwig, 2000; DCITA, 2004; SEU, 2005).

Even though the existence of the digital divide has been acknowledged by research studies and in official policy documentation, access to ICT - if able to be universally adopted - is claimed to be a potential conduit for social inclusion (NOIE, 1999, 2002; DCITA, 2004; PC, 2003b; DCITA, 2005a; SEU, 2005; Meredyth et al., 2006). Many government and community sector-led initiatives exist for local community development projects using ICT. For example, the Welink Queensland Rural Women's Network Information Network (ABS, 2002); The Parks Kiosk and Nunga Website in South Australia (ACCHS, 2003) and Atherton Gardens 'Wired High Rise' project in Victoria (Meredyth et al., 2006). In addition to these there is growing evidence of transformational change to lifestyle and communication for some individuals and communities in

particular contexts. For example, it is argued that ICT-enabled communications and transactions can assist people with physical disabilities to participate more actively in society and to communicate with support group networks as well as service providers, thereby transcending aspects of their disability (Seymour, 2001). However, there is a contrasting argument in the literature on electronic government and the digital divide, suggesting that socially and economically disadvantaged people are not able to access information via ICT (NTIA 1995, 1998; BF, 1998, 1999; OECD, 2001b; Lloyd & Hellwig, 2000; Norris, 2002). They are unable to sustain temporarily or inadequately supported community initiatives and are therefore denied the benefits associated with such information and communications.

In Australia, the Federal Government has reported that there is a strong interest by the public in accessing government websites and online services, with access being ahead of other information economy leaders such as the United States, Hong Kong and Sweden (DCITA, 2005a). Access to government websites by home Internet users has only been measured in Australia since 2000, following government initiatives to make services available online. In January 2005, Australia had the highest percentage (39.2%) of home Internet users accessing government websites (DCITA, 2005a) compared with other OECD countries.

2.2.1.1 Enabling Policy and Legislation

Through legislation and policy, Australian governments are mandated to provide specific public services to its citizens through Federal and state/territory-based legislation. Issues of access and equity in the provision of those services are partly addressed by national legislation in the Equal Opportunity Act (1984), the Disability Discrimination Act (1992) and the Freedom of Information Act (1992) (www.austlii.edu.au/au/legis/cth), and state/territory legislation based on these. These Acts describe principles and policies that govern interactions with the general public. There are no formal information and communications policies or legislation relating specifically to equity and access in the application of ICT. However, concerns were identified in relation to ICT-enabled communication and service delivery that required specific legislation. For example, the national Privacy Act (1988) and the Electronic Transactions Act (1999) (www.austlii.edu.au/au/legis/cth) were established by the Federal Government in order to address new problems that had emerged from the growing use of information technology, i.e. privacy of computer-held personal information and computer business transactions.

The South Australian Government followed by proclaiming a local Electronic Transactions Act (2000) (www.parliament.sa.gov.au/dbsearch/acts.list.htm). This Act was established in order to expand rules governing government transactions and legal obligations to include all forms of electronic information and transactions. For example, documents contained in electronic mail files, computer disks or other digital media, such as video tape, would be admissible as evidence in court as long as the author/originator could be validated. The Privacy Act (2000) addresses the potential risks from technological capacity for increased inappropriate sharing of private and confidential information, e.g. personal details and medical treatment information contained in electronic health patient records, and instituted new codes of practice for consent to collect and share information required to protect the patient.

2.2.2.2 Service to Citizens

In Australia, access to health care is reflected in national government policy as a basic human right and a necessary prerequisite of an individual's ability to participate as a citizen (DHA, 2003). Access to health care services, which includes the provision of health information, is therefore a central attribute of social and political citizenship. According to Marshall (1965, p. 115), no "modern government can disclaim a general responsibility for the health of its people, nor would it wish to do so".

Health policies and funding arrangements are contained in the Australian Health Care Agreement (DHA, 2003), which is an agreement between the Australian Government and state and territory jurisdictions and renewed every five years. It is premised on the notion of universal access to health care with no fee for service required for people requiring public hospital services and with either free or subsidised health care outside of hospital settings with medical practitioners through a government-based insurance system, Medicare. Health information on preventative health, health diseases and conditions and on local health services is available to the public through hospitals, other health service providers in the public system and through multiple public information distribution channels, including the Internet.

Government administration and service delivery is formed as the 'Public Service' or 'Public Sector' as a collective of largely taxation-funded, not-for-profit organizations implementing public policy and serving citizens. To be a member of the 'public' is to be a citizen in a

democratic society. Citizenship can simply mean belonging to a place or country and being afforded certain rights but can also extend to the responsibilities and obligations for active community/civil participation. That is, participation in political life as part of the democratic process. This notion of citizenship has implications for electronic government policy in terms of individuals and communities being served as well as serving through online participation. Similarly, this notion of citizenship has implications for public health policy for health promotion and online health information in the health promotion push for individual and collective active participation and engagement – and conformity - to good health, self-care and risk management (Lupton, 1995; Petersen & Lupton, 1996). This challenges the implicit universality of citizenship and may be seen to discriminate against and exclude non-conformists, i.e. non-participants, despite egalitarian government objectives. Using this perspective, the digital divide can be seen as one that separates citizens into those who participate online, thereby engaging in emergent dominant forms of democracy and government service delivery, and those who do not.

According to this perspective the Internet can both reinforce existing power dynamics and citizen participation and potentially expand citizenship through broader organisational and social networking – the notion of a 'global citizen' where products and services, including information and knowledge, are available from multiple and far-flung sources outside the boundaries of one's political jurisdiction or country (van Steenbergen, 1994). Citizenship and the notion of community are explored further in Chapter 3 and Chapter 6. Essentially, government services that claim to have universal access, for example, health and community/social services, target service delivery to particular communities and to the general public. The general public are considered to be consumers of services as well as citizens that increasingly have a say in policy, planning and government decision-making, with equity of access being a key component of public policy.

Many Australian Government organizations have customer services charters that outline their objectives for access and equity in service provision. For example, the Department of Industry, Science and Tourism's Customer Service Charter, July 1998, claims to make public information easily accessible and to "improve access for those with particular needs". The inherent assumption is that equitable access to information is a public good.

In South Australia a Citizen's Charter was first published in 1994; it outlines public sector customer service responsibilities and governs the provision of information and services to the public. It covers the customer service ethos by which the public sector must operate. That includes standards, 'open-ness' (i.e. transparency - no secrecy), information (full, accurate, readily available and in plain language about what services and where, how and when they will be provided), choice, non-discrimination, accessibility, redress mechanism for bad service delivery, and value for money:

> As we strive for South Australia to be recognised as a good place to live, work and invest, we need to look at ways of working in partnership with the community. The Citizen's Charter is one way of demonstrating that we take customer service seriously (OGM, 1994).

Access to information is essential in order to exercise the rights and responsibilities of citizenship and to participate in the democratic process (Steele, 1998, p.163). Attention to equity of access issues is essentially a focus on making a service realistically accessible by all people, including people that are most disadvantaged due to socio-economic circumstances, and that are most likely to benefit from appropriate access to government-provided services.

2.2.2 South Australian Online Government Services

The key objectives for online information and service delivery and electronic government that have been promoted via South Australian policy documentation (DAIS, 1994, 2002) were to: firstly, build the capacity to meet what were considered to be growing demands from citizens for better access to public services at lower costs; and secondly, create an information-enabled society with the ability to participate in the global information economy. This was to be achieved through the development of ICT-related industries as well as widespread telecommunications infrastructure and increased use of information and knowledge-sharing technologies.

Market research was conducted using a sample of the South Australian community to ascertain what the requirements were for the way in which information and services should be delivered (DAIS, 1998). The results supported the recommendation to develop a single web access point for all government services. Public access Internet kiosks were considered potentially to be useful but the results indicated that people preferred direct telephone or face-to-face assistance for general dealings with government organisations. This resulted in the establishment in 2002 of a government services Internet portal – a gateway to South Australian Government services and

information, Service SA (www.service.sa.gov.au), designed to assist citizens in navigating their way around available government information and services using the Internet. Internet web-based 'portals' are based on technology infrastructure that is built to link and integrate services and are a prominent feature of electronic government, potentially providing a 'one-stop-shop' for all citizens' needs, for example information about health, education and transport services. Typically, they are designed to allow users to find what they are looking for where the citizen does not need to know about the organizational complexity behind the services. Government 'intranet portals' are also a feature of e-government that enable secure, common or single point for government employees to access and share information and collaborate electronically across all departments (DAIS, 1994).

Networked communication technologies have enabled the utilisation of a number of technology platforms to improve government internal operations, and make external operations – services to the public - available electronically. Nationally and in South Australia, these have included proprietary online services, bulletin board systems, public information and community networks (DSS, 1995; ACCHS, 2003), electronic mail and the Internet, all accessible through networked computers and personal computers (Sewards & Patrick, 1996).

2.2.3 Electronic Networks

The role of technology in the democratic processes of government is very topical. A view was promoted in the early literature on electronic government and democracy enabled by ICT (McLuhan, 1964; Dutton, 1987, 1991; Negroponte, 1995; Rheingold, 1993) that electronic networks such as the Internet and government-operated electronic "villages", or virtual and physical community meeting places, united people. They claimed to bring communities closer together for social support, promoting improved interaction with government (Schuler, 1996).
Since the vision of wired nations and online public information utilities were conceived and promoted, particularly by Marshall McLuhan in the1960s (McLuhan, 1964), they have been denounced as utopian pipe dreams (Dutton, 1993). Although a diverse array of electronic information services has emerged to support public access to information and services, the issue of equity of access, or universal access, remains an unsolved problem while social inequality exists. Due to the digital divide, a 'networked nation' (Dutton et al., 1987; Abramson et al., 1987)

appears to still be a pipe dream despite the proliferation of relevant telecommunications infrastructure and increasing adoption of ICT.

2.3 Universal Access

One of the common themes in the literature about the Internet's proliferation (Dutton, 1987; Negroponte, 1995) is that of 'universal' access. The Internet, also referred to then as the "information highway", held a promise of global connectivity and an infrastructure for public information more vast and widespread than could have been imagined a decade previously. It is increasingly being used by Australian governments as the preferred medium to provide information to the public and also for payment transactions.

A message that has been emphasised by the Australian Labor and Liberal Governments since the 1990s is that for the continued development of an equitable society it is necessary to ensure that all citizens can access and make productive use of information and communication services (DCITA, 1997). Similar sentiments have been expressed by the governments of the United Kingdom, United States of America and some parts of Europe in heralding the information age. The Australian Liberal Government has gone so far as to state that it will "never tolerate the emergence of an information underclass" (DCITA, 1997). At the time it proposed public access information kiosks as a means of making information and services available to all people, which turned out not to be a successful strategy, either due to the Internet and/or due to prohibitive costs of multimedia technology and other necessary resources for effectiveness. While public access appears to be an important strategy in the quest for universal access and the creation of an information-enabled society, access is increasingly being understood to be a more complex issue than previously defined and researched (DCITA, 2005a).

Inequities in access to information for public consumption have historically been based on differences in language, formal education, race, class, gender, income, and for the disabled and people living in rural communities (Loader, 1998). Essentially, any electronic information system that has been developed or is being developed by institutions or authorities for a broad population or even for a specific target group faces significant challenges regarding equity of access within the defined group. This is due to population diversity and the variety of individual needs and preferences (HREOC, 2000). A major challenge for information service providers is

the personalisation and customisation of services instead of taking a broad compatibility approach that expects to meet generic needs (DCITA, 2005a). That is, an information system using one particular delivery mechanism will not necessarily be adaptable or appropriate to suit all people and all needs. Social dimensions and demographics in a diverse population such as South Australia's are vast and varied, and require a multi-dimensional approach to the delivery of public information in terms of method of delivery and relevance of content.

These challenges, arising from the complexity of access beyond objective, material access, threaten the potential effectiveness of the system if the access concerns and needs of potential users are not known and not addressed adequately by service providers. A fear that an information underclass would result from the digital divide is expressed in policy documentation and research literature (NTIA, 1995, 1998; BF, 1998, 1999; DCITA, 1997, NOIE, 1999; Norris, 1999, 2001; Lloyd & Hellwig, 2000) with reference to 'information poverty' and an alleged chasm between the 'information rich' and 'information poor' (Mitchell, 1995). The information-enabled society, therefore, can be seen as a two-tiered society, the result of technology shaping human culture and communication, and the inadequacy of social systems to manage these changes in an anticipatory and effective manner (Norris, 1999; Garson, 1995).

The greatest threat, or risk, that the literature has highlighted about the Internet and public information access is that the information and communications infrastructure will develop in ways that widen existing social divisions, causing social insecurity and disruption (NTIA, 1995, 1998; BF, 1998; 1999; Norris, 1999, 2001; Lloyd & Hellwig, 2000; Garson, 1995). Although these concerns have been raised, evidence and social impacts have not been comprehensively or conclusively examined. Barriers to access have been identified that have contributed to the digital divide and the concern about social groups missing out on information and services proliferates as society's dependence on ICT grows, particularly with the threat of channels of some public information being restricted to online service provision (NTIA 1995, 1998; BF, 1998, 1999; Lloyd & Hellwig, 2000). The claims that ICT could potentially improve access and quality of life for people, as discussed, have appeared to be more aspirational rather than based on evidence over longer than the last decade, but the evidence of benefit to people has grown in more recent years. The aspirational claims are found in the literature heralding wired nations to be achieved through interactive broadband cable, interactive television and public information utilities (Dutton et al., 1987; Abramson et al., 1988) – which failed to become reality due to the

digital divide. They are found also in official government policy documentation charting aims and strategies for networked rural communities (DCITA, 1997), and for the information economy and electronic government (OECD, 1998, 2001b; NOIE, 1999; CITU, 2000; DCITA, 1997, 2004).

The evidence base is growing, however, in support of ICT social and economic benefits being achieved, including ICT enabling social inclusion (DCITA, 2005b; Phipps, 2000; SEU, 2006). A research study by the United Kingdom's Social Exclusion Unit (2006) found that, overall, socially excluded people positively engage with certain types of ICT. It found that ICT is used by a very wide range of people in society, including those groups which are typically regarded as digitally excluded (e.g. according to race, gender, [dis]ability, ethnicity and class). As information technologies encourage people to become increasingly well-informed and self-reliant, others who lack access to information resources will find themselves at a disadvantage (Mitchell, 1995). It is the aim of this thesis to contribute to policy debates regarding access to information resources by identifying barriers to access and the implications for social and government policies.

Upon analysis of government policy on health care information, it is evident that a key component of access, meaning universal access, is inclusivity: that is, non-discriminatory provision of information (AHCA, 2000) as opposed to exclusivity in the provision of information or access. Universal access, taken at its broadest meaning, therefore, might also be considered a utopian dream, the realization of which is spoiled by the challenges and threats it presents. Individuals and communities may define access in different ways and are likely to have specific requirements and expectations for the delivery of information and services. For this reason, this thesis will explore people's attitudes towards access and lack of access to online health information, and identify who is included or excluded in access and use such services.

2.3.1 Information-Enabled Society

An information-enabled society may entail an environment where connections between people can be enhanced, isolation can be reduced, and supportive relationships can be established (OECD, 2001b). These potential 'enablers' aim to bring about improvements in social support

that are deemed to have a positive impact on health and empowering individuals and the community (Lomas, 1998; Baum, 2000; Veenstra, 2001; Turner, 2003).

An information-enabled society is expected also to be a connected or networked society with ICT potentially enabling communications within and across social, business and government networks as well as access to information resources and services. The National Office for the Information Economy (NOIE, 2001) acknowledged in its report titled *Government Online* that home Internet access was becoming an essential tool in the lives of many Australians in order to undertake an increasingly diverse range of online activities. It found that at that time Australia ranked second in advanced economies, at 64%, for the number of households that were estimated as owning or leasing a computer, with South Korea ranked first, with 70%. In 2005, this has increased to 74%. Fifty-two per cent of Australian households were connected to the Internet, placing Australia equal seventh with Norway. It considered the Internet to be an important tool for employment and education and gaining information and participating in society. It described access to new technology in the home setting as 'vital' for the social and educational participation of 'all' Australians. The research also found that while the numbers of Australians going online continued to increase, presumably due to decreasing costs of access and general trend for uptake of ICT, a significant number of Australians remained unconnected to the Internet. The two major reasons were found to be lack of interest and cost (NOIE, 2001). While cost was a problem that the Government worked on, the lack of interest was attributed largely to people being unaware of the breadth of information and range of services available online, and the assumed benefits for individuals, families and groups.

In 2005, the Australian Government Information Management Office (formerly the National Office for the Information Economy) reported that:

> …the Internet is now an established feature of life in industry, households, offices and schools; Online participation continues to expand across age and gender groups, albeit at a slower pace than in previous years, reflecting a pattern of consolidation experienced by other global information economy leaders such as the US, Canada and Sweden. This is true also for business online participation, where Australia performs well in terms of Internet access and is ranked among the most connected and active countries in the world (The Current State of Play, AGIMO, 2005b, p.4).

The percentage of people in Australia aged 14 years and over using the Internet on a monthly basis increased from 54% in September 2001 to 67% in April 2005. The largest proportion of

Internet users accessed it from their own homes (87%), followed by workplace (37%), school or other educational institution, someone else's house (16%) and from a variety of public points of access (29%) including library, Internet café and other (AGIMO, 2005b). While the research found that there was continued growth in use across age and gender groups, it found that younger Australians (86% 14-17 years) used the Internet more than older Australians (40% of persons 55 years or over). In 2005 the proportion of persons using the Internet in metropolitan areas compared with other areas is similar to 2001, i.e. 72% in metropolitan areas and 28% in other areas (68% of the Australian population lives in metropolitan areas) - the significant aspect being that the proportion in both has increased similarly.

Overall, household use of personal computers and the Internet continues to increase in Australia although the rate of growth has slowed down over the last five years (AGIMO, 2005b). Regarding access to government websites, 39% of home users used the Internet to access government websites, an increase from 27% reported in 2002 (AGIMO, 2005b).

2.4 Knowledge and Information Technology

The impact of developments in information technology on Western societies and their economies has been researched by the Organization for Economic Cooperation and Development in recent years (OECD, 2001b, 2003). In analysing the transformations in communication, education, leisure/entertainment, government and business, the OECD has found that some social groups are being left behind by the changes brought about through the application and use of ICT (NOIE, 1999; OECD, 2001a; 2003).

The literature on the information age and these transformations claims that a new economy has emerged (NOIE, 1999; OECD, 2001b; WSIS, 2003). This new economy is referred to by many different names that focus on different aspects of the concept or specific industries. For example, the 'digital economy' and 'information economy' often refer to information technology industries that have emerged from new products and services which have become available as well as employment and training in the production and application of ICT (OECD, 2001b). It comprises new technology industries that have emerged in addition to and as a result of the different ways of conducting business in the era of globalisation with wider and more accessible markets, hence the use of the term 'economy' for the emergence of new industries and markets (NOIE, 1999, 2002, 2004; OECD, 2001b). The 'knowledge economy' often refers to the currency of

knowledge as a commodity or product resulting from ICT-enabled knowledge and information creation, sharing and marketing (APEC, 2000). The transformation in the way government and business operate in the information economy could be described as being concerned with knowledge as the major 'product' and their main objectives are to collect, manage and convey information in their core areas of responsibility. Fountain (2001) discussed the difference between social capital and information capital, considered an important distinction for understanding how to build information capacity. Information capital is developed through social capital where actors in a collaborative network learn about new technologies opportunities outcomes and challenges quickly because of the density of interaction with the network and where learning is enhanced across horizontal networks as opposed to siloed organisations (Fountain, 2001, p.77).

A large share of the world's economy is now involved in managing, processing, and distributing information. These industries include telecommunications, banking, insurance, advertising, law, medicine, government and education; and occupations such as managers, lawyers, bankers, sales representatives, accountants, and teachers (OECD, 2001b). The increased importance of knowledge in the economy means that the net stock of intangible capital (i.e. education and research) has grown faster than tangible capital (i.e. buildings, transportation, roads, and machinery) and is therefore potentially a more important asset for the economy:

> Access to online technologies is a necessary requirement for ensuring equity in access to the information economy, to enable governments to achieve electronic service delivery objectives and allow Australians to capitalise on the opportunities for economic growth offered by the information economy (NOIE, 2001).

The vision of the information economy as indicated in official Australian government strategic policy documentation is a connection between government, business and society. All three 'arms' can participate with confidence, are innovative and can collaborate as required to maximise the economic and social benefits (NOIE, 2001, 2003; AGIMO, 2005b; DCITA, 2004).

The vision for the information economy, online service delivery and citizen connectivity appears largely to be aspirational, i.e. hoping for social and economic benefits from ICT infrastructure and industry development, with a focus on knowledge and information as resources and some evidence that the gap (digital divide) is closing (NTIA, 2000; NOIE, 2001, 2003; AGIMO, 2005b; DAIS, 1994, 2002; DCITA, 2004, 2005a, 2005b). It may be concluded that Federal and

State policy directives implore that, for the benefit of the Australian and South Australian economy, an information-enabled society must be cultivated.

Knowledge is a complex concept not easily limited or packaged as an economic commodity or the intangible aspects easily directed or managed in organisational or expert domains as systems of knowledge (Leonard, 1998). Knowledge, specifically expert knowledge inclusive of health information, operates within diverse power structures where the interests of someone or some organization are potentially served but, in the context of social constructionism, cannot simply be reduced to dominant expert knowledge shaping the lives of passive subjects (Foucault, 1991). The sociology of knowledge and social constructionism, where the knowledge subject is a participant in the construction of reality, is relevant to the analysis of access and non-access to online health information in terms of relationship of individuals and groups to the information provider (source) and to the information itself. Aspects of these relationships will be explored further in Chapters 5, 6 and 7.

2.4.1 South Australia and the Information Economy

In South Australia the information economy aims are to develop a knowledge-based workforce by investing in education, software, research and development and information and communications technologies (exceeding 10% of GDP). Another aim is to transform government operations and services and to minimize social exclusion by achieving a critical mass of users of ICT where people are not excluded from participation (DAIS, 2002):

> Since the Internet is such an important tool for participation in the Information Economy, reliable, equitable access for all South Australians becomes an essential ingredient in enabling a connected community (DAIS, 2002).

In 2002, the South Australian Liberal Government launched its strategic plan for how government, business and South Australian citizens would participate in and benefit from the information economy: *Information Economy 2002: Delivering the Future* (DAIS, 2002). The particular Information Economy plan did not progress due to the Labor Party being elected to government in 2003. Since then an information-enabled society and social capital issues have been picked up by the social inclusion agenda, with less emphasis on the ‘information economy’ and industry per se.

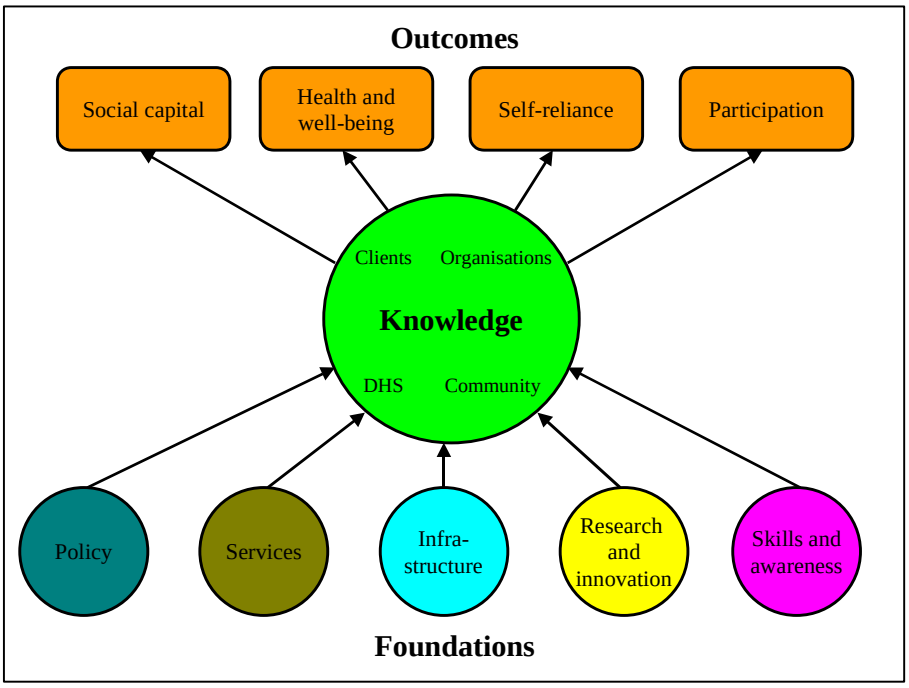
2.4.2 Human Services in the South Australian Information Economy

Between 1999 and 2004, the responsibility for state-funded health services, together with public housing and community services, fell within the South Australian Government portfolio of human services, under the administration of the Department of Human Services (DHS). This Department was responsible for health, housing and community services. In my employment with DHS (now the South Australian Department of Health), I co-authored a publication: *Human Services in the South Australian Information Economy* released in December 2002. This government policy publication was prepared in response to the Government's Information Economy 2002 strategy and to accompany the Department's electronic service delivery strategy: *Electronic Service Delivery, 2001-2002* (DHS, 2001). The rationale for this strategic policy response was to demonstrate the application of ICT in health and human service delivery and service management and also to explain how social services delivery is different to payment/transaction based services, i.e. more ambiguous, complex and not easily electronically enabled. The report emphasized that the Department was responsible for ensuring that all population groups would benefit as much as possible from service improvements resulting from ICT:

> We are at a stage where putting a small 'e' in front of anything has become an art form which apparently bestows some legitimacy or magic on the activity. In the Human Services portfolio we deal with population groups for whom this can be entirely alienating. It is our intention to use our unique set of interactions to ensure that this is not the case…of its commitment to realizing social benefits across the entire community through the information revolution….contribute to the development of an information-enabled society that enhances the quality of life of all South Australians (Dr. Tom Stubbs, Chief Information Officer, p.1).

Commensurate with public policy governing health and community services and universal access, social capital is referred as being one the expected outcomes of the strategic directions outlined in the Human Services Information Economy Framework for information-enabled services, with knowledge as the major resource, as shown below in Figure 2.1:

Figure 2.1: Human Services in the Information Economy



Health and human services delivered online are intended to facilitate the outcomes of social capital, health and well-being and self-reliance (through information, support and choice) and promote social and civic participation and interaction with government. Online health information, while not intended by government service providers to be an exclusive service, has specific characteristics of content and availability that differ from other channels and resulted in a reduction of printed copy of information brochures and other material (DHS, 2002).

2.4.3 Online Health Information Provided by Government Organizations

The major aims of online health information provided by government organizations through websites are to promote good health and support for information about preventive health care, health conditions, health treatments and services. The transformation of the information aspect of health care through a medium that is increasingly used by members of the public and health workers (public and private) could potentially improve the range and quality of information (i.e. potentially up-to-date compared to printed copy) and reduce costs to the providers while improving convenience for the users who have access to the Internet. The Internet is available twenty four hours a day, seven days a week, unlike any part of the health care system other than hospital emergency departments that are intended to have a specific function for urgent care. Online health information could be considered to fill a service gap in the health care system for

non-urgent care for which access is assumed by providers to be beneficial to people. Other features of online health information are depth and breadth of information available in summaries or detailed information on specific subjects and from a range of different sources although access is facilitated through a government entity. Information about health options includes medical and nom-medical information and where to find help or contact other consumers (Hopkins & Fogg, 2002).

The Internet and the World Wide Web have become major vehicles for health-related information. In the United States in 1999 an estimated 30 million Americans used the Internet to search for health-related information, many of them accessing consumer-oriented health websites created especially for the non-health professional user. Examples of Australian 'health' portals developed by government organizations include: the Australian Government health portal HealthInsite (http://www.healthinsite.gov.au), established in 1999; state government health portals such as the Victorian Better Health Channel (http://www.betterhealth.vic.gov.au); and South Australia's HealthySA (http://www.healthysa.gov.au). International health information websites intended for nation-wide use include the health information website by the National Institutes of Health collaborative (http://www.health.nih.gov), developed and operated by the United States Department of Health and Human Services; and NHS Direct Online in the United Kingdom (http://www.nhsdirect.nhs.uk), developed and operated by the National Health Service, a confederation of government public health entities in England and Scotland.

In Australia, Federal and State government proponents of health information websites claim that access to the Internet for health information can improve people's health. They attribute the Internet as an effective channel for health promotion, to assist in the prevention of illness by changing personal behaviours, such as diet and exercise habits (Detels et al., 2002). These claims lead to the question: can information delivered online change individual risk behaviour that has a health outcome? They also make assumptions about groups 'at risk' of poor health or disease to be targeted through the Internet, which have similarities to the categories of 'at risk' groups regarding material access to the Internet. That is, people who are socio-economically 'disadvantaged'. These claims about health outcomes are representative of causal relationships that are not embedded in subjective meanings about health and ICT. Testing relative health outcomes is out of the scope of this research and would require a longitudinal study of interventions and the use of control groups. There is a lack of evidence of any direct effect on

health outcomes from online health information. However, a subjective analysis of potential health and social benefits of online health information is explored in this research.

Research of online health information use in Australia (Hopkins & Fogg, 2002) found the biggest concerns for users about online health information were quality and trustworthiness of information, fearing misleading and inaccurate information as well as information that was difficult to understand due to the use of complex medical terms and information overload. Hopkins and Fogg (2002) also found that users appreciated the way they could learn from other people's health experiences when they had the same condition or were undergoing the same treatment. Internet-encouraged anonymity was thought to be a positive aspect by users, where people can find information on personal concerns or sensitive problems that they might not otherwise raise with a health professional. Research conducted by the Australian Government in 2005 on Australians' use of and satisfaction with e-government services (AGIMO, 2005a) described the Internet as a "mainstream choice" (p. 1) for people to make contact with government. This research noted that citizens can overcome geographic isolation using the Internet to contact government and that with the Internet there were "obvious advantages over other channels – saving time and cost and offering convenience" (AGIMO, 2005a, p. 1).

This research went somewhat further in its investigation than other research on access to government services that informed the data collection for this thesis (see Chapter 4) and available subsequently (for example, NOIE, 2001, 2003; AGIMO, 2005b; DAIS, 2002). It did this by exploring to some degree what sort of government services are accessed and why. Relevant findings were: e-government users could not be easily typified (no reference to particular government services); that the Internet was less likely to be used for "complex and ambiguous issues" (AGIMO, 2005a, p. 6) where telephone and face-to-face communication is preferred; that lack of awareness of online services available was a barrier to access and that any strategies employed to overcome this had to balance cost of advertising with financial return, which would be unjustified; that the Internet is not seen as an anonymous or accountable channel, which would have implications for the types of services online; and that citizens' preferences change significantly over time and require monitoring of behavioural changes and attitudes to ensure "citizen-centric" service delivery (AGIMO, 2005a, pp. 6-7). The relevance of these findings to this thesis will be explored in the results chapters (Chapters 5, 6 and 7). It is notable that there is reference to 'citizens' where e-government services are the focus of the research rather than

general Internet services in terms of the consumer or recipient of services. They may be considered to have both rights and obligations where government online services are concerned. The notion of citizenship is explored further in the next chapter.

The Australian Commonwealth Department of Health and Ageing (DHA, 2002) described the Internet as becoming increasingly important as a source of health information, offering many benefits such as access 24 hours a day to up-to-date information and a range of opinions. Who uses the Internet to access health information? The Australian Online Health Report (ACNielsen, 2001) found that nearly 30% of Internet Users used the Internet for their health information. The same percentage used the Internet for sports information, which is indicative of relatively high use, given Australia's enthusiasm for sports. This represented 27% of the 5.2 million regular Internet Users using it to access health information in 2002, compared with 22% in 2001. These "online health consumers" represented 1.4 million Australians over the age of 15. They were considered to be experienced Internet users, comprising a high female component: 55% were basically in good health (with no major medical conditions), 32% were in good health with one or more medical conditions requiring day-to-day management (e.g. asthma, high blood pressure). A small percentage, 11%, had either been recently diagnosed with a medical condition or described themselves as having multiple health conditions and being in average to poor health. This suggests that having a medical condition does not necessarily predispose people to access to online health information.

Of the 1600 consumers surveyed, 62% said they referred to the Internet more than any other medium for health information and advice, compared to health books (12%), television (8%), women's magazines (5%) and health magazines (3%). The research explored how the Internet is changing the interaction between health consumers and healthcare professionals. For example, over a third of online health consumers surveyed said they referred to health information downloaded from the Internet before visiting a doctor, or went in search of it after a consultation. This supports the argument that people with access to the Internet are willing to pursue online health information and this access may play a role individual decision-making about health. However, it does not mean that there is a correlation between use of the Internet and good health.

The Benton Foundation research study in 1999 in the United States found that between 57-75% of Internet users use the Internet to find health information and 25% of searches through search

engines involve health-related issues. Parallel to the research of Lloyd and Hellwig (2000) in Australia, the Benton Foundation (1999) also found that limited income and lack of formal secondary and tertiary education were the highest barriers to accessing ICT-enabled information. The Benton Foundation report, *Networking for Better Care: Health Care in the Information Age* (1999), described these barriers as particularly concerning in health care, as responsibility for health care is shifting away from doctors' offices and hospitals and toward homes and communities. This movement towards self-risk for the individual is a feature of the public health movement incorporating health promotion, and for primary health care public policy (Lupton, 1999). According to the Benton Foundation (BF, 1999), "differences in access are becoming increasingly worrisome – especially since disadvantaged groups already suffer certain health problems disproportionately" (http://www.benton.org/publibrary/health/two.htm#lack).

The digital divide has been best understood as a divide based on income and demographic characteristics of a population that contribute to their material access to and knowledge and ability to interact with information and communications technologies.

2.5 The Digital Divide

The term 'digital divide' is often used in government policy on electronic service delivery to describe disparities in the use of the Internet and new telecommunication services across different social groups (BF 1998, 1999; NOIE, 1999, 2001; Norris, 2001; OECD, 2001b; DCITA, 1997, 2005a). The term first emerged in the mid-1990s (NTIA, 1995). Much attention has been given since to the problem of socially disadvantaged people's lack of access to the Internet (NTIA, 1995, 1998; Loader, 1998; BF, 1998, 1999; OECD 1998, 2001b; Lloyd & Hellwig, 2000), primarily because computer equipment and telecommunications services is expensive and access to connectivity infrastructure, particularly in rural areas where Internet access is expensive and slow (Buckeridge, 1996; DCITA, 1997, 2005b). Haddon (2000) suggests that the notion of the digital divide is intended to draw our attention to the continuation of long-standing patterns of economic and social disadvantage in the new realm of IT and claims that it is a new form of old inequality driven by governments to revise telecommunications regulation.

In Australia, the problem of the digital divide has been explored by the government's National Centre for Economic Modelling, which found that the greatest barriers to the take-up of

technology (in particular, use of the Internet) were lack of higher secondary or tertiary education and limited income (Lloyd & Hellwig, 2000). The findings were that in addition to equipment access, the digital divide was attributed to poor phone lines, antiquated equipment, limited access through over-booked public Internet facilities, expensive user fees and lack of confidence or technical skill to use the technology. An argument of this thesis, supported by more recent research, is that the problem of the digital divide goes beyond material access and computer skills (e.g. DCITA, 2005a; SEU, 2006) whereas early research on the digital divide (e.g. NTIA 1995, 1998; Loader, 1998, BF, 1998; 1999) focused only on material access barriers. Although it explores who is excluded and why, the research of Lloyd and Hellwig (2000) is primarily based on material access and not the subjective reasons people might choose to use or not use the Internet.

Following Lloyd and Hellwig's (2000) warnings (see also NTIA 1995, 1998; Loader, 1998; BF, 1998, 1999) of the threat of people being excluded from employment opportunities and the chance to fully participate in economic, political and community life through lack of access to computers and the Internet, this thesis sought to address these concerns through the methodological approach explained in Chapter 4 with a sample of people less likely to use the Internet for online health information, as one area of government service delivery. The aforementioned early research on the digital divide has found that people on low incomes, without tertiary education, living in rural and remote areas, of Aboriginal and Torres Strait Islander heritage, with disabilities, with a language background other than English, and aged 55 and over are less likely to use the Internet:

> In an ideal world, information technology holds enormous potential for development on both micro and macro scales. The spectacular rise of electronic mail, internet services, and telecommunications offers unprecedented opportunities to access instant information, reach new markets and generate social capital. However, with technological advances and globalization come unprecedented risks – that poor people and entire societies will be excluded from global economic growth (World Bank, 2000).

The World Bank (2000) claims that information technology has the potential to increase social capital – and in particular 'bridging' social capital, which connects actors to resources, relationships and information beyond their immediate environment. This claim is supported by Seymour (2000), in her research on the benefits of ICT for people with frail and damaged bodies, raises the problem of the disparity between the information-advantaged and those people who are

excluded from the benefits of the information technology revolution by the associations of disadvantage of class, race, age, gender and disability, despite the Internet being presented as a "democratic arena" (Seymour, 2000, p. 7) where disadvantage is compounded by lack of access, understanding and information for participation.

In Australia the focus of addressing the gap between the information rich and information poor has been a regional one because of differences in metropolitan and regional rates of access to new telecommunications services (Buckeridge, 1996; NOIE, 1999; DCITA, 1997, 2005b). People living in rural or remote areas are considered to be digitally disadvantaged because of the relatively high costs and poor quality of services available to them (Lloyd & Hellwig, 2000). Lloyd and Hellwig (2000) argue that government policies have focused on supply-side issues such as quality and cost of supply in regional Australia, and suggest that these policy solutions will not be sufficient to overcome the digital divide.

In accordance with the findings of international government research on Internet access and the digital divide (OECD, 1999; 2001b), Lloyd and Hellwig (2000) claim that economic and social circumstances are behind the lack of online participation for a large section of the Australian community (67% of households not accessing the Internet in 2000) not geography, whereas Australian Government efforts at bridging the digital divide were focused on where people live – the urban and rural divide, with the Networking the Nation program and Open Access Centres (DCITA, 1997, 2005b; NOIE 1999). Lloyd and Hellwig (2000) concluded that educational qualifications and personal income determine whether a person has the capacity to participate fully in the 'knowledge economy'. In this thesis, I argue that participation is much more complex than material access alone. I set about this research to explore issues from the perceptions and attitudes of people who are less likely to access the Internet and government online health information services – the so-called 'disadvantaged'.

2.5.1 Evidence of the Digital Divide in Australia

The Australian Bureau of Statistics (ABS, 2001) found that 67% of Australian households were not connected to the Internet in 2000. This percentage of household non-users fell to 45% in 2003 (NOIE, 2003), but remained the same in 2005 according to non-Census based Internet research data (AGIMO, 2005b), thus demonstrating a levelling out of growth in Internet use. In

regard to who is using the Internet, as per ABS findings in 2000, the trend remains that Australian adult Internet users tend to be younger, male, earning in excess of $75,000, employed, and living in metropolitan areas (AGIMO, 2005b):

> For those unconnected Australians, the barriers they face in achieving online access are very similar to those experienced by the disadvantaged in other developed industrialised countries: set-up and access costs; lack of physical access; a perceived lack of relevant content; security concerns; lack of skills and training; and illiteracy (ABS, 2001).

Research conducted by the Australian Government's National Office of the Information Economy (NOIE, 2003) has found that Internet participation increased with personal incomes and there has been a slower rate of increase and a widening gap in Internet usage over six years (1998-2003) for low income earners when compared with higher income earners. In 2003, 36% of those earning between $10,000 and $14,999 used the Internet compared to 72% of those earning between $40,000 and $49,999 and 90% of those on incomes of $119,999 or above.

Internet participation has been found to decrease with age (NOIE, 2003). Eighty-two per cent of persons aged 14-17 years reported using the Internet compared to 79% for 18-24 year olds, 71% of 25-39 year olds, 65% of 40-54 year olds and 29% of persons aged 55 years or over. Interestingly, though, the highest proportional increase in online participation was recorded by persons aged 55 years and over. This represents an increase of 61% between June 2001 and June 2003. Internet participation increased with higher levels of formal education, where 85% of people with a university degree accessed the Internet compared to 64% of persons with a certificate, 61% of those with upper secondary, and 40% of those with mainly primary school education (NOIE, 2003).

In Australia in 2003, Internet participation was found to be higher among people living in metropolitan areas - 62% of persons in metropolitan areas accessed the Internet compared to 53% in non-metropolitan areas. However, the highest proportional increase in online participation was recorded in non-metropolitan areas, an increase of 26% since June 2001 (NOIE, 2003). This demonstrates rapid growth of Internet participation for people living in rural and remote areas of Australia. The most frequently reported reasons for why some Australian households were not connected to the Internet were high costs related to Internet access (26%) and lack of interest

(25%). Additionally, 16% reported having no use for the Internet, 7% had Internet access through the workplace or school and 27% had other reasons.

The Australian Government research on the use of online government services (AGIMO, 2005a) found that the profile of the online government services user community is only slightly different to the profile of general Internet users. Internet users aged between 25 and 44 years have a slightly higher tendency to use online government services compared to other age groups. Male Internet users have a slightly higher tendency to use online government services than female users. Internet users on higher incomes have a slightly greater tendency to use online government services and Internet users with degree qualifications or higher had a tendency to use online services. For Internet users with a disability, a similar proportion used government services as were represented by overall Internet users.

2.5.1.1 Internet Use in South Australia

At 30%, South Australia's rate of household Internet access as reported in 2002 (DAIS, 2002) is below the Australian national average of about 55% but the rate of growth in access to government services (for example, adults accessing the Internet, paying bills or transferring funds on-line) has been consistently above national levels (DAIS, 2002):

> This implies that the desire and willingness to use the technology may currently outstrip the facility to do so (Information Economy Scorecard, SA Government, 2002, p.3).

The Information Economy Scorecard (2002) report was published to indicate how South Australia was positioned in the global information economy and contained measures of the initiatives from the Information Economy 2002 strategic plan. It found that the emerging demographic profile of South Australian Internet users indicated that the groups most likely to have an Internet connection at home are males, those aged 35-49, those with a personal income of $30,000 or more, those with a tertiary eduction, and those living within the greater Adelaide area.

The report indicated that accessibility is not only a matter of affordability or the availability of a reliable connection but that it was important to assess the availability of public access to the Internet and the provisions that are made for 'disadvantaged' citizens or those with a disability. Access from public libraries and tertiary institutions is 6% and 7% respectively, consistent with

the national average, and at 14% South Australia has a relatively high rate of access from a friend or neighbour's home. In relation to provisions for the disadvantaged or those with disabilities, the report noted that while a number of education and community organisations throughout South Australia provide access to special facilities, services and products, it could not provide specific measures due to lack of available data.

The statistics indicate that the use of information and communications technology is growing steadily throughout South Australia and is likely to continue to gain momentum as ICT becomes more accessible and more relevant to the daily lives of a broader range of citizens. However, despite an above average growth rate, South Australia is still below the national average in Internet use. The policy response for this appears to be the increase of online government services available via the Internet and marketing campaigns for online government services. There appears to be an expectation that the availability of new services to the public would create a momentum of interest resulting in increased access. In terms of specific policy responses to low levels of Internet access, there is a reliance on Federal Government programs for improved telecommunications infrastructure and rural improvements in access in addition to small, local programs targeted at 'at risk' communities such as indigenous people, newly arrived migrants or refugees and low socio-economic neighbourhoods. The range of online health information available has expanded over time to include health information specific to certain population groups, for example a 'migrant health' category on HealthySA (www.healthy.sa.gov.au). Rising Internet use and especially government online services is anticipated to be achieved over time but it is unlikely that printed media or other channels will disappear completely as multiple channels would need to continue in response to the diversity of information services required and public need. Complex and critical health and human services information services designed for universal access cannot be exclusively reliant on online delivery unless 100% of the citizen population access online services and where multiple personal interactions or transactions are needed. The quantum of unmet need is unknown and the costs of providing personalised and customised support for Internet access are likely to be prohibitive for budget-constrained public funding. Is it unrealistic therefore for online government policies and health policies to refer to universal access? What would be the ramifications of targeted and rationed service delivery for only those that are 'at risk'?

2.5.1.2 Inequality in South Australia

Social disadvantage in South Australia has increased over the last two decades (Hetzel et al., 2004). Compared to the rest of Australia, South Australia has the lowest household mean income as well as the highest proportion of the population in the lowest income bracket. South Australia has the highest rate of long-term unemployed people, and is the mainland state most reliant on government welfare payments (Hetzel et al., 2004). Factors such as South Australia's ageing population, isolation of regional communities, unemployment and related socio-demographic issues are considerations for electronic government service delivery.

2.5.2 Bridging the Divide

This section explores how the Australian Government has sought to reduce the inequalities associated with the digital divide. Most of the policy initiatives in response to the problem of the digital divide have focused on material access issues with funding support for a regional Australia/rural focus. Although Lloyd and Hellwig (2000) have provided evidence of a digital divide in Australia based on material access and structural stratification of society, they have also concluded that Internet take-up rates are not determined by a person's ability to connect to the Internet. That is, improved infrastructure alone will not overcome the disparity in access rates for different social groups. They found that even in metropolitan areas where telecommunications infrastructure is well developed, Internet take-up rates for certain social groups were low, such as low income earners, the unemployed, and the elderly. They concluded that social policy targeting digitally disadvantaged communities was necessary for Australia to address the root causes of the digital divide. This points to the need for research on the subjective causes of the digital divide to inform policy and social knowledge.

One of the policy initiatives of the Australian Government to address inequalities in rural areas' access to the Internet and online government services has been the Networking the Nation program. This program has included the establishment of 1,822 Online Access Centres (DCITA, 1997, 2005b) following a recommendation of the Regional Telecommunications Inquiry. These centres provide public information access through community online access centres for communication services, access to government services, and facilitate social development and community development. An Online Council is charged with strategic management and governance, working with the Government to maintain the viability of the online access centres,

which extend also to remote Indigenous communities. The centres provide communication services and government services, social development and community development. Online Access Centres are recognised by the Australian Government as playing an important role in fostering and strengthening social capital (DCITA, 2005b).

The Australian Government has examined the role of ICT in building communities and social capital. It has examined the social and economic role which the community or non-profit sector plays in Australian society and its interaction with the information economy (DCITA, 2005a, 2005b). ICT is acknowledged as having an impact on how community, business and government organizations and groups interact with each other and with citizens, clients and customers.

2.6 Conclusion

The methods of delivering public information and services in the information age are being transformed through the application of ICT. The governments of Australia, the United Kingdom and the United States have had high expectations of the economic and social benefits that may potentially result from electronic networking and e-government services and promotional initiatives. A characteristic of the so-called information and knowledge age is the creation of an information society that is built from equitable and ubiquitous access to the Internet from the home, workplace and in community settings and active individual and group participation. This expectation fits with the charter of Western democratic governments to service and support their constituents or citizens through universal access to services driven by egalitarian principles and the public policy construct of citizenship. Inherently, citizenship comes with rights as well as obligations for social and civic participation albeit in the context of socio-economic inequality.

The delivery of online health information services to the public is one major area of e-government service delivery by the Australian Government and jurisdictions including South Australia. The South Australian Government's Department of Health aims via its health information website, HealthySA (www.healthysa.gov.au), to increase access to quality, timely information to improve access to services and ultimately enhance self-reliance through health promotion and health outcomes. The development of social capital from electronic government services and electronic networking in Australia, in South Australia and other Western societies

internationally, is also an objective of online government services. Social capital will be explored further in the next chapter.

This chapter has presented the evidence of the existence of a digital divide based on access and use of Internet-based services. The digital divide means that socio-economically disadvantaged citizens may be denied access to government online information services, including online health information. In particular, the people on the wrong side of the digital divide (i.e. the "have-nots") are low income earners with poor or non-existent computer literacy and skills. The "digitally disenfranchised" have been acknowledged by the Australian, United Kingdom and United States governments, i.e. those administrations having electronic government policies and enabling legislation, strategies and services with an agenda to reduce costs of service production and service delivery, improved services and participation in the information and knowledge economy.

These governments have sought to bridge the digital divide by introducing programs that improve access to Internet services in non-urban areas which were found to be missing the necessary telecommunications infrastructure. They have done this by making shared-access to Internet services and support available in community settings, providing funding support for computer skills development and incentives for Internet access and they encourage and support state and local government entities as well as non-government organizations in fostering local community development projects using ICT.

These strategies are premised on the notion that electronic networking and increased access to knowledge, information and government services presents opportunities for improved quality of life for the socially and economically disadvantaged. Evaluation of these strategies and academic research demonstrate that ICT can transcend inequality and help build social capital in communities but it can also widen pre-existing disparities and inequities.

CHAPTER 3: SOCIAL CAPITAL

3.1 Introduction

The previous chapter argued that the use of information and communication technologies could potentially build social capital. It could play a role in improving the health outcomes of individuals and communities. The effective use of information and communications technologies would require access to resources, development of individual and community capacity and interest for Internet use and participation in networks for online information access and exchange. Through the provision of publicly funded health services and online health information services, government is attempting to support individuals and communities to build social capital and achieve better health. Examination of the relationship between social capital and the digital divide in the context of the delivery of health information services involves exploration of population health inequalities and the social determinants of health (Marmot & Wilkinson, 1998, 2003; Macinko & Starfield, 2001, 2003; WHO, 2003). Essentially, these concepts are concerned with the effects of social cohesion and fragmentation and broader social inequity. This examination involves a consideration of the role of publicly funded health services, where health information is part of health care, and access by individuals and communities to resources, services and support in an information society. A focus on access to health information services, particularly online health information, can assist in demonstrating the link between information policy and social policy in the context of social capital and the digital divide.

This chapter explores the concept of 'social capital' (Putnam, 1986, 2000; OECD 2001; Lin, 2001) and its relationship with the digital divide, being the disparity in access to the Internet caused by social and economic disadvantage (NTIA, 1995, 1998; BF, 1998, 1999; Lloyd & Hellwig, 2000; Norris, 2000, 2001). This chapter considers the relationship between the two concepts in the context of the health of individuals and communities, and access to publicly funded health information services with relevance to the research questions for this study. The literature on social capital and health suggests that there is a link between social capital and population health and that communities with high social capital have better health than those communities with low social capital (Lomas, 1998; Baum, 2000; Veenstra, 2001; Turner, 2003). The same socio-economic characteristics present in populations with poor health appear to be present also where there is less information technology literacy and computer use. In particular,

the characteristics of low income and low levels of formal education are present in communities with low social capital and IT use and with poor health (Knack, 1997, 1999; Phipps, 1998; Norris, 2001).

The social determinants of health are factors that have been shown in a variety of settings to have the greatest influence on health. They include living and working conditions, physical environment, personal health practices, culture and ethnicity, age and gender (Marmot & Wilkinson, 1998, 2003; Queensland DH, 2000; Macinko & Starfield, 2001, 2003; WHO, 2003). Social capital is also emerging as a specific determinant of health in literature on public health (Wilkinson, 1996; Kawachi et al., 2000) in which it is interpreted as synonymous with 'social cohesion' (Lomas, 1998; Lavis & Stoddart, 1999; Kawachi et al., 2000). Analysing the concept of social capital will enable one to understand its uses when applied to social problems such as health inequalities. According to the Australian Bureau of Statistics, this interest "is fuelled by some promising research indicating that social capital may further explain the disparities in health, housing, education, and other facets of social life" (ABS, 2004).

3.1.1 Social Capital Defined

There is not a universally accepted definition for social capital. Various perspectives on social capital are explored in this section. The Australian Bureau of Statistics (ABS) adopted the definition for social capital as used by the European Community: "Networks, together with shared norms, values and understandings which facilitate cooperation within or among groups" (OECD, 2000). In its framework for measuring the multi-dimensional concept of social capital, the ABS refers to four different types of capital: (1) natural capital, (2) economic capital, (3) human capital, and (4) social capital and their relationships with well-being outcomes (ABS, 2004). The concept of social capital provides a framework by which to explore the digital divide's causes and effects. Social capital may also contribute to a policy framework making possible the development of strategies addressing the digital divide. This nexus recognises the link between information policy and social policy where the digital divide hampers access to information resources and communication networking opportunities.

Over the past decade and particularly in the last few years, social capital has been of research and policy interest in a broad range of fields, including public health which is premised on population-based strategies to improve the physical and mental health outcomes of communities

(Wilkinson, 1996; Baum, 2000). Remarking on the language of social capital, Baron et al. (2000, p. 12) propose that the introduction of social capital into social policy reintroduces the social dimension into capitalism. Is this simply an attempt to give tangible legitimacy to intangible resources?

Social capital has been used in many disciplines, for example sociology and government policy (Coleman, 1988; Portes, 1998; Edwards & Foley, 1998; Halpern, 1999, Putnam 2000; Baron et al., 2000; Cote & Healy, 2001; Cavaye, 2004), political science and economics (Putnam, 1995; Fukuyama, 1995; World Bank, 2000). Social capital is regarded by the World Bank as one of four indicators in the World Bank's wealth accounting system together with natural capital: environmental resources, produced assets, industrial resources and human assets, knowledge and cultural resources, as the major resources that nations have. Generally, the debates against social capital highlight empirical weaknesses stemming from poor definition and measurement difficulties, although its positive social objectives are noted. For example, Woolcock (2001) believes that the concept of social capital puts itself at risk by trying to explain too much with too little substance. Harper (2000) suggests that it is overused as well as inappropriately used due to the lack of conceptual clarity but offers that social capital, in the form of social trust and associational networks, has a "multiplicity of desirable policy outcomes" (Harper, 2000, p. 4). Does the application of social capital theory, therefore, require a 'leap of faith'?

Social capital is a multi-dimensional concept and, as such, there are several different theoretical perspectives, explored below, and practical applications. The World Bank (2000) suggests that there are three types of social capital. The first, 'bonding' social capital, refers to horizontal tight-knit ties between individuals or groups sharing similar demographic characteristics, e.g. when all participants in the group are of the same ethnicity or religion. That is demonstrative of the 'dark side' of social capital (see 3.2.1), whereby a homogenous group may operate exclusively. The second, 'bridging' social capital, refers to ties that cut across different communities/individuals. An example of bridging social capital is the connections made between different civil rights groups joining to progress similar objectives. The third, 'linking' social capital, refers to vertical connections that span differences of power, such as individuals or communities with government. Szreter (2002) argues that this form of social capital is particularly relevant in terms of reducing inequities because it encourages people to feel a sense of responsibility for people (or networks/organisations) beyond their bonded group. Szreter notes,

however, that despite the analytical utility of such distinctions, it is debatable whether it is possible to distinguish empirically between these different types of social capital. Using this definition, this thesis is concerned with, but not restricted to, 'linking' and 'bridging' social capital – interactions with government and others for which there are weak rather than strong ties. Perhaps some of the complexity and confusion around social capital is due to perceptions and expectations of horizontal/vertical or wide/narrow social capital.

The different perspectives on social capital refer to what comprises social capital, how it is formed and how it can be measured. There appear to be two main schools of thought regarding the definition of social capital (but many variations thereof). One draws on the work of Bourdieu, who 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" (1986, p. 248). This definition focuses on the resources that accrue to individuals from their participation in social networks, social capital being a symbolic or intangible resource present in social life along with material resources. Bourdieu suggests that social capital is inextricably linked to economic capital but cannot be reduced simply to an economic form. This suggests that it must retain its intangible form and subjective nature. Central to Bourdieu's theory is that the state mediates society's access to social capital. This argument is pertinent to this thesis which is concerned with government information policies, social policies and the digital divide.

Online health information that is facilitated by government websites represents a public utility that is mediated by government and ICT. In contrast to Bourdieu's theory, Putnam (1993) argues that social capital is a community-level resource resulting from a strong civil society where the state plays a minor role. Putnam undertook empirical research in Italy and the United States on the relationships between social relations and civic engagement and the economic outcomes. He defined social capital as "features of social organization such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit" (1995, p.67). Bourdieu and Putnam focus on relationships and how these impact on both collective and individual action and interaction. Both theorists assert that social capital can be enhanced with resources. Coleman (1988) made a significant contribution to the theoretical debates on social capital by associating social capital with educational processes and beneficial impacts on communities. Coleman (1988, 1990) defined social capital by functions or activities by networks of individuals within a variety

of social structures, where social capital achieves and facilitates ends but is not a specific entity, yet it could be depleted. According to this view, social capital is a process or an enabler and not an outcome in itself, but could be used to influence and produce outcomes.

Bourdieu (1986), Putnam (1993, 1995, 2000) and Coleman (1988, 1990) in essence do not differ in their perception of social capital. They concur that it is a complex process as well as a resource that can take a variety of different forms but they do differ in their expectations of how social capital can and should be applied. These theorists share the view that social capital is a resource for collective action and that the resource comprises the norms and sanctions of trust and reciprocity of social networks that enable mutual benefit outcomes. However, they differ in how they each use the concept to understand different types of collective action, such as dominant culture, civil community action, family or minority group activity. These are not contradictory definitions, merely different in purpose and application. Bourdieu (1986) explores the concept of social capital as a means to secure economic capital and focuses on gain for individuals within a competitive environment. Putnam (1983) uses social capital as a means to secure effective democracy and economy, applied to regions in national settings. Coleman (1998) considers social capital to be a means to build human capital, a property of individuals. His focus is primarily on individuals in family and community settings.

These perspectives all have some relevance in the exploration of government online service delivery, the provision of health information by public agencies and their effects on individuals and communities. Publicly funded online service delivery is both a social and economic strategy by the state to improve service delivery, reduce costs and support commercial relationships with private industry providers. Public health information provided via the Internet and through many other methods is a population-based strategy to promote health and well-being to individuals and communities, considered to be a prime function for public health agencies to enable informed health choices and treatments for better population health outcomes (Starfield, 1994; Hawe & Shiell, 2000; Healy, 2001; Wanless, 2004).

Although there are differences in perspectives on social capital, they share common features. Principally, a common feature is the belief in social networks based on trust and reciprocity that produce individual and community resources. Another common feature is the notion that social, economic and political spheres are linked and social relationships are recognised implicitly as

influencing how states and markets operate. An example of this is the function of public advocacy agencies and regulatory agencies. Another common feature is that relationships and processes are considered to be of primary importance to the effectiveness and efficiency of both collective and individual action and interaction, as demonstrated by civic participation and volunteer organizations for the public good. It is also a shared view that social capital can be built and strengthened, that resources are required to do this and that good outcomes may prevail.

There has been a significant debate about a generational decline in social capital, with Putnam (2000) in particular arguing that social capital, at least in the United States, has been declining since the 1960s. He used the metaphor 'bowling alone'. However, some theorists argue that this finding is a reflection on the way that social capital is measured and that what is represented as demonstrations of decline are changes in forms of social capital, instead of an overall decline (Lin, 2001; Szreter, 2002). For example, Szreter (2002) argues that bonding social capital may have increased, in the form of tight knit exclusionary groups, but that linking and bridging social capital had declined. He attributes this decline to the rise of neo-liberal and market-oriented government policies that have created conditions in which people are less inclined to be altruistic, and more inclined to pursue their own self interest. He extends his argument to note that the decline in linking social capital is likely to lead to an increase in health inequalities resulting from social constraints. Restrictions in the ability to communicate and exchange experiences and knowledge outside of one familiar environment and contacts are considered to have a negative impact on health and well-being.

It has also been suggested that the structural and cognitive elements of social capital can be distinguished (World Bank, 1999). Essentially, the structural forms of social capital relate to social structures such as social networks and associations between individuals and groups of individuals. Cognitive forms of social capital relate to the subjective or intangible attributes of those networks and associations, such as trust and reciprocity which are considered present where there are effective connections or networks between people. These elements are explored in sections 3.2.2.2 and 3.2.2.3.

3.1.2 Operational Definition

The operational definition of social capital used here is: 'social capital represents the social networks, processes and relationships based on trust and reciprocity which facilitate coordination, cooperation and systematic access to resources'. To expand upon this definition: social capital is an intangible value aggregated from social and organizational networks which can result in social and economic benefits to individuals and communities. Whether social capital can produce common good outcomes is open to debate and unmeasurable. This definition of social capital has been constructed for application to government and its relationship with a constituent population through access to information and services. While this operational definition accords with the common elements of the major schools of thought regarding social capital, it is more aligned to Bourdieu than Putnam in that the state/government is considered central to the way in which society has access to social capital and can influence social inclusion or exclusion.

Social capital with this meaning can be an outcome expected by a public agency using online service delivery to: first, inform a population about health issues and health services; and second, promote a healthy society. The connections between social capital, online service delivery and health promotion will be explored further in this chapter.

3.2 Attributes of Social Capital

The application of social capital to social research including research on computer networks requires analysis of the aims and attributes of social capital. In Australia, Eva Cox's Boyer Lectures (1995) marked the starting point for a debate about social capital, with a focus on the implications of social capital for common good outcomes for civil society: "social capital should be the pre-eminent and most valued form of capital as it provides the basis on which we build a truly civil society" (Cox, 1995, p. 17). Civil society was defined by Cox as civic participation and community support. Her definition also allows for social capital as an expression of the mutual benefit between individuals (see Putnam, 1986). There has been a momentum of more recent research in Australia as well as internationally on the underlying principles and uses for social capital theory and the role of institutions such as government, voluntary associations and communities, families and businesses in the creation of social capital (Cox et al., 1998; Winter, 2000; Baum et al., 2000b; Lin, 2001; Ewing et al., 2003; Cavaye, 2004; Meredyth et al., 2006) together with emerging methodologies for empirical measurement, most notably of local

neighbourhood urban and regional communities (Cox, 1998; Bullen & Onyx, 1998; Bullen et al., 1999; Miller et al., 1999; Baron et al., 2000; Stone, 2001; ABS, 2002; Ewing et al., 2003; Cavaye, 2004; Meredyth et al., 2006).

Key themes and debates on social capital revolve around the nature and utility of social capital. For example, one debate is whether social capital achieves common good outcomes or facilitates social exclusion which centres on what can now be described as the different types of social capital, i.e. bonding or linking. Social capital can be considered as a commodity that enhances the capacity of individuals to use social systems, similar to human and cultural capital (Bourdieu, 1986), concerned respectively with personal and societal attributes and resources, or produced through the processes of group interactions, being an attribute of groups and communities. Social capital is expressed rather than owned by the collective and in this way it differs from financial capital, human and cultural capital (Bourdieu, 1986). In this view, it can be considered as a measure of the health and value of group processes and social interactions and for this reason must include all the diverse components of that group/society, and demonstrate capacity for positive, collective participation. Examples of community groups with the capacity for positive, collective participation and action are voluntary associations and resident action groups. The approach of such groups is based on the assumption that social capital is indeed an asset to a community or a state/nation. However, Portes and Landolt (1996) raise a challenge to social capital that the networks upon which it is based may not always operate for the 'common good' – that there is a down side or a dark side (Portes, 1998; Baum, 2000) to social capital.

3.2.1 The Dark Side

While social capital is premised on social resources embedded in social networks and debatable outcomes for the 'public' or 'common good', it can also be a potential disadvantage for public programs focused on building social capital that favour already strong links and those communities that are more able to participate (demonstrative of 'bonding' social capital). This is the so-called 'dark side' of social capital (Portes & Landolt 1996; Edwards & Foley, 1997; Baum, 2000; Elliot, 2001; Holroyd & Burgess, 2005). This refers to the potential for communities to exclude and be distrustful of outsiders or those that hold a minority or a majority view, contrary to the aims of 'bridging' or 'linking' social capital. Examples of this are Mafiosi and Islamic terrorist groups that are strongly bound groups but are exclusive. Only those who

share their values participate in their network. The ABS (2002) also acknowledges positive and negative effects of social capital even though there is a theoretical propensity for the positive aspects of social capital. Networks can either work positively in a community or society, demonstrating balanced social capital, or can have detrimental effects, the result of unbalanced social capital. There may be groups that actively exclude or oppress others whereas social cohesion would require suppression of differences, tolerance of diversity and cooperation in the interests of social harmony and productive society. As far as the application of the concept of social capital is concerned, however, there is little empirical evidence to support disadvantages of active participation in reciprocal social networks to a broad, diverse community while there is evidence to support social capital producing individual and group benefits (Putnam, 1986; Miller et al., 1999; Kawachi et al., 1999; Baum et al., 2000a; Bolin, 2003).

In the context of an information society, elements of the 'dark side' of social capital may be considered to be related to the causes and effects of the digital divide, with Internet Users being the 'bonded' group. That is, the web of social networks has connections that break down or are unable to be formed, depending on the networks' rules of social inclusivity or exclusivity and potential for people to access the networks and draw value from their participation. It could be said that social capital can be depleted just as it can be built as it requires maintenance and renewal (Cooper et al., 1999; Healy, 2001). The Internet can be positioned as a means for social capital and also a means for social exclusion. Therefore, this 'dark-side' notion requires investigation in relation to the digital divide where the literature relevant to both social capital and the digital divide suggests various social outcomes associated with computer-mediated public information networks (Charles & Clarke, 1987; Garson, 1995; Norris, 2001; Macintosh, 2003; Wellman, 2001; Wellman et al., 2001).

A key characteristic of benefit to individuals and communities expected from virtual networks and public online information is empowerment. Therefore, while some people will be able to participate, others will be disadvantaged by structural factors including income, gender, age, location, language, literacy and computer skills (Lloyd, Given & Hellwig, 2000; Norris, 2001). The 'dark side' of social capital, therefore, may be demonstrated by lack of access to or participation in the Internet and World Wide Web as a key infrastructure resource for social capital for citizens in the information age. On the other side, access to and participation in the

Internet and the World Wide Web as a social capital resource can further produce social capital outcomes from beneficent social networks and access to information and knowledge resources.

3.2.2 Social Networks and Access to Information Resources

Social networks refer to the ties between individuals or groups. Social networks create exchanges, obligations and shared identities for individuals and it is through these that support is accessed. Bourdieu (1986) explains social capital through social networks and connections. In the context of social capital, social networks can be distinguished on a number of dimensions: for example, the extent to which networks are formal or informal, the types of social capital outcomes produced and the methods used for communicating or networking. 'Networks' are considered the central social capital element for the framework to measure social capital as developed by the ABS (2002). Networks in this context are defined as groups of people connected by past or present interactions. Networks have many attributes but primarily they are dynamic, either informal or formal, and are maintained and expanded by interactions, transactions and exchanges (Hall, 1999). For the development of a social capital framework the ABS (2002) defined networks as dynamic relationships built for a purpose and maintained by supportive and productive interactions, rather than static objects. The social capital framework therefore needed to represent the transactions that occur between people within networks and between organizations. These transactions may take the form of shared information, introductions, physical or financial assistance and encouragement amongst other things. They are actions or behaviours that contribute to the formation and maintenance of social capital, and they represent the advantages that people or groups draw from social capital. Government websites containing information resources could be considered to be formal social networks. They require computer-mediated interactions which are essentially person to person/agency interactions that represent weak and unfamiliar ties within a network and can operate as gateways to multiple other network interactions.

In the notion of the information society, telecommunications generally and the Internet specifically have a major role in facilitating local and international individual-to-individual and individual-to-group communication. The Internet has fostered the development of wider-reaching global networks of interactive social networks. According to the World Bank and

supported by the Australian Bureau of Statistics, social networks have been distinguished as bonding, bridging or linking, reflecting the different types of social capital that they promote.

The different types of networks are described as promoting bonding, bridging and linking social capital, the types of social capital introduced in section 3.1.1. Bonding relationships occur within homogenous groups; bridging relationships occur across heterogenous groups (that is, from a different socio-economic status, age, race or ethnicity); and linking relationships occur between people and agencies of authority, power or influence (Woolcock, 2001). Each of these types of relationships is considered to be important as each potentially produces social capital.

Networks can be differentiated on the basis of their size, density and the extent to which they are open and closed (Stone, 2001). Network structure includes size, density, frequency, porosity and communication mode of networks (ABS, 2002). These structural attributes can provide information such as how open a network is to those external to a network, how often members have contact with others in the network, and to what extent a network may overlap with another in terms of membership. It also provides for relationships maintained via telephone or the Internet. Network characteristics are likely to affect the flow of resources and the nature of social capital available through a network. The existence of social networks or access to the Internet alone, however, is not necessarily an indicator of collaboration amongst people for the promotion or production of social capital (Bullen, 1999; Stone, 2001). That is why they are referred to as the structural elements of social capital. The cognitive elements of social capital are the tacit relationships and participation in networks from which social capital is derived. Social capital producing networks can be defined as networks of social connections and relationships between people based on participation, trust and reciprocity (Granovetter, 1973; Schuller, 1996; Wellman, et al., 1996; Wellman, 2000; Campbell, 2000; Woolcock, 2001).

Network qualities include the norms and values that may exist within networks, and serve to enhance their functioning. These include but are not limited to trust, reciprocity, cooperation, and acceptance of diversity. These norms and values are essential to healthy functioning of networks because they encourage people to act cooperatively, and effectively provide rules and sanctions to govern people's behaviour (Putnam, 1993; Cox, 1995; Woolcock, 2001). More specifically, norms such as trust and reciprocity are important because they may help reduce transaction costs regarding negotiation and enforcement, and encourage knowledge and ideas to

be shared. The purpose of the relationship is also classed as a quality of the network. Social and civic participation are common reasons for forming formal or informal groups (Putnam, 1993; Cox, 1995).

The composition of networks describes a range of relating entities and relationships. These include family, friends, neighbours, colleagues, and organizations. The inclusion of these descriptive attributes in the framework is due to the considered importance of these items in providing information on the nature, diversity, extent and strength of networks. To some extent the composition of networks also provides information about place-based and non-place-based relationships. Lin (2001a) proposes the network theory of social capital which is based on social network analysis that examines the ties between individuals. The network theory of social capital explains how the quality of social resources available to an individual within their social network influences the success of achieving desired tangible or intangible outcomes. In the context of the network theory, social capital is defined as "resources embedded in a social structure which are accessed and/or mobilized in purposive actions" (Lin, 2001b, p. 12). Social network analysis and the network theory are relevant to access to information resources as a potential social capital benefit and also to information seeking behaviour. In social network analysis, the relationships or ties come into focus in an examination of the hierarchical nature of the social structure. This is where stronger ties are demonstrative of bonding social capital amongst people on the same level of hierarchy. They are like each other and possess similar resources while weaker ties are demonstrative of bridging or linking social capital which reach outside of familiar social groups and where resources are positioned in a different level of the social hierarchy that includes social institutions. Johnson (2004) suggests that people seeking different resources need to utilize weak ties, reaching up and down the social hierarchy but infers that new resources of value are expected to be found across and up the social hierarchy. Johnson (2004) draws on Granovetter's (1973) theory of the strength of weak ties for effecting bridging and linking social capital, and Laumann's (1966) prestige principle that people prefer to associate with others of similar or higher social status. Using the perspective of access to online health information resources, weak ties could be interactions with strangers, government entities and health authorities.

Participation is an attribute of a social network. Membership of a network can be demonstrated by participation at some point, active or otherwise and the protocols and behaviour that apply to

participation (Granovetter, 1973; Schuller, 1996; Campbell, 2000; Wellman et al., 1996; Wellman, 2000; Woolcock, 2001).

3.2.2.1 Participation

Participation, being an attribute of social networks, is a process for the development of social capital, which has social connectedness as one potential beneficial outcome. Participation in society has been considered to be central to health since the 1981 *Health for All by the Year 2000* policy of the World Health Organization (WHO, 1984). Participation is also a feature of contemporary citizenship which has shifted from being passive and dependent with security in organizational and social life to active and individualistic participation and exercising of choice (Miller & Rose, 1993, p. 98).

The importance of participation for public health promotion strategies aimed at improved population health outcomes was reinforced in the WHO Ottawa Charter for Health Promotion (1986) to initiate and drive processes of social change aimed at improving living and working conditions conducive to health. The relevance of participation lies in the recognition that professional domination in health may reduce the power of individuals and communities and that information, choice and social support are paramount to maintaining well-being.

Participation can range from consultation to structural participation. That is, where lay people are the driving force of initiatives. A significant indicator used in the measurement of social capital is the extent to which people participate in social and civil activities (Wilkinson, 1996; Schuller, 2001). Baum et al. (2000a) support the notion that communities with low social capital and, therefore, low participation in networks also have low household incomes and educational levels. Putnam (2000) suggests that a decline in participation, neighbouring or social connectedness does matter. He believes that social isolation presents risks for premature death, raised crime rates and poorer school performance as a result of citizens becoming disengaged. The notions of trust and reciprocity as basic tenets or values in social networks (Putnam, 1995; Baron et al., 2000; Woolcock, 2001; Healy, 2001) require investigation for an understanding of social capital and the implications of ICT-mediated communication and networking. Although access to online health information is representative of ‘linking’ social capital that demonstrates weak ties compared with ‘bonding’ social capital, except where bonding with strangers may occur over time as a

result of sharing health information and experiences, trust and reciprocity may be relevant indicators of social capital.

3.2.2.2 Trust

Trust is relevant to the cognitive understanding of social capital. Rahn and Transue (1998: p. 545) define trust as "a standing decision to give most people – even those whom one does not know from direct experience – the benefit of the doubt". In relation to social capital, three broad types of trust can be differentiated. The first is trust of familiars that exists within established relationships and social networks; the second is generalised trust or 'social trust', which relates to the trust extended to strangers; and the third form is institutional trust, which refers to the basic forms of trust in the formal institutions of governance (Stone, 2001).

Trust as an individual and social value is socialized or enculturated by social upbringing and sanctions in social and organizational behaviour (Halpern, 1999). There does not, however, appear to be a comprehensive, integrative theoretical framework for trust (Baron et al., 2000) or conceptual clarity about whether it is an enabler or outcome of social capital (Woolcock, 2001). Sixsmith et al. (2001) assert that trust is multi-dimensional and cannot be attributed a unilateral means of development and operation within networks. On the basis that trust is complex and contextual, Cote and Healy (2001) criticize simplistic measures of social trust that ask questions of individuals and then aggregate their replies to ascertain a community characteristic, suggesting that collective social capital is not the sum of individual social capital. Fukuyama (2004) uses trust to describe cooperative norms within different tiers or levels of a moral system, with different behaviour reserved for family and friends from behaviour in the public sphere which could be of a lower standard, providing also a cultural foundation for corruption. Kawachi (2000) has explored evidence of a link between trust and health but points out that individual trust cannot have an impact on population health outcomes. Francois and Zabojnik (2004) purport that trustworthiness may enable economic development through social capital in a way that moves away from incentive structures in motivating behaviour, but focuses on parental influence on early childhood values of trust and social responsibility without expectation of gain, thereby creating societies of higher social capital. Although this view is premised on learning to trust without expectation, it is concerned primarily with how trust is developed and is not necessarily at odds with literature on the relationship of trust to social capital, which places it as a

value and a norm operating within social networks together with reciprocity (Putnam, 1993; Woolcock; 2001; Stone, 2001).

3.2.2.3 Reciprocity

Reciprocity, also a cognitive element of social capital, refers to the provision of resources by an individual or group to another individual or group, and the repayment of resources of equivalent value by these recipients to the original provider. High levels of social capital are argued to give rise to a higher level of reciprocal relationships and so lead to more cooperative and well-functioning societies (Putnam, 1993; Halpern, 1999). Linking social capital, which refers to relationships across different social strata in a hierarchy, enables access to resources on a much wider scale than within a certain geographical or other restricted community (Granovetter, 1973; Cote & Healy, 2001; Woolcock, 2001). Reciprocity in the context of citizenship could mean access to resources in exchange for participation and engagement with government and other civic institutions. Reciprocity is important in the context of contemporary citizenship and community participation.

3.3 Social Capital and Community

Community is difficult to define as it is a dynamic rather than static entity in that it usually refers to relationships between individuals and groups (Minkler, 1997; Williams, 1998). While it can mean a group of people living in a specific geographic area, it is more dynamic in the context of communities resulting from computer-mediated communication and networking via the Internet (Rheingold, 1993). 'Community' as a term can be used descriptively: "The people who live in a defined geographic locality, and/or who share a sense of identity or have common concerns" (Fry & Baum, 1992, p. 297). The notion of community is important for social capital because social capital may vary between and within communities and the physical, social and economic characteristics of community may affect the levels of social capital within that community. Virtual communities are social aggregations that emerge from the Internet when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace (Rheingold, 1993).

Professionally defined geographical areas or localities can also define a community, varying in size from a single street to a neighbourhood. The concept of a "sense of community" (McMillan

& Chavis, 1986) may be useful to understand the relevance of community, as a form of connectedness, to social capital. It is hard to define because there is inevitably a subjective element to the connectedness that may result from social networks and socio-geographic networks or communities that may have the values of trust and reciprocity in common.

The word 'community' suggests a common bond between individuals, groups or sections of the population with implicit inclusiveness and belonging. Conversely, it may also mean exclusion by members of that same community. The characteristics of community may be based upon ethnicity, gender, religion or a mutually shared issue or problem. The concept and reality of community between professional and lay people or policy-makers and recipients can be vastly different (Holroyd & Burgess, 2005). The Australian Government and related South Australian Government policies on electronic government introduced in the previous chapter define community as Australian society and all South Australians respectively. Communities are not always homogenous and harmonious entities. Haggstrom (1970) defines communities as either objects of decision makers' policies, as networks of interdependent systems, or acting where they identify their own needs, bottom up, collective action and decision-making. They are cross-cut by a variety of divisions – race, gender, and class – and contain a multitude of groups whose values and interests may conflict with each other. These communities could be violent and demonstrate racial harassment (Hawtin et al., 1999). This reflects the 'dark side' of social capital in the broader context of community.

From the perspectives of Baum and Cox regarding social capital, it could be considered to be a product both of individuals and communities, facilitated at some level by the state. Bourdieu believes that the state plays a more significant role in enabling or blocking the social capital production of individuals and communities, while Putnam attributes the production of social capital mainly to civic participation and the efforts of local communities. This view is challenged by developments in ICT-mediated communications and networking. Putnam (2000) noted that communities are in flux due to work patterns, growth of suburbia, commercial television and generational change, particularly geographic mobility and recognised that it was becoming more difficult to bring people together at a local level - a problem exacerbated by the increased use of the Internet. It could be suggested that social capital may be the product of the balanced tension between state, communities and business and produced at different levels within and across each sphere by different methods, including the Internet. This balance would differ depending on

where and how social capital is applied, i.e. due to the available resources, the governance arrangements in place, the nature and expectations of the major business activity and the culture(s) of the communities concerned.

There are contrasting policy perspectives on the role of government in the production of social capital. Latham (1997) considers the production of social capital as best left to local level interactions and that government should restrict its role to purchasing and regulating, leaving planning and spending to local groups, including local government. This would mean reduced power and responsibilities for the nation state and increased informal structures of governance. The assumption that the community can manage its own affairs ignores the existence of local power differences (Foucault, 1982; Wilcox, 1994; Woolcock, 2001). Regarding community interventions by government or local community authorities, Cavaye (2004) expresses the view that the real value in social capital measurement is that which could be measured over time and where the effect of activities could be isolated from other effects and the measures of what social capital would have been if no intervention had occurred. He also notes the difficulty inherent in trying to measure the potential future development of social capital in a community without intervention, yet makes the point that the concept of a moving baseline needs to be considered in the interpretation of social capital impacts (Cavaye, 2004, p. 16). The inference is that social capital requires systematic intervention for production and sustainability.

The third sector - the community sector consisting of not-for-profit organizations - has played a major role in the provision of community services and income support in Australia since white settlement. They are independent of government and are legally prohibited from distributing any surplus income to members. They are particularly active in health, community services, education, culture, and sport and recreation (Shuler, 1996; Rheingold, 1993) and promote the benefits of electronic networking. The role of the third sector in creating and supporting interventions for social capital using ICT has been touted as the ‘new social policy’ for the digital age (Ewing et al., 2003) for a public/private partnership for a ‘wired’ high rise public housing estate project in Victoria, ‘Reach For the Clouds’, the neighbourhood renewal and socio-economic outcomes of which were later published as the three year long Atherton Community Enterprise (e-ACE) project (Meredyth et al., 2006). A key feature of this project was access to social services online and enhanced levels of social connectedness.

Electronic networking of communities is acknowledged as where ICT can be influential in community capacity building as a community-led and/or government funded enterprise, even creating 'electronic villages' or social capital producing neighbourhoods (BEV, 1995; WELL, 1995; Ewing et al., 2003; Meredyth et al., 2006). 'Community Networking' is itself a troublesome catch phrase, packed with a whole range of understandings, assumptions and expectations. 'Network' is as ubiquitous as it is indeterminate, "Community' covers a spectrum from groups located in small specific geographic locations to large widely distributed individuals with a common interest, and the compound, Community Network, applies at once to the sorts of large scale, inclusive infrastructure, education and content undertakings and to relatively small scale community organization or networked neighbourhood ICT-based projects (Rose, 2001; Stillman et al., 2002; Meredyth et al., 2006). Simpson (2002) suggests that community networks, i.e. community informatics projects, should adopt a more holistic approach to implementation in order to ensure sustainability but also to better understand the complexity and consequences for communities. A social capital framework requires a critical approach to policy development based on a more realistic understanding of the role of community informatics in the social and economic development of communities. European Union, national and local government initiatives can create monetary and physical resources via grants, lottery funding, etc. but many communities are hard pressed to attract sufficient human resources of skilled, confident and knowledgeable people. Networks that develop within the community between individuals and society are of vital importance in disadvantaged communities. These social ties can ameliorate the consequences of inadequate financial and physical capacity but they can be the hardest to mobilise in areas where they are needed most (Hancock et al., 1992).

Exploration of community networks demonstrates how ICT might foster wider and deeper interaction within and between communities (geographic communities or communities of interest). The network metaphor that underpins information age technologies can be extended to encompass the co-ordination of social life, allowing exploration of the attributes that underpin and sustain social networks, such as solidarity, altruism, loyalty, reciprocity and trust (Thompson, 1993) and the extent to which electronic networks might help to maintain, strengthen and proliferate such ties. In summary, it allows an exploration of the role of ICT in building social capital.

Notwithstanding the dynamic and variable nature of community, in this study the relationship of community to the concept of social capital is explored by examining the extent of connectedness and social cohesion.

3.4 Social Capital and Health

The theory and application of social capital has been extended to health in order to explain geographical variations in mortality and morbidity (Kawachi et al., 1997; Putnam, 2000) and has links with the population dimension of the 'new' public health and sociology of health and illness (Lupton, 1994; Rosenfeld, 1997; Baum, 2002). In the United States, States with low levels of social capital have been shown to have higher mortality rates and worse health status, confirmed in multi-level analyses (Kawachi et al., 1998; Subramanian et al., 2001). Muntaner et al. (2001) consider that the construct of social capital employed in the public health literature lacks depth compared with its uses in social science. This view is held largely because social capital in public health appears to be synonymous with social cohesion and social support and unable to be measured in isolation to other factors (including socio-economic circumstances) in relation to health outcomes. While there is empirical evidence of social capital in local communities (Bullen & Onyx, 1999), it has been found to not generally be related to economic well-being: that is, "more money and education does not necessarily mean more social capital" (p. 14) although a minimum level of material conditions may be a prerequisite for its development. However, welfare recipients (Family Support) were found to have lower social capital unless specific government or community interventions are made (Bullen & Onyx, 1999). Muntaner et al. (2001) raise questions about 'the culture of inequality' (p. 226) underlying the social capital and health association which has been around in various forms relative to social cohesion before social capital became popular. The notion of 'the culture of inequality' is premised on subjective responses to objective inequalities which ultimately determine the well-being of populations. The questions and concerns raised are about the lack of empirical support and the consequential policy implications towards anti-egalitarian public health policies – an unpalatable potential outcome for proponents of the positive links between social capital and public health.

Public health literature argues that social status and health are strongly related (Ross et al., 2000; Wolfson et al., 1999, Lynch & Kaplan, 1997). Veenstra (2001) notes that income that provides purchasing power and education that provides knowledge power are resources that "elevate or

sustain health status" where people with higher incomes have better health (p.73). Epidemiological studies have generally included income and educational attainment in their measures of socio-economic status (SES) (Adler et al., 1994; Fein, 1995). They have found relationships between SES and such health indicators as the incidence of cancer, heart or cardiovascular disease, hypertension, degree of obesity and morbidity and mortality in general. While noting this finding, Adler et al. (1994) and Veenstra (2001) are critical of the inclusion of SES in empirical epidemiological studies without much explicit theorizing about society and the social hierarchies within it to which SES may correspond. They consider that social capital presents itself as one of the theoretical conceptions of the nature of social relations and society that may assist population health researchers.

Despite individual SES and health indicator relationships within a population, Wilkinson (1996) has found that the income and health relationship does not translate across OECD populations and countries. For example, nations with a higher Gross Domestic Product per capita are not necessarily healthier nations. This is debated by Muntaner et al. (1999) and, although Ross et al. (2000) failed to find statistically significant relationships between income and inequality and health among Canadian provinces and metropolitan areas, the relationship between income inequality and health is strong among American states. It can only be concluded that the relationship between income and health along the social scale and across populations is complex. More broadly, connections between social capital and health are found in research on social networks, social support, civic engagement and local area relationships of trust and reciprocity that facilitate health and well-being (Cooper et al., 1999; Blaxter et al., 2001; Coulthard et al., 2001; Sixsmith et al., 2001; Campbell et al., 1999; Campbell, 2000; Whitehead & Diderichsen, 2001; Graham & Kelly, 2004).

Social support is considered to have a positive impact on health (Minkler, 1997; Baum, 2000; House et al., 2000; Turner, 2003), including empowerment of the individual and community through personal choice and control. Isolated individuals with inadequate social networks or supportive relationships have a lower rate of recovery from ill health or trauma than those that have effective social networks and supportive relationships (Lomas, 1998; Baum, 2000; Veenstra, 2001; Turner, 2003). Baum (2000) claims that people earning higher incomes are most likely to participate in social, civic and community activities. Based on the World Health Organization's findings on health determinants (Wilkinson & Marmot 1998, 2003), social

support networks are identified as a key determinant of health and well-being although empirical data for South Australia were not available for the report titled *Inequality in South Australia* (Hetzel et al., 2004). While Baum (2002) finds that social participation has strong links with health and civic participation does not, some aspects of civic participation such as volunteering and other forms of community support have not been fully explored. However, Kawachi et al. (1997) demonstrate the correlation between level of civic trust and a measure of self-reported well-being in America. While there are some perceived health benefits in rural areas (clean air, strong sense of community and non-sedentary work and leisure), mortality rates and some diseases continue to be higher in Australia than urban areas, particularly for young men, indigenous and non-indigenous, (AIHW, 2006) who may be socially isolated, engage in risk behaviours and are less likely to adopt preventive health measures (seeking information and services). Access to health services is also more limited in rural and remote areas.

Social participation in the local community can be a buffer to poor health as age increases and socio-economic status declines. Socio-economic status is a moderate predictor of health status and social participation declines with age. This presents a challenge for society to build the social capital of communities in a way that encourages social participation of men and women as they get older, and encourages the participation of lower socio-economic groups.

The theories of social capital and public health appear to resonate with each other with their focus on population level attributes and functions. Public health is a combination of science, population skills, and beliefs that is directed to the maintenance and improvement of people's health. It is one of the efforts organized by society to protect, promote and restore people's health through collective or social activities. Social support, high self-esteem and a sense of personal control are important determinants of health, best achieved in societies and communities that are relatively equal and have reasonable levels of social solidarity (Baum, 2002).

There has been a so-called 'new' direction in public health over the last decade (Petersen & Lupton, 1996; Lupton, 1999; Baum, 2000, 2002; Turner 2003). A distinguishing feature of public health is its focus on populations rather than the individual and in that respect the perspective is complementary to the theory of social capital as it focuses on individual actions and collective benefits. Public health also has a focus on equity and breaking down barriers between professional groups and professionals and laypeople. Public health is positioned as multi-

disciplinary and holistic, and health is seen in a cultural and economic context and not from a medical, scientific perspective. The concept of the citizen is central to the new public health (Petersen & Lupton, 1996), with policy implications for universal access to health care by providers and responsibilities and obligations for citizens for participation in health promotion and health promoting behaviour, self-care and risk management. Public health studies the distribution of disease and positive attributes of health in whole populations where the impact of changing a risk factor across a population can be predicted or evaluated, such as the impact of health promotion activities, e.g. a social marketing campaign for the cessation of smoking, by changing a causal factor in disease or a medical practice for early detection, intervention/treatment of a disease condition. The influence of non-medical, broad structural factors on health should also be measured, predicted and evaluated. This view of health links it to social justice, social change, social reform and social capital.

Nationally and internationally, preventive health care to reduce illness, health care utilisation and health care spending is increasing. This push is supported by research that has demonstrated conclusively the benefits of coordinated and effective illness prevention activities provided in the general practice setting (Starfield, 1994; Macinko et al., 2003). However, people most at risk for poor health and who have been shown in research to have the greatest need for and benefit from preventive health care are in lower socio-economic population groups (Harris & Furler, 2002) and are reluctant to consult a general practitioner for preventive health care. This is due, in large part, to the cost involved where the consultation in Australia is not able to be refunded or discounted through the Medicare system (Cheek et al., 2002).

Chapter 2 outlined Australia's policy position on health care, where access to health care is considered to be a basic human right and a necessary prerequisite of an individual's ability to fully participate in social and political citizenship. Universal access for health care draws parallels in universal access to the Internet and to online health information resources aimed at population/society-level benefit. In the context of this thesis it is relevant to consider potential health impacts of social capital produced by a connected and information-enabled society. From the theoretical and empirical evidence presented in this chapter, although somewhat scant and inconclusive due to the complex nature of the social capital and its application, the digital divide has a likely negative impact on the social capital production in an information-enabled society and also may have a negative impact on health outcomes through people's lack of opportunity to

access health services, health information and the network effects of health promotion and social support from cooperative and supportive relationships.

3.4.1 Health Promotion

In the context of health policy, health promotion and online health information are linked as Internet-based health information potentially provides population-wide distribution of key health messages for preventive health care. Significantly underpinning both public health and population health disciplines is the concept and practice of health promotion for education, information and advice about health risk factors. The concept of social capital also supplies health sociology and health promotion with a conceptual framework for group-level influences on individual's health. Health promotion and primary health care include strategies for the prevention and early detection of disease and early intervention of treatment or self-management (Hancock, 1992; Starfield, 1994; Campbell, 2000; Hawe & Shiell, 2000; Healy, 2001; Harris & Furler, 2002). The promotion of health across a population is part of the science of health promotion and social marketing. Health promotion is an important health policy construct, emanating from the Ottowa Charter for Health Promotion (1986).

The nexus of the social capital and public health concepts would focus on aggregate social capital and the collective health of populations rather than individual social and health status. The Ottowa Charter defines health promotion as the process of enabling people to increase control over, and improve their health. The Ottowa Charter identifies the fundamental conditions and resources that are necessary for good health. These are peace, shelter, education, food, income, a stable ecosystem, sustainable resources, and social justice and equity. Wellman (2000) acknowledges that networks and social support are also considered necessary for good health and, notably, has found that people consult friends first, then physicians for health information. This infers elements of risk where health information and information sources are concerned both in regard to access and non-access. 'Risk' is relevant to subjective analysis of access to health information, regardless of the means of access, and is relevant to contemporary society and both individual and population health.

3.4.2 Risk and Health

The World Health Organization defined various levels of health risk (1984): relative risk, and attributable risk which relates to (i) the frequency of the unwanted outcome when the risk factor is present, (ii) the frequency of the outcome when the risk factor is absent, and (iii) the frequency of occurrence of the risk factor in the community. Attributable risk is important for setting social priorities and policy development. The health sciences have been largely concerned with a construct of risk that enables prospective and retrospective explanation of characteristics deemed to be conducive to harm. Modern health disciplines, notably those of public health and health promotion, have been heavily reliant upon this understanding of risk (Hancock, 1992; Starfield, 1994; Campbell, 2000; Hawe & Shiell, 2000; Healy, 2001; Harris & Furler, 2002).

Health promotion as an organizing construct of health policy is particularly relevant to this study, as its principles underpin universal access to health services, reduction of health inequalities and minimisation of social exclusion (Ottowa Charter, 1984; World Health Assembly, 1998). Health promotion and health information are linked as the policy intent for the provision of health information and information about health services is to reduce health risk. Nettleton and Bunton (1984) critique risk in the context of a wider examination of how the technologies of health promotion serve to monitor and regulate populations on the one hand while constructing particular identities on the other through the creation of the health promoting self. They argue this occurs through self-observational practices, the creation of healthy bodies and healthy subjectivities that are expressions of social regulation. Central to this process is the self-recognition and management of risk, with implications for the self, and its relations with others. Self-management of risk is seen as a major premise of neo-liberal rationality; encouraging calculative prudence towards risk; self-accountability and the capacity to care for one-self and for others. Contemporary health promotion constitutes the healthy body as a composite of risks, potentially ill and subject to a proliferating repertoire of risk-reducing interventions. As such risk functions to distance experts from direct intervention into personal lives whilst inciting the agency of subjects in individual risk management, and therefore in practices of intensive self regulation. Is this what is intended with self-empowerment with regard to health in an information society? Lupton (1995, 1999) has challenged medicine with a socio-cultural and political critique regarding the construct of risk and truth as expert knowledge but does not ascribe to the notion of the traditional opposition of state with civil society of coercion and

control. The tension between state and community or government and constituents has implications for electronic government and health information policy.

As a subjective concept, trust is a social or psychosocial factor that has links with social relations and with health. It is also linked with social capital as one of the social determinants of health (Marmot & Wilkinson, 1998, 2003; Macinko & Starfield, 2001, 2003; WHO, 2003). As indicated in Chapter 4, empirical research so far has not adequately addressed the complexity of the concept of trust which, in any case, appears to lack an integrative theory (Volkens, 2002). Volkens' (2002) concept of trust differs from that of trust in Putnam's theory of social capital where civic trust is understood to create social trust and therefore must be a prerequisite to social capital. Volkens' (2002) position on social capital and trust is supported also by empirical evidence about social trust as an indicator of system trust (Job, 2005) and starts to at least broaden, if not shift, the debate about the causes of the digital divide away from income and education.

3.4.3 Social Determinants of Health

Muntaner et al. (2001) call for a broadening of public health conceptions of social capital beyond the communitarian notion of civic participation and its indicators and towards broader social networks and linking social connections to social institutions that help determine which individuals and groups have access to and control over the health-enhancing resources in the society (p. 219). In social epidemiology social capital presents a model of the social determinants of health that excludes any analysis of structural inequalities such as class, gender or racial relations in favour of a horizontal view of social relations based on distributive inequalities in income. Eckersley (2001) highlights distinctions between the materialist determinants of health and the psychosocial consequences as well as the debate about which have the greatest impact on health. The materialist determinants are the absolute factors associated with low socio-economic position, including poorer quality living and working conditions, food and access to health whereas advocates of the psychosocial perspective (Marmot & Wilkinson, 1998; Lynch et al., 2000) argue that people's relative position in the social hierarchy is more important than material factors as the causes and effects of inequality are more complex than materialist determinants. For example a psychosocial factor could include low self-esteem and depression. This is an

important debate in the context of the potential relationship of health, social capital and the digital divide which can also be claimed to be more complex than the materialist determinants.
The effect of social factors on health is a mainstream health issue worldwide (Marmot & Wilkinson, 1998). Public health authorities worldwide have recognised that addressing disease and lifestyle is insufficient to improve the overall health status of populations and minimise inequities in health status between social groups. There is broad agreement that social factors, or the social determinants of health, are a valid concern of the health sector and that a comprehensive strategy for better health is to counter the life circumstances that give rise to poor health and foster those that generate good health.

From a population health perspective, 'health' has been broadly defined as being: "a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity" (World Health Organization, 1986). This definition includes illness and disability that can be measured on a population basis and enables social determinants to be incorporated into social well-being. The Australian Better Health Commission (1986, p. 2) extended the definition:

> The basic requirements for health are a suitable diet, decent shelter, companionship, an adequate income and a healthy environment. In addition, people require information, opportunities, and social and behavioural skills to be healthy.

The causes of ill health are complex and interrelated and include peace, shelter, social security, social relations, food, income, empowerment of women, a stable eco-system, sustainable resource use, social justice, respect for human rights and equity, and poverty and income inequality (WHO, 2003). This declaration has led to the development of the term 'social determinants of health', further defined by the establishment of an international Commission on Social Determinants of Health by the World Health Organization to focus on poverty, social exclusion, poor housing and poor health systems (Marmot & Wilkinson, 2003) and a broader role for discipline of public health (Queensland DH, 2000, p. 26):

> Social and community influences, living and working conditions, and broad socio-economic, cultural and environmental conditions also affect health… These determinants of health are often beyond the control of the individual; however, collective action by society can function to improve the health of the community.

The Queensland Government report on the Social Determinants of Health (Queensland DH, 2000) also supported the existence of a link between poverty and health and acknowledges the

link between social capital and better health outcomes. It found that income is the single most important modifiable determinant of health and is strongly related to health and well-being, and that people in poverty experience the highest rates of illness and premature death.

The ABS (2000) also supports the assertion that people with strong family, cultural and community ties have better health than people who are socially isolated and that education is critical in determining people's social and economic position and health status. Greater income inequality within society may also be associated with increased overall mortality. Both poverty and income inequities have increased in Australia over the last decade. A low level of education is also associated with poor health status. According to the ABS (2000), in 1998, 53% of the population aged 15-64 years had no recognised post-school qualifications. The Census results for 2000 found that single parent families, people with mental illness, people with disabilities, people living alone and older people are particularly vulnerable to social isolation. The conclusion was reached that reduced social connectedness was caused by unemployment, frequent change of residence, and single parent and one-person households. Therefore, social cohesion or connectedness may be linked to the health of individuals and communities.

Social exclusion is relevant to social capital in so far as it links the social elements of exclusion to material deprivation and poverty and focuses on the processes of marginalisation (Bullen et al., 1999; Berman et al., 2000; SEU, 2005).

3.4.4 Social Exclusion

The founding principle of the World Health Organization is that enjoyment of the highest attainable standard of health is a fundamental human right and should be within reach of all "without distinction for race, religion, political belief, economic or social condition" (WHO, 1984). The responsibility of Western governments to service all people and therefore ensure equity of access to information and services is evident in government social policy and also in particular service programs (e.g. public housing, domiciliary care, disability services, family and community services, etc.). In 2002, the South Australian Labor Government articulated its social inclusion policy aimed at reducing socio-economic disadvantage in the state. The policy is based on the United Kingdom's Blair Government Social Exclusion policy and describes disadvantage

as being closely associated with denial of opportunities, feelings of isolation and a sense of social exclusion.

Addressing social exclusion has formed the logic for much of the 'Third Way' policy agenda of the Blair Labor Government, with one of its aims being to reduce exclusion from social capital (SEU, 2005). This expectation of the role of the state in the production and application of social capital resonates with Bourdieu's formulation of social capital. The South Australian Labor Government's Social Inclusion Initiative formulated in 2002 is described as: "the cornerstone of a different way of tackling pressing social issues". It recognises that issues such as poor health, homelessness, crime rates and poverty are all interconnected and their causes stem from social exclusion. The Social Inclusion Initiative is about "finding ways to make sure everyone who lives in South Australia has access to all that our society offers; helping people to live fulfilling lives and to feel a part of the community" (DPC, 2002, p. 1).

The policy framework and official documents outlining directions and strategies focus on collaborative government efforts being required to address major problems of homelessness, drug abuse and low school retention rates. Some of the underlying issues to these major problem areas for the social inclusion initiative are poverty/low income and low level of education, which have also been identified as key barriers to accessing online information and services (Lloyd & Hellwig, 2000). Phipps (2000) describes an "outpouring of energy and creativity" (p. 39) by individuals, public and private sector organizations and communities into ways of using ICT and the information society to create inclusion, using ICT as a "conduit for social inclusion". ICT potentially provide opportunities to reduce and even prevent social exclusion (SEU, 2005; Muir, 2004; Meredyth et al., 2006).

It is not clear from the literature on social capital whether the Internet is widely considered an effective tool for the development of social capital even if it can assist with social inclusion. For example, evidence from simulated public good experiments suggests that computer-mediated communication may decrease levels of trust or reciprocity when compared to face-to-face interaction (Palfrey and Rosenthal, 1988; Rocco & Warglien, 1995). In addition, Berry et al. (1993) in their study of urban participation, argued that face-to-face communication is necessary for citizen participation to be effective. A meta-analysis of experiments from 1959-92 found that face-to-face communication significantly raised the cooperation rate on average by more than

45% (Ostrom, 1990). There are contrasting views, therefore, regarding ICT where it is considered to be both a threat to social inclusion and present opportunities for social inclusion.

The social inclusion policy initiative is premised on the basis that in order to achieve social inclusion, issues such as poor health, increasing crime rates, increasing problem drug use, poverty and decreased social cohesion must be addressed in an interrelated manner. There are three key elements in a policy response to social inclusion: (1) it is informed by a diversity of views, (2) it assumes that to ameliorate difficult social problems, multiple solutions are required, and (3) it focuses on the most vulnerable and/or disadvantaged (SIU, 2002).

Social exclusion refers not only to the economic hardship of relative economic poverty, but also incorporates the notion of the process of marginalisation – how individuals come, through their lives, to be excluded and marginalised from various aspects of social and community life (Shaw, Dorling & Smith 1999, p. 222). Social exclusion is considered to include a number of dimensions:

> Exclusion processes are dynamic and multidimensional in nature. They are linked, not only to unemployment and/or to low income, but also to housing conditions, levels of education and opportunities, health, discrimination, citizenship and integration in the local community.

The term social exclusion also refers to exclusion arising from cultural differences and discrimination, as well as the relationship between the included and the excluded. That relationship is one of the many 'divides' that social inclusion policies aim to address. Norris (2001) considers that social exclusion and the extent of relative deprivation have a major impact on health and premature death. That is, that the harm to health comes not only from material deprivation but also from the social and psychological problems of living in poverty. Poverty, unemployment and homelessness have increased in many countries and the digital divide may be another differentiator between the advantaged and the disadvantaged.

3.5 Social Capital and ICT

As explored earlier an information-enabled society entails an environment where connections between people can be enhanced, isolation can be reduced, and supportive relationships can be established. These aspects of social support, as explored in this chapter, are said to have a positive impact on health and on empowerment of the individual and the community.

Information and communications technologies (ICT) such as the Internet have a role to play as resources and enablers of social capital. Therefore, those individuals and communities on the disadvantaged side of the digital divide could be missing an important mechanism for accessing information and network communications and benefits that the tools of modern society allow. These benefits include the promotion of 'health knowledge' and social support as the products of social capital.

The South Australian Information Economy Plan (DAIS, 2002) discussed in the previous chapter, positions online services and virtual network multiplier effects to secure economic capital and return social benefits. Social capital and 'quality of life' indicators are intended to measure the success of the various information economy initiatives. An important point on social capital measurement made by Cox (1998) is that collaboration itself may only be worth measuring if the outcomes can be measured instead of the number of collaborations. It remains to be seen whether quality of life and social capital indicators can be distilled from other societal impacts.

One of the major policy directions for online service delivery is the creation of an information-enabled society. In response to the South Australian Government's Information Economy Plan (IE2002), the South Australian Department of Human Services (DHS) made a commitment to working towards an information-enabled society. This was announced in the publication called *Human Services in the South Australian Information Economy*, which identified the key outcomes for the South Australian community expected from participation in an information-enabled society. These included: improved health and well-being; increased self-reliance; increased community participation, and increased social capital. DHS supported the IE2002 for its emphasis on promoting social inclusion and shifting the balance from vulnerability to opportunity. The policy direction echoes the overarching political sentiment and expresses a commitment by DHS to monitor the strategies used to address the digital divide and expresses the idea that: "an increase in the digital divide will serve only to erode rather than to build social capital" (2002, p. 40). Therefore in order to address the problem it: "plans to establish devices in each of its service outlets which will be available for clients to get access to web-based services, providing access for clients who otherwise would not be able to participate equitably in the information-enabled society" (2002, p. 40). The Department of Human Services also confirms that, in the move towards an electronic service delivery model, it aims to empower clients with more information and more control over the processes that affect their relationship with the

organization. This is reflected in its report, *Electronic Service Delivery: A Strategic Framework for Development 2001-2002*, which aims to develop an information-enabled economy that will benefit South Australia. Analysis of the report raises several questions: To what extent is it possible to ensure access for those unable to participate can do so? Is there evidence of benefit? How is the momentum of these policy initiatives carried through to evaluation when they are time-limited and subject to political and resource constraints?

Wellman et al. (2001), having stated that utopians claim that the Internet provides new and better ways of communication, while dystopians argue that the Internet takes people away from their communities and families, have also found that the effects of the Internet on social capital are supplementary, unlike the predictions of either the utopians or dystopians. Internet use supplements network capital by extending existing levels of face-to-face and telephone contact. Internet use should also supplement offline interpersonal interaction, not affect organizational participation and increase commitment to community.

3.5.1 ICT and Health in Australia

As explored in the previous chapter, government funded health services are increasingly using ICT to promote health and advise about services that are available to the general public and to health practitioners. The Australian Government 'Electronic Health' initiative, Health Online, now HealthConnect (http://www.health.gov.au/internet/hconnect/publishing.nsf/Content/home), launched in November 1999, aims to provide the basis for a national strategic approach to using information in the health system, and to promote new ways of delivering health services by harnessing the potential of new and emerging online technologies. An example is consumer access to one's own health records online. The national action plan for the health care sector was developed under the auspices of the National Health Information Management Advisory Council (NHIMAC) by the Commonwealth Department of Health and Ageing.

As discussed in the previous chapter, the South Australian Government's HealthySA website or health information Internet 'portal' is an example of electronic service delivery, launched in June 2000. It is based on a self-described consumer-centric view of health information needs. In this web-based service, 'health' is used in its broadest context as 'well-being', i.e. not just the absence of illness, thereby including public housing and community service information as well as

specific information about health conditions and treatments. The described service aims are to make it simple for consumers of health services to find quality health information on the Internet (www.healthysa.sa.gov.au). The equivalent Australian Federal Government service is Health Insite (www.healthinsite.gov.au).

The above services available online are among those that 'disadvantaged' people in the context of the digital divide may not be able to access. Strategies to improve access may include publicly funded or subsidised facilities for Internet access and support. Several questions can be raised: Is there enough being done by government to improve access? What else can be done? Will the strategies focused only on material access be effective?

3.5.2 ICT as a Conduit for Social Inclusion

Dissemination of the ability to network electronically as widely as possible is considered to be central to the creation of a strong democracy facilitated by ICT (Hague and Loader, 2002, p. 12). In addition to the neighbourhood ICT enabled social capital project in Victoria mentioned in section 3.3 (Meredyth et al., 2006), Bolam et al. (2006) demonstrate improvements in social participation through a project using ICT as a conduit for social inclusion targeting socio-economically disadvantaged people in Nottingham, United Kingdom. Hague and Loader (2002) believe that electronic community networks will overtake, but potentially enhance and expand existing social networks and, as such, will be subject to the same economic and political constraints. These projects are subject to those constraints which threaten their future sustainability and maintenance of community benefit. Chambers and Clarke (1987) found that disadvantage from the effects of ethnicity or race, socioeconomic status, gender, and school ability were cumulative. More disadvantaged students participated less in class computing, gained lower computing knowledge and had less positive attitudes toward computing. That is, computing increased rather than reduced inequities and requires sustained intervention particularly to support the disadvantaged.

The design of information systems and service delivery mechanisms cannot be totally overlooked in the analysis of access or non-access. Spring (1997) found that workers in an organization or social relationships saw social capital as investment in a relationship; furthermore, computers preserve and enhance human capital. System design could either increase or decrease human capital through an interactive social interface. In discussion systems and social capital, Spring

(1997) proposed that social capital could be thought of as a term analogous to “human capital”, which was itself created by analogy to the term “physical capital”.

Social exclusion is a complex and multi-faceted condition and must be recognised as a long standing social problem which existed and exists irrespective of the development of ICT and the information society (Phipps, 2000). Electronic communications are not inherently a cause of social exclusion but lack of access to the means of communication, increasingly used by the rest of society has the potential to worsen the relative position of excluded individuals and groups. As new ways of learning, working and engaging with others develop, those whom are not enabled access will be additionally excluded. The increasing trend toward use of electronic communication for health and other services may exacerbate social exclusion, but may in some ways offer opportunities for social inclusion, especially for less mobile groups and for social discussion, exchanging information, for education and training. This could also have an impact on individual and community health and well-being.

3.6 Conclusion

Why is social capital important in relation to the digital divide? It is important because the notion of the digital divide represents a breakdown in networks that are fundamental to social capital. Social capital is not a precise concept but it relates to the resources available within communities as a consequence of networks of mutual support, reciprocity, trust and obligation. There is agreement among researchers of concepts concerned with social capital that it is a multi-dimensional concept, each dimension requiring measurement (ABS, 2002) and that it is a property of groups, not of individuals although individuals may benefit from it. Although there is no universal agreement networks have been assessed by the ABS social capital framework as the key central social capital element. The use of networks as the basis by which to organize elements of social capital was reported by the ABS to have been generally well accepted during the Australian government and community sector consultations conducted (ABS, 2002).

As explored in this chapter, there are contradictions in the literature about what actually constitutes social capital. However, some common features are that it relates to relationships, shared understandings and social norms, attitudes and values, social and civic engagement, working together to achieve common goals, but different people have different views about

where the cycle starts: which are the producers, which the results and which the essence of social capital. Another disagreement centres on whether the term should only be used for unequivocally beneficial relationships and norms since the concept of social capital is understood to also have a 'dark side' where individuals and groups may be excluded from the beneficent social networks and even those networks might conspire against them (for example, the Mafia or Islamic terrorist groups).

Social capital is related to variations in health outcomes in a population and the causes and effects of the digital divide have the potential to reinforce existing health inequalities. Social capital can contribute to reducing health inequalities but it is only one part of an approach to health improvement. It must include strategies that raise the absolute income levels and material living standards of the worst off in society.

Public health is a combination of science, population skills, and beliefs that is directed to the maintenance and improvement of the health of all people. It is one of the efforts organized by society to protect, promote and restore the people's health through collective or social activities. Social support, high self-esteem and a sense of personal control are important determinants of health, best achieved in societies and communities that are relatively equal and that have reasonable levels of social solidarity. Baum (2002) believes that the development of supportive societies and communities should be at the heart of public health strategies for the future. The necessary strategies should include public policies, legislation, public interaction and local activity. Social capital and the trust it relies on are likely to be central to public health endeavours in the new millennium.

One of the means by which health can be promoted is by using social capital as both a resource and a product of effective networks. The Internet, an ICT, is a resource – a means to enable social capital and promote health. Social exclusion is relevant to social capital in that it links social elements to material deprivation and poverty and on the processes of marginalisation. Networks are central to social capital and can be considered to be a metaphor for social inclusion. Perhaps the most important developments is the many-to-many nature of communications facilitated by the latest ICT means that citizens and communities can become information providers themselves, sharing information about themselves and shaping an identity

for dissemination within the local community and with local service organizations and to the world at large.

Providing physical access to ICT is one thing; giving citizens good reason to want to make use of them is quite another. Is the value of ICT just e-government or 'information age' rhetoric and is the digital divide a scare tactic concerning the social and economic exclusion awaiting individuals and communities that do not get wired? This is contingent upon the type, quality and relevance of content to which they provide access and whether it is provided at a cost that does not present a barrier to access. It is important to understand the information needs, the patterns of information retrieval and the barriers to accessing information.

Community networks allow the exploration of how ICT might foster widened and deepened interaction between and within communities (whether geographic communities or communities of interest). The network metaphor that underpins Information Age technologies can be extended to encompass the coordination of social life, allowing exploration of the attributes that underpin and sustain social networks, such as solidarity, altruism, loyalty, reciprocity and trust (Thompson, 1993) and the extent to which electronic networks might maintain, strengthen and proliferate such ties. In summary, it allows an exploration of the role of ICT in building social capital.

There is a form of technological determinism that regards one-way media, such as radio and TV as an anathema to public participation while new media such as the Internet possesses inherently democratic and libertarian characteristics (utopian). This potentially enables empowerment of people in political communication and interactions.

On a fundamental level, however, the issue is whether the Internet can effectively develop social capital, and particularly the trust and norms of generalised reciprocity that are claimed to be the essential components of effective communities. The next chapter presents the profile of the sample used for this research, selected on the basis of characteristics of social disadvantage relevant to the digital divide which are also relevant to the perceived variable ability to produce and apply social capital.

CHAPTER 4: METHODOLOGY

4.1 Introduction

This chapter explains the research design and methods used in this exploration of the relationship between the concepts of social capital (Putnam, 1986, 2000; OECD, 2001; Lin, 2001) and the digital divide (NTIA, 1995, 1998; Loader, 1998; Norris, 2000, 2001). In particular, how they intersect with government online health information is noted with consideration of the subjective aspects which impact on access to the Internet and to online health information. Social capital is a concept concerned with productive social and societal connections between people and communities. Social capital is a multi-dimensional concept applied in public policy for social services, health, crime prevention and education for improved health and well-being resulting from social connectedness and local/state government participation (Wilkinson, 1996; Baum, 2000).

The opposite of social connectedness is the social isolation/marginalisation of individuals and groups. Implicit in the concept of social capital is that it aims to guard against the potential detrimental social effects arising from the lack of resources and disconnection from communities and civic society. While there are benefits resulting from the use of ICT to deliver government services, including ready access to health information resources for public consumption, there is also an amplification of inequality – producing a new societal divide – the 'digital divide' - concerned with the problem of lack of equity in society. This refers to access to the benefits of information and communications technologies, in particular the Internet, as well as the extent to which it is used and by whom (NTIA, 1995, 1998; Loader, 1998; BF, 1998, 1999; Lloyd & Hellwig, 2000; Norris, 2000, 2001). The digital divide can be seen as a metaphor for social exclusion relevant to public information access and use or, specifically, exclusion from infrastructure and services to which people have rights as citizens in a democratic, information-enabled society. The contemporary social policy theme of social inclusion or exclusion is relevant to the concepts of social capital and the digital divide and is evident in the social liberal policies of British Labor Governments and the Australian State Labor Governments. For example, the Labor Government policies of the South Australian Government (DPC, 2002) and the United Kingdom (Social Exclusion Unit, 1998; 2005) for social inclusion/exclusion aim to improve social connectedness, civic participation and community engagement in public service

planning and decision-making and to improve government service delivery by 'joined-up' approaches.

Government online health information services were selected as a particular area of electronic government service delivery due to the stated responsibility of government to service 'all' citizens (DPC, 1994, 2002; DH, 2002; DHA, 2003) and address the policy intent for social inclusion and equity of access to social services. Health information service delivery is also relevant to the theories and concepts of social capital and the sociology of health and policy responses to the problem of the digital divide.

The interpretive methodology as outlined in this chapter was designed to explore the phenomena of social capital and the digital divide and the relationship between them and with health, using a South Australian case study regarding access to government online health information. The case study explores access to publicly-funded health information services via the Internet by people who were perceived to be 'disadvantaged' in the context of the digital divide (Lloyd & Hellwig, 2000). Qualitative and quantitative data were collected via a survey completed by individual participants and eight focus groups comprising participants with various aspects of 'disadvantage' as informed by the literature review in Chapter 2 and Chapter 3, within the two major categories of participants, Internet Users and Non-Users. The analysis was conducted within a qualitative research paradigm with an emphasis on subjective aspects which impact on access to the Internet and to online health information. This method is recognised as having the potential for revealing complexity in the research topic and placing value on the insights expressed by the voices of participants.

4.2 Research Problem

Social policy and government policy concerned with access to online health information is likely to benefit from an examination of the intersection between concepts of social capital and the digital divide. This thesis also privileges the exploration of whether Internet Users, particularly those who access online health information, have the potential for higher social capital than Non-Users.

4.2.1 Key Research Questions

The three key research questions explored for this study are:

(1a) *Is social inclusion enhanced by the Australian Government and related South Australian Government policies for online health information?*

(1b) *If so, how?*

(2) *What can be learned from the links between social capital and the digital divide that informs and challenges electronic government and health policies and the body of social knowledge?*

(3) *Are Internet Users with access to online health information more likely to have higher social capital and, potentially, better health and well-being than Internet Non-Users? That is, how does the relationship between Internet use, social capital and health have an impact on social capital for Internet Users and Non-Users?*

4.2.2 Sub-Questions

The five key sub-questions contributing to the main research question are as follows:

4.2.2.1 *How does the inability to access the Internet contribute to social exclusion, particularly in regard to knowledge about health?*

4.2.2.2 *How do subjective meanings about Internet use and access (as opposed to material access) contribute to social policy and government policy outcomes regarding online health information?*

4.2.2.3 *What relationship is there between social capital, social networking and ICT and the potential for a digital divide?*

4.2.2.4 *What are the relationships between social capital, empowerment and citizenship?*

4.2.2.5 *What are the relationships between trust, risk and social capital? How are they relevant to electronic government and health policies?*

4.3 Research Design

4.3.1 Literature Review

The theoretical and conceptual framework used was informed by a literature review process that spanned ten years, from 1996-2006. Initially, the literature review focused on the concepts of the digital divide and social capital and their application in government and social policy, particularly in human services and health information service delivery in the electronic/information age. Empirical evidence of the relationship between ICT and social capital was also considered to be of particular relevance to this research, as well as evidence of the relationship between social capital and health. Of particular interest were the use of ICT in government service delivery and the policy response by governments with electronic service delivery agenda regarding the emerging 'problem' of the digital divide.

Concerns about the digital divide have arisen due to the increasingly widespread use of information and communications technologies for people's individual and community interests, work, education and lifestyle. Information and communications technologies, such as the Internet, were fast becoming adopted by government as new methods of service delivery that would potentially improve access and reduce costs associated with government services, particularly information services and transaction-based services, such as payment of motor vehicle registrations. The concept of the 'digital divide', however, is based on expectations and

evidence of social inequalities and the inequitable distribution of resources that enable access to public information resources and other online applications.

In order to approach the research problem using a service area for which government has a stated responsibility to serve citizens equitably, a decision was made to examine health information services that were web-based. The online health information service that was used to guide the Focus Group discussion was the South Australian Government HealthySA website (http://www.healthysa.sa.gov.au), developed and managed by the South Australian Department of Health. This warranted extending the literature review to equity of access to publicly-funded health services using information and communications technologies, and exploration of the relationship between health and social capital. The World Health Organization (1999, 2003), OECD (2001) and health researchers support the notion that better health outcomes could be achieved for individual and communities with higher social capital (Lomas, 1998; Baum, 2000; Veenstra, 2001; Turner, 2003). Epidemiological evidence exists for the relationship between social support, which is a characteristic of social capital, and health. Broadhead et al. (1983) reviewed that evidence and concluded that ameliorative and protective effects of social support have been reported for numerous disease outcomes.

Social capital in a societal context may include social networks for institutions, relationships, attitudes and values that govern interactions among people and contribute to economic and social development. It includes the shared values and rules for social conduct expressed in personal relationships, trust, and a common sense of 'civic' responsibility, which makes society represent more than just a collection of individuals (World Bank, 1998). This definition together with other relevant findings in the literature review informed the research design and data collection methods.

The literature review identified several factors that were considered to be barriers to accessing information and communications technologies, specifically the Internet, and thereby constituting the digital divide. The two outstanding factors were income and education. People on low incomes and with low levels of formal education were the most unlikely to have access to Internet resources or have the ability to use them. Other aspects of people considered to be 'disadvantaged' and consequently situated on the negative side of the digital divide included people with certain (dis)abilities, with poor or non-existent English speaking skills, aged over 50

years, and people living in rural or remote areas. Males were identified as higher users of the Internet than females and the likelihood of Internet use declined with age.

While many other aspects were identified as indicative of 'disadvantage' in the context of the digital divide, those four categories of potential disadvantage appeared consistent in the literature on the digital divide with low levels of income and formal education as central within those categories (NTIA, 1995, 1998; Lloyd & Hellwig, 2000). In regard to health, the aged are known to be the highest users of health services and have a high need for preventative and early interventionist health care which includes requiring health information for informed decisions regarding diet and lifestyle and health treatment choices (DHS, 2001). Living in a rural or outer metropolitan area means that a person is more likely to be 'disadvantaged' by having limited access to health information and services as well as other social infrastructure (SACOSS & University of South Australia, 2001).

Accessing a broad but contained sample of people, each participant purposely selected due to having an aspect of potential 'disadvantage', separated into groups of Internet Users and Non-Users, allowed for the further identification of the diversity of the sample that spanned many areas of social categories, defying categorisation by a single dominant aspect. This unintended diversity, although it increased the complexity of the analysis, was considered ultimately beneficial to the process and reflective of a pluralistic society. After all, the purpose of the analysis was to understand without needing to generalise in all cases. Although the research design and data collection had been informed by the literature review prior to late 2001, the analysis was informed by the extended literature review. This process enabled a more critical retrospective analysis of the research design that had been shaped by the available research literature and gaps identified at the time. It also enabled comparisons and analysis to be made of the implications of more recent research.

4.3.2 Data Collection Methods

The research problem and the theoretical and conceptual framework shaped the research questions and informed the selection and design of the methods for data collection. A survey was selected as the most appropriate method to enable a study of the distribution of characteristics in the sample (Mason & Bramble, 1989; Denzin & Lincoln, 1994) and the use of focus groups was

selected to enable the development and analysis of subjective meanings regarding Internet access for online health information and exploration of the perceptions, attitudes and relevant experiences of research participants (Morgan, 1988; Kreuger, 1988; Stewart & Shamdasani, 1990; Morgan, 1993; Kitzinger, 1995; Puchta & Potter, 2004).

The survey was selected as it was considered to be the most effective means of collecting relevant individual quantitative data to show the distribution of characteristics across the sample and would provide a more detailed understanding of the socio-demographic profile of the purposely selected sample that was based on the theoretical and conceptual framework (Mason & Bramble, 1989; Denzin & Lincoln, 1994; Mason, 2002). The survey contained simple, closed questions including multiple choice of a range of answers that were relevant, for example, to identify consenting participant age and income demographics and other relevant characteristics. For the survey, participants were asked to give their highest attained level of formal education and their income range and age. The survey was also designed to collect individual information about use of the Internet and health information seeking behaviour. Survey question types, length and approximate time to be taken to complete were guided by expert literature on relevant research methods (Mason & Bramble, 1989; Denzin & Lincoln, 1994). There were two versions of the survey with questions in common as well as different questions directed specifically to Internet Users (Appendix 2a) and Non-Users (Appendix 2b) for individual responses. The survey for Internet Users would take approximately up to 15 minutes to complete and the survey for Non-Users would take between approximately 5 and 10 minutes.

The method selected for collecting qualitative data was the use of focus groups, particularly as that form of group interview uses group interaction/group dynamics and informality as part of the method in addition to enabling the collection of data from several people simultaneously (Morgan, 1988; Kreuger, 1988; Stewart & Shamdasani, 1990; Morgan, 1993; Kitzinger, 1995; Puchta & Potter, 2004). Focus groups are a technique that has advantages over other methods, such as one-to-one interviews, for specific types of research but are not an easy option. Both Morgan and Kreuger caution that focus groups are complex rather than time-savers and do not produce conformity in focus group responses, should that be the perceived or desired outcome by researchers. Focus groups can be the most appropriate method for researching particular types of questions that seek expression of attitudes, experiences and reasons and where there are likely to be many cultural variables, such as in cross-cultural research work and work with ethnic

minorities. Kitzinger (1995) found that the use of focus groups is sensitive to cultural variables and is particularly useful for exploring people's knowledge and experiences regarding health services, for example on differential use of health services. Focus groups can be used to identify group norms and cultural values, and can elicit strong and potentially contrasting opinions which are more likely to be expressed in peer group settings. Therefore, the composition of the focus groups is important, comprising some aspect of homogeneity relevant to the theoretical sampling to capitalize on shared experiences. Given that the main purpose of the focus groups in this research study was to explore perceptions and attitudes of 'disadvantaged' people toward the Internet in the delivery of online health information, the discussions, questions and anecdotes that could be stimulated and shared by participants during the focus group sessions were considered to be of potentially greater value than one-to-one interviews using direct questions. Open-ended questions should be used for focus groups as a guide to encourage participants to explore issues and, to some degree, determine priorities for discussion and take the research into new directions (Kitzinger, 1995).

Another opportunity presented by focus groups is the collection of valuable data potentially producing unintended as well as intended results. Puchta and Potter (2004) refer to the value of "talking" in focus groups for producing group participation and useful and varied opinions. Data captured from the sessions could include participants' questions and be presented in their own informal conversational vocabulary as distinct from formal written or spoken responses from fixed, direct questions. Focus groups can also participate actively in the analysis of the qualitative data generated by the sessions as the discussions between participants and with the moderator/facilitator can identify major themes, common experiences, group consensus or contrasting points of view during the sessions. New knowledge, different attitudes and stronger opinions may also be formed by participants during the focus group process due to participants' exposure to new information which may be presented in focus group sessions and may arise from group interaction. For example, Internet non-users finding out from other non-users how they might overcome a perceived access barrier or be encouraged to more confidently affirm their disinterest in the Internet.

The composition of the focus groups was guided by the intent to bring together groups of consenting participants who possessed a common aspect relevant to 'disadvantage' in regard to Internet access and use, e.g. aged over fifty years or where English is not the primary language or

dominant cultural background. The design of the focus groups sessions included guided discussion using open-ended, flexible questions for group discussion (Morgan, 1988; Krueger, 1988). The questions were common to each session with different questions as relevant for Internet Users (Appendix 3a) and Non-Users (Appendix 3b). The focus groups were used to collect qualitative group data for greater depth of analysis on subjective issues of Internet access and use or non-use. The subjective nature of the topic was part of the rationale for the use of focus groups. Participants completed the survey which included basic questions about their Internet Use or Non-Use before participating in focus group sessions. The discussion in the focus groups enabled relevant questions and themes to be explored as well as new questions and themes emerging from responses to the original semi-structured questions. Discussion and debate arose from participants' questions in addition to the perceptions and attitudes expressed and experiences and anecdotes shared.

4.3.3 Sampling

This research study has used a theoretical sampling model for the purposeful composition of the sample used to produce data via the survey and focus groups (Miles & Huberman, 1994; Mason, 2002). The sample was not intended to be representational but could be stratified to identify typical and deviant responses, with potentially transferable results. Australian research on the digital divide (Lloyd & Hellwig, 2000) refers to people on the disadvantaged side of the digital divide as being people who are low income earners, had poor or non-existent English language skills and poor levels of computer literacy, aged over fifty years old, lived in rural or remote areas and/or had some form of (dis)ability. These groups of people were targeted for this study as they represent the social groups that were considered to be less likely to have access to ICT. People in these groups were assumed to have mixed characteristics of low levels of formal education and low literacy, low or non-existent computer literacy, social isolation, limited income and some form of (dis)ability.

Based on the review of relevant literature on the digital divide and the selected focus on services delivered via the Internet, effective comparative analyses would require investigation of both Internet Users and Non-Users with one or more of the characteristics of disadvantage assumed to be pertinent to the digital divide. The total sample in Table 4.1 at the end of this section comprised 50% Internet Users and 50% Non-Users for comparative views and an equal number

of males and females, categorised into four major groups: (a) people aged over fifty years; (b) people with a physical (dis)ability; (c) people from culturally and linguistically diverse backgrounds (non-English speaking background), and (d) people living in rural/remote areas. The 68 respondents from the original target sample of 80 people were the same participants used for both the survey and focus groups.

A difficulty in purposeful sampling is finding people with the specific characteristics sought. For example, females and people aged over 45 were easier to recruit for the research study than males and people younger than 45 that had other characteristics of 'disadvantage' also sought for the sample. Finding people in the sample that have several of the characteristics that are sought and where a dominant characteristic cannot be isolated for analysis can add further complexity. For example, in which of the four major groups would one place a paraplegic male, aged over 50, who speaks very little English and lives in a remote town? How does this impact on the analysis of relationships to the context and on the validity and transferability of results?

4.3.4 Access to Sample

The participants who formed the sample were identified with assistance from the former South Australian Department of Human Services (DHS) (as of July 2005 split into the Department of Health and the Department of Families and Communities). Under the joint auspices of DHS and the University of South Australia, participants were recruited with assistance from service partner organisations from the 'third sector' which typically receive government funding and other forms of support. This refers to the not-for-profit, non-government community services sector, via representative organizations that advocate for the population groups sought for the sample, i.e. people with a (dis)ability and people aged over 50.

The specific representative organizations involved in participant recruitment were the Council of the Ageing, Deaf SA, Disability Information and Resource Centre, and the Migrant Resource Centre. These organizations were listed among the community services resources and service partners associated with, and partly funded by, the Department of Human Services, with which I was employed when this research started. The appropriate officers in these organizations were contacted by telephone to recruit consenting participants for both the survey and focus groups, using standard community engagement processes. The Department of Human Services gave written permission to the University of South Australia for the research data collection as part of

the ethics approval process. Perceptions and attitudes gained from members of the South Australian community about government-provided online health information were also considered to be of value directly to the department as part of its evaluation of such services.

An information sheet (Appendix 1a) was used at the outset of the recruitment process to inform the prospective participants about the research objectives and their requirement to fill out a survey form and participate in an audio-taped focus group session. The information sheet also outlined the consent process with an assurance of confidentiality and privacy of identifying personal details. A consent form (Appendix 1b) was then provided to each prospective participant for information and signature immediately prior to their actual participation. Ethical considerations and advice sought from expert literature informed the processes used and addressed some of the limitations of the research methods pertinent to the circumstances encountered (Miles & Huberman, 1994). Where necessary, translators with skills in the required languages were used to explain the content of the information sheet and consent form for participants. Interpreter services were made available also during the conduct of the survey and focus groups. Sign language interpreters were also used to support participants with profound hearing impairment.

Table 4.1: Total Sample

n=68	Aged Over 50 G1	Disability G2	Rural/Remote G3	CALD G4	% of Total Sample
Gender:	n=20	n=16	n=16	n=16	
Female n=39	15	10	9	5	57%
Male n=29	5	6	7	11	43%
Age:					
Under 25		1		6	10%
26-35		6		5	17%
36-45		3		4	10%
46-55		2	4		9%
56-65	7		10		25%
66-75	10		1		16%
Over 75	3	2			7%
Employment:					
Seasonal					0%
Casual		2	2	3	10%
Part-time		7	1	2	15%
Full-time				1	1%
Unemployed	1	1			3%
Pensioner	9		2	1	19%
Other (self-employed, volunteers & self-funded retirees)	10	2	9	8	43%
Income:					
Under $25,000	7	7	3	13	44%
$25,000-$50,000	12	9	9	3	49%
$50,000-$75,000	1		4		7%
Over $75,000					0%
Education:					
No formal education				1	1%
Primary	2	3		5	15%
Secondary	11	8	9	5	49%
Tertiary	7	5	7	5	35%

NB: The sum totals of the columns and rows are purposely not displayed as they do not reflect the actual total number of participants. Instead they break down the four major groups (columns) into sub-category attributes (rows).

4.4 Data Collection Procedures

4.4.1 Survey

A survey collected data requiring only a Yes/No response or a tick next to the appropriate response, together with other easily quantifiable data to show the distribution of characteristics across the sample and to assist in profiling specific characteristics beyond the major demographic characteristics for which they had already been selected (e.g. age). The survey was designed to collect specific data from all participants, such as level of income and level of formal education and to obtain information on the methods they employed to gain information about health. Different questions were asked of Internet Users (Appendix 2a) compared with Non-Users (Appendix 2b) regarding their use of the Internet. These included questions about accessing online health information and whether they communicated such information with family and friends. The survey was presented to the participants to complete directly prior to their engagement in a focus group session. Interpreter assistance was provided as required for those of non-English speaking background, along with writing assistance where requested for participants with writing/mobility impairment. These requirements were advised during the participant recruitment process prior to the conduct of the survey and focus groups.

In designing the questions for the survey that sought data about employment and income, upon reflection after the survey data collection, I found that I had not considered categories for self-employed people or for self-funded retirees. This information could be collected through the provision of a category for 'other' and a place for the participant to write information that would not otherwise be captured. I recognised that one of the research limitations was my own perception of 'disadvantage'. I had expected that the sample, chosen for particular aspects of disadvantage, would consist of people on low incomes and I did not associate self-employment with low income. I had also assumed that people of pension age would be receiving old-age pensions and had not considered that they might be self-funded retirees, and therefore had not provided these categories for response.

4.4.2 Focus Groups

Focus group design and conduct was informed by expert literature on focus groups (Morgan, 1988; Kreuger, 1988; Stewart & Shamdasani, 1990; Morgan, 1993; Kitzinger, 1995; Puchta & Potter, 2004). The participants were organised into eight focus groups – six groups of eight

people and two groups of ten people each, half Internet Users and half Non-Users covering the four major categories of 'disadvantage'. A schedule of semi-structured questions was asked and views were explored in open discussion with participants. The questions were designed to explore issues of health information-seeking and sharing practices, trust, reciprocity, risk, the nature of relationships with health professionals and with government and social inclusion/exclusion relevant to the Internet for Internet Users (Appendix 3a) and Non-Users (Appendix 3b).

The focus groups were held at various locations including aged residential care communal facilities, community halls and meeting rooms and the 'Box Factory' Community Centre. They were all conducted in metropolitan Adelaide except for two sessions in Coober Pedy in the far north of South Australia. One was conducted by telephone interview for a participant who was unable to attend one of the arranged Focus Group sessions. Each focus group session lasted two hours and was audio-taped for subsequent translation. Refreshments were provided during the session in the form of either a morning or afternoon tea. The focus group sessions were all facilitated using two different sets of questions developed: one set for the Internet Users (Appendix 3a) and the other for Non-Users (Appendix 3b). The sessions were conducted using the information sheet and consent form, and the survey and focus group questions.

During the course of the focus group sessions, all participants were introduced to the South Australian Government's online health information service website, HealthySA (www.healthysa.sa.gov.au). The reason for this was to give Internet Users and Non-Users the opportunity to appraise themselves of the sort of information about health that is available on the Internet and about where government-funded health services can be obtained. While Internet users were specifically approached for the sample, it was not a requirement that they were to be current users of, or have any familiarity with, available online health information services.

In hindsight, I find that I neglected to include a specific question on participant health status to ascertain whether there was a relationship between existing health condition(s) or concerns and their health information-seeking behaviour. However, the focus groups included participants discussing their own health conditions and experiences and those of people known to them regarding their search for health information (see discussion in the result-based Chapters 5, 6 and 7). Also, I had not considered including a question/s on participant social networking behaviours

outside of networking associated with the Internet for a comparison with general networking capacity or behaviour. This may have been a limitation, given the broader focus on social capital, and in terms of relative social networking behaviour and Internet use.

4.4.3 Ethical Considerations

Consideration of ethics during the conduct of this research was focused on research participant confidentiality regarding any identifying information, informed consent, and the respectful and reciprocal relationship with research participants during the conduct of the survey and focus groups and for the prolonged engagement with the data (Mason & Bramble, 1989).

Information about the purpose of the research study was discussed with all participants and provided also in writing (Information Sheet). The consent forms were then distributed and all subsequently signed by participants and collected as part of the research participation consent process prior to completion of the survey and the focus group sessions. The signed consent forms are held as confidential documentation to be stored at the University of South Australia for a period of seven years. Names were only collected once for the consent forms and were not sought for the purposes of the survey or conduct of the focus groups. No identifying information is held in the audio-tapes and transcripts (which have also been stored at the University of South Australia) or disclosed in the data reported. The Principal and Associate Supervisors did not have access to all raw data but viewed some survey data and transcripts. Most data were presented to supervisors via tables, consolidated information, quotes and discussion.

The research was conducted under the auspices of both the University of South Australia and the former Department of Human Services as advocates for the socially ‘disadvantaged’ and with research and practical interests in improving access to health information and services. Participants were encouraged to express their perceptions, attitudes and experiences freely to provide information that would inform government policy and practice for online health information and services.

4.5 Analysis

The quantitative data collected and analysed from the survey were organized into tables for stratification of the sample group (displayed in Chapter 5). An ethnographic and descriptive/interpretive approach was used to analyze the qualitative data where the process was based on inductive analysis, reduction and interpretation (Strauss, 1987; Denzin, 1989a,b; Mason & Bramble, 1989; Guba & Lincoln, 1989; Miles & Huberman, 1994; Neuman, 1999; Babbie, 2001; Cherry, 2000). Analysis in qualitative research can occur before the data collection process has been completed as there is interaction between the data collection and analysis. Interpretation of the data involved making decisions about relevance of the emergent themes and drawing conclusions relevant to the research questions using coding and memos. For example, social exclusion is one of the key themes from the literature review relevant to both social capital and digital divide concepts. The theme of social exclusion was used to shape a question for the focus groups designed to elicit perceptions and attitudes about one's 'place' in society as influenced by access or non-access to the Internet and government online health information (induction) and where an interpretation is made of responses (deduction). This involved decision-making about criteria for analysis during the analysis process and organizing data into coded themes, including putting the participants' quotes from the focus groups interviews into categories for context (Miles & Huberman, 1994).

The qualitative analysis process involved a preliminary stage of reading the focus group interview transcripts and highlighting words and phrases of interest and starting to note themes and contradictions within and across groups. This was followed by more refined investigation of the data for patterns, common themes and contradictions and the establishment of relationships among the data. This was repeated many times within and across groups of data and in response to raising questions of the data, including checking interpretation of relationships.

4.5.1 Assumptions

An underlying assumption made in this research approach is that a contribution to social capital can be made by individuals, resulting from their access to social and public networks and information resources. That is, social capital while being an attribute of a society is aggregated by individual contribution or participation. This assumption was made on the basis of the potential personal value of network relationships an individual has within a community or across

various communities, regardless of the type and nature of those communities. This is relevant to the method in regard to the value placed on individual participant perceptions of social connectedness and the relevance or otherwise of access to the Internet and online health information. This qualitative analysis is based on expressions of 'self' in the survey and in focus group discussions and relationship to the research questions.

Another assumption made is that socially disadvantaged people or groups are likely to have lower social capital if they do not have access to online government information services, particularly health-related information, and the Internet for communication. It is acknowledged that not all types of social disadvantage relevant to the digital divide and social capital could be explored in this research or compared with outcomes from non-digitised information resources. Other assumptions made ahead of the data collection and analysis were: first, that access to the Internet is beneficial for citizens; second, that Internet access and use can be a facilitator/enabler of social capital but does not produce social capital (i.e. social capital may be enabled with means other than via Internet-assisted communication); third, that access to information and knowledge provided by government organizations is of benefit to citizens and has positive individual and social effects; and fourth, that information about health is essential for people's health and well-being.

These assumptions are reflective of my positive perceptions about the role and impact of public policy and government in relation to information, information technology and health. This is influenced – and both supported and challenged - by my employment for over fifteen years as a Public Servant with experience in ICT, government service delivery in human services and health and my graduate and postgraduate studies in social sciences and communication studies. The thesis provided me with an opportunity to attempt to separate my own assumptions from the data collected. While it is not possible for me as the researcher to take a completely objective stance, the challenge of this thesis can be demonstrated in the questions around those assumptions and the journey taken to arrive at a different position from that which I started.

4.5.2 Limitations

There were some expected limitations identified for this research study and some unexpected limitations that present opportunities for further exploration.

Some of the expected limitations were understood as part of the research process and methods used. While the use of focus groups was selected for the advantages in this type of research study, there are some potential disadvantages in the use of focus groups which may compromise the integrity and validity of results. For example, discussion in groups of strangers may compromise confidentiality where sensitive issues and experiences may be discussed. Also, if the group dynamic is that there are dominant people whose opinions compromise discussion then voices of dissent may not be heard and deviant themes and relationships to the context may be lost, as well as the credibility and dependability of the data.

The results from purposeful qualitative sampling are subjective cannot be generalised, although percentages are used where relevant to describe the sample. The trustworthiness and transferability of the results are based on the demonstrated relationships of the results to the context provided by the theoretical and conceptual framework.

I found that, in the context of qualitative analysis, it was not possible to separate the material aspects or issues clearly from the subjective because they intersect. An individual's access to a computer with Internet capability (material) does not by default mean that the individual will become an Internet User if they choose not to use it (subjective). Inability to access a computer with Internet cannot, therefore, be assumed as the reason why someone is not an Internet User. For example, a Non-User may be a Non-User due to their lack of interest in Internet access or failure to find the Internet of personal benefit. It may not be due to lack of income or skills and abilities that might be required to enable access. The literature available on access to the Internet, particularly for online services for government organizations, has an emphasis on physical or material access and socio-economic barriers to access (Lloyd & Hellwig, 2000). This emphasis sets a policy direction and focus for the development and implementation of strategies to overcome the 'digital divide' for material improvements to access, and does not address or test the subjective barriers to access. This is why I used focus groups to get at the subjective meanings and experience of Internet use and non-use.

This analysis, inclusive of material/objective access, cuts across the other various categories of 'disadvantage' identified in the literature on access to the Internet and the social and policy challenges presented by the digital divide (Lloyd & Hellwig, 2000). These categories include: gender, age, cultural and linguistic background, residential location (metropolitan or rural) and

personal abilities and skills. I had set out to find both Internet Users and Non-Users for groups of each major category of 'disadvantage' likely to be on the 'negative' side of the digital divide: people aged over fifty; people with some form of physical disability; people residing in a rural/remote location; and people of a culturally and linguistically diverse background (i.e. of non-English speaking background) for comparative purposes. Instead of individual participants being able to be clearly targeted and categorized for a single characteristic of 'disadvantage' relevant to Internet access, the sample (and the data) reflected a cross-section of a diverse community. The sample's diversity and the unexpected 'blending' of groups due to the multiple and shared characteristics, in addition to the intended diverse characteristics across the sample, presented a greater level of complexity for the analysis than expected, together with unexpected insights.

It became apparent during the analysis of the data obtained from the survey that the intended method of categorization for a single major characteristic would be problematic. The organization of the sample into the respective groups of subjective 'disadvantage' as Users and Non-Users of the Internet made comparative analysis difficult due to the presence of multiple characteristics of so-called 'disadvantage', and even potential 'advantage' (i.e. Self-Funded Pensioner) in regard to Internet access, across the whole sample. Each group was, therefore, not homogeneous and easily positioned into a major single category of 'disadvantage'. For example, the sample included a high income earner, over fifty years of age, with a disability and living in a remote town. For this reason, it also became necessary to question the use of the term 'disadvantage' and the associated negative assumption in regard to Internet use of a single characteristic such as age beyond fifty years. It would be limiting to label or categorize a particular social aspect as a 'disadvantage', especially when evidence can be found that both contradicts and supports that assumption, rendering it impossible to operate on that assumption and make such a generalisation. At the outset of the research, the finding that Internet Users could easily be recruited within each category of 'disadvantage' alone was an early indication that the old, negative assumptions of 'disadvantage' could be challenged.

An observation from this research exercise is that government organizations and organizations in the community services sector, when targeting 'disadvantaged populations' for health or other community services may assume that one type of potential 'disadvantage' dominates or presupposes another type of 'disadvantage'. In the case of this sample, people who have one type

of disadvantage also had multiple areas of related or unrelated 'disadvantage'. For example, one research participant was of non-English speaking background, earning a low income, lived in a rural/remote area and had a disability. People with multiple characteristics targeted by human services programs and service could be defined as 'people with complex problems' where multiple services are needed and many organizations need to be involved in health care or other Government or community services. The reverse could also be the case where 'disadvantage' may potentially be incorrectly assumed due to people possessing one of the aspects of 'disadvantage' stated in the literature. This was the case for this research where it was not anticipated that a person earning a low income was likely to be self-employed, a self-funded retiree or engage in volunteer work.

This serves to highlight the limitations of understanding human subjectivity and experience as dominated by one social characteristic and methodologically separating subjects into groups based on material characteristics or attributes. The method did not attempt to classify resolutely but did attempt to determine which aspect of subjectivity was likely to be dominant in Internet use. This refers to accessing health information for health care, instead of privileging relatively straightforward and absolute characteristics of levels of income and formal education.

While there are still clear distinctions of difference or diversity within the sample, the only major distinction of difference relevant to Internet access is that the participants are either Users or Non-Users. Therefore, I will discuss the data analysis using those two major categories with reference to other characteristics that are potentially relevant to Internet access (objective and subjective) and may support or disagree with the literature findings. Instead of assuming that the categories necessarily represent 'disadvantage', I will address multiple attributes or characteristics of the sample that are relevant to the discussion and prefer to regard these characteristics or attributes as potentially positive capabilities. For this reason, I have applied an alphanumeric code to each of the four groups: G1, G2, G3 and G4, as displayed in Chapter 5 (see Tables 5.1, 5.2, 5.3 and 5.4), and Table 4.1 in this chapter.

A limitation in the use of focus groups is the inability to come to absolute conclusions as not all participants are interviewed individually and also because the subject matter is predominantly of a subjective nature. This is a feature of qualitative analysis and the focus therefore becomes the identification of patterns in the responses as well as departures from the majority responses.

Drawing the commonality and variations in the attitudes and perceptions within and across groups expresses the value of the data analysed against relevant literature findings and expectations. The purposeful sampling was also a strategy to *"understand something about certain select cases without needing to generalise to all such cases"* (Neville, Willis & Edwards, 1994, p. 7).

4.6 Conclusion

The literature review, the data collection methods and the approach to the analysis were based on the research purpose as defined and the theoretical and conceptual framework used. That is, the concepts of social capital and the digital divide provided the context for the exploration of the implications for online health information, using a survey to describe the distribution of characteristics across the sample and focus groups to dynamically explore relevant perceptions, attitudes and experiences of research participants. The assumptions were that social capital is a resource for individuals and groups; that access to online government services, particularly health information are of benefit to individuals and groups; and that access to the Internet and online government services enables the development of social capital.

Chapters 2 and 3 examined the literature relevant to social capital and the digital divide and the key questions posed in this thesis (see section 4.2). The literature review directed this research to particular characteristics that were considered to be 'evidence' of social 'disadvantage' caused by (or a product of) the digital divide. These characteristics were sought of a targeted sample group that subsequently completed a survey of set, fixed questions and then participated in facilitated, audio-taped focus groups, where open-ended and flexible questions were posed to guide the discussion and which provided opportunity for questions and issues to be raised by participants for discussion. There were 68 respondents from the original target sample of 80 people and these same 68 were used for both the survey to be completed by each participant who then attended one of eight focus groups. The participants were recruited with ethics authorization under the auspices of both the University of South Australia and the former Department of Human Services (now the Department of Health).

The analysis was both qualitative and quantitative (demographic and other descriptive data) and aimed to provide a profile of the participants to explore a range of relevant individual characteristics and explore behaviour/experiences, attitudes and perceptions of Internet usage and government-funded online health information services. The focus of the analysis addressed the research problem and set out to answer the research questions posed in section 4.2.

It is acknowledged that there are limitations in qualitative methodologies, such as the use of focus groups, that result in the inability to generalise and come to absolute conclusions as not all participants are interviewed individually. However, the individually completed survey did elicit differential information of value and it was possible with the focus group data to clearly identify patterns in responses and common attitudes and perceptions within and across groups, as well as departures from the majority responses. These results are shown in Chapters 5, 6 and 7.

CHAPTER 5: PROFILE OF USERS AND NON-USERS OF THE INTERNET FOR HEALTH INFORMATION

5.1 Introduction

Although government and social policy aims aspire to universal access to the Internet, not everybody has access to the Internet. The literature on the digital divide over the last decade has focused more on material access and barriers to accessing the Internet (NTIA, 1995, 1998; BF, 1998, 1999; Lloyd & Hellwig, 2000; Norris, 2000, 2001; Gibson, 2003) and less on why people use the Internet and how their perceptions and attitudes impact on access. On the basis of 'access' being more complex than material access, the reasons for Internet use and non-use and attitudes towards the Internet and who is using or not are important to explore in the context of the digital divide and its relationship to social capital. Further to this, the use and non-use of online health information is important to understand relative to the profile of the sample for potential policy implications.

This chapter presents the profile of Internet Users and Non-Users and discusses health information-seeking behaviour. While this profile focuses mainly on the material or structural aspects of 'access' and 'non-access' to the Internet, such as opportunity or capacity (i.e. income and ability) to use the Internet for health information and for other purposes, it also briefly introduces some of the subjective aspects of 'access' and 'non-access', such as personal choice, contrasting attitudes towards technology and differences in perceived personal and social significance of access to the Internet. These subjective aspects will be examined further in Chapters 6 and 7.

It is important to profile the sample used: first, to describe the social groups that are the focus of the research (outlined in Chapter 2) and, second, to demonstrate the diversity of attributes relevant to access and non-access to the Internet within and across these groups. This rendered it problematic to define a 'typical' Internet User or Non-User for access to health information or other purposes – a key finding of this research. The categories of Internet Users and Non-Users have diverse characteristics and attributes. The previous chapter discussed the problems encountered from assumptions made as part of the process of recruitment of the sample and design of the data collection methods. These assumptions included expected major characteristics

of social disadvantage relevant to Internet access within the pre-sought gender balance and equal number of Internet Users and Non-Users for the total sample. As a result the four major social groups sought for this research were: people aged over fifty years; people with a (dis)ability; people living in rural or remote towns; and people of culturally and linguistically diverse background. They have been coded as G1, G2, G3 and G4 for this chapter and the following two chapters.

A policy implication of this finding is that service strategies that 'target' social groups according to a single area of assumed or subjective 'disadvantage' may be misguided. The difficulty with this approach is complicated further by an individual or social group potentially having diverse, multiple characteristics or attributes that may or may not meet the assumptions and expectations drawn from their socio-economic situation.

Section 5.2 presents the profile of the total sample, stratified by gender, age, employment, income and formal education. This section is preceded by two tables showing a breakdown of Internet Users (Table 5.1) and Non-Users (Table 5.2) within the total sample, similarly stratified.

Section 5.3 discusses material access or non-access to the Internet as found in the sample, together with other objective aspects of access or non-access. This section is preceded by two tables showing the survey results for the closed questions for Internet Users (Table 5.3) and Non-Users (Table 5.4).

Section 5.4 explores the reasons for Internet access and describes general information-seeking behaviour as well as health information-seeking behaviour. The reason for exploring the former behaviour was to gain an understanding of Internet use for non-health related reasons, while health information seeking behaviour was compared across Users and Non-Users.

Table 5.1: Internet Users

n=34	Aged Over 50 G1	Disability G2	Rural/Remote G3	CALD G4
	n=10	n=8	n=8	n=8
Gender:				
Female n=19	6	6	5	2
Male n=15	4	2	3	6
Age:				
Under 25		1		3
26-35		3		2
36-45		2		3
46-55		2		
56-65	3		7	
66-75	5		1	
Over 75	2			
Employment:				
Seasonal				
Casual		1		2
Part-time		4		2
Full-time				
Unemployed		1		
Pensioner	7		2	1
Other (self-employed, volunteers & self-funded retirees)	3	2	6	3
Income:				
Under $25,000	2	3	1	6
$25,000-$50,000	7	5	3	2
$50,000-$75,000	1		4	
Over $75,000				
Education:				
No formal education				
Primary	1	1		2
Secondary	4	2	3	1
Tertiary	5	5	5	5

NB: The sum totals of the columns and rows are purposely not displayed as they do not reflect the actual total number of participants. Instead, they break down the four major groups (columns) into sub-category attributes (rows).

Table 5.2: Non-Users

n=34	Aged Over 50 G1	Disability G2	Rural/Remote G3	CALD G4
	n=10	n=8	n=8	n=8
Gender:				
Female n=20	9	4	4	3
Male n=14	1	4	4	5
Age:				
Under 25				3
26-35		3		3
36-45		1		1
46-55			4	
56-65	4		3	
66-75	5			
Over 75	1	2		
Employment:				
Seasonal				
Casual		1	2	1
Part-time		3	1	
Full-time				1
Unemployed	1			
Pensioner	2			
Other (self-employed, volunteers & self-funded retirees)	7		3	5
Income:				
Under $25,000	5	4	2	7
$25,000-$50,000	5	4	6	1
$50,000-$75,000				
Over $75,000				
Education:				
No formal education				1
Primary	1	2		3
Secondary	7	6	6	4
Tertiary	2		2	

NB: The sum totals of the columns and rows are purposely not displayed as they do not reflect the actual total number of participants. Instead, they break down the four major groups (columns) into sub-category attributes (rows).

5.2 Profile of the Total Sample

This section details the total sample (see Table 4.1) and divides it into Internet Users and Non-Users and their relevant characteristics and attributes. There were eighty (80) participants targeted who were invited to one of eight focus groups for Internet Users and Non-Users, each expected to accommodate up to ten people. The participants were asked to complete a written survey at the beginning of each facilitated focus group session. The focus group session comprised discussion based on a series of set questions.

There was an overall response rate of 85%, with sixty-eight (68) of the invited sample of eighty (80) participants completing the survey and attending one of the eight focus groups. It was intended that Users and Non-Users be separated in groups but in two sessions they were combined due to participant and venue availability. Quantitative and qualitative data were collected from the survey and the focus groups (two sessions of ten people each and six sessions of eight people).

5.2.1 Stratification of Total Sample

This sub-section discusses the profile of participants from data collected from the survey. The total sample of 68 people (actual participants/respondents from the original target sample of 80 people) comprised exactly 50% each of Internet Users (n=34) and Non-Users (n=34). Table 4.1 in the previous chapter stratifies the total sample according to gender, age, employment status, levels of income and formal education, across four major groups: G1, G2, G3 and G4. Each group comprised participants that had common characteristics: people aged over fifty; people with some form of physical disability; people residing in a rural/remote location; and people of a culturally and linguistically diverse background (non-English speaking background). Note that each participant in one of these four groups with a common characteristic may also have one or more characteristic of another group. Of these four specific characteristics, only age (indication of participants near or over the age of fifty years) is shown across the four groups, together with the other attributes of gender, employment, income and formal education.

5.2.1.1 Gender

It was intended that the sample be gender balanced. This was almost achieved, with only a slightly higher percentage of female participants (57%) than males (43%). There were more

females (n=19) than males (n=15) who were Internet Users, as displayed in Table 5.1 and also more females (n=20) than males (n=14) that were Internet Non-Users, as displayed in Table 5.2. Although equal gender balance within the Internet Users groups and Non-Users groups had been sought, the Non-Users groups overall had six more females than males and the Users groups overall had four more females than males, as displayed in Table 5.2. Comparatively, there were more Internet user males than Non-User females.

Overall, it was easier to source female participants for the sample across the four groups of common characteristics sought as Non-Users than Internet Users, while it was harder to find male Non-Users. Without being able to generalize, this finding supports the research literature finding that young, educated males are more likely to use computers and the Internet than females (NTIA 1995, 1998; Lloyd & Hellwig, 2000; ABS, 2001) but also that the gap between Internet use by men and women may be closing (NTIA, 2000).

5.2.1.2 Age

There was varied distribution of people over age ranges, with more people in the youngest and oldest age ranges 26-35 (n=6), 56-65 (n=7) and 66-75 (n=9) and fewer in the middle range 36-45 (n=2). This supported the view that people in the middle age range were more likely to be employed full-time, possibly have access to the Internet in the workplace or at home, and would also be more difficult to recruit for the research study due to time commitments. In particular, the age distribution of the participants in two groups drew attention: the Rural/Remote Group was comprised of participants above the age of 45 and the CALD Group participants were all under 45 years of age. Participants for these groups were recruited in the same way as the other groups, through community organisations associated in some way with government. The resultant age distribution may be indicative of the higher level of interaction with community and government organisations by older persons in the remote town used in the study (where 63% of the town's population was aged over 45). The resultant age distribution for the CALD Group participants may be indicative of a higher level of interaction with community and government organisations by culturally and linguistically diverse students and others under 45 years of age that were likely to be seeking employment or already participating in the workforce.

More than 50% of the sample was near or over the age of fifty, 10% under the age of twenty-five and 27% were under the age of thirty-five. Participants over the age of fifty were specifically

recruited for one of the groups, through the Council on the Ageing, and ended up being the most represented age group. That characteristic was sought in response to the literature finding that older people would be less likely to use the Internet (NTIA 1995, 1998; Lloyd & Hellwig, 2000; ABS, 2001). In a sample where approximately 50% were aged over fifty, the finding that more than half of the older aged people in the sample were Internet Users was relatively surprising. Compared with Non-Users, a slightly higher number of participants over the age of fifty (3 more) were Internet Users. Overall, however, Internet Users were younger in age than Non-Users.

5.2.1.3 Employment Status

The attributes of employment status expected from the sample included work on a full-time or part-time basis, seasonal, casual, unemployed, receiving a pension, or other circumstance. Only 19% of the total sample identified as 'Pensioner', whereas this was expected to be higher in a sample selected for characteristics of 'disadvantage' in relation to Internet access. The 'Other' category attracted more replies than anticipated regarding employment options considered for the survey instrument, such as volunteers or self-funded retirees. Of the total sample, in the 'Other' category for 'Employment', 43% of participants indicated that they were either involved in non-paid work as volunteers; were self-employed or self-funded retirees. The remainder comprised 19% in paid employment, 26% receiving a pension and 3% unemployed (n=2). This result highlighted a problem with the assumptions made and the design of the survey. That is, it was not anticipated that the sample might include people working as volunteers (in various health and community service sectors), and self-funded retirees. It had not been considered that volunteering or non-paid employment would have been an employment option that might have been relevant for the sample. Through one of the focus group sessions it was identified that there was also a student in the sample (an Internet User of culturally and linguistically diverse background). Chapter Two refers to my assumption, which turned out to be incorrect, that all of the 'socially disadvantaged' people in the sample would be low income earners, and would be unlikely to self-fund their retirement.

The data suggest that employment does not necessarily have a direct relationship to Internet access. Of the two participants who were unemployed, one was an Internet User (Table 5.1) and the other a Non-User (Table 5.2). Although it cannot be generalised, this specific finding contrasts with the literature on the digital divide (NTIA, 1995, 1998; Lloyd & Hellwig, 2000;

ABS 2001) which assigns specific attributes to Non-Users that are perpetuated in investigations on the digital divide.

5.2.1.4 Income

With income being related to employment, in accordance with the negative assumption of 'disadvantage', I had expected lower levels of income across the sample. Although the participants predominantly earned low to medium/average income, i.e. under $25,000 per annum (44%) and $25,000-$50,000 (49%), 7% of the sample (n=5) indicated an annual income of above $50,000 but under $75,000. Most of the Non-Users were not in full-time or part-time employment, with more than 50% being pensioners, self-employed, self-funded retirees or volunteers. All Non-Users had an income of less than $50,000 per annum, with over 50% earning less than $25,000 per annum. This supports the findings in the literature that Internet Non-Users have lower levels of income than Internet Users (e.g. NTIA, 1995, 1998; Lloyd & Hellwig, 2000; ABS, 2001).

5.2.1.5 Education

While the sample comprised predominantly low to medium income earners, the levels of formal education were higher than anticipated. That is, it was not anticipated that there would be as many tertiary educated participants (35%) in a sample that may be 'socially disadvantaged' in relation to the digital divide. Eighty-four percent of the sample had attained secondary or tertiary level education. Only 1% of the sample had no formal education and 15% had only attained primary school level education. Again, this finding differs from the general literature conclusions about the digital divide (NTIA, 1995, 1998; Lloyd & Hellwig, 2000) and relevant other categories of social disadvantage such as gender and age. There was no evidence here of proportionally lower levels of formal education among older women participants.

More than 50% of Internet Users had achieved a tertiary level of education (and had higher income overall) compared with Non-Users where only 15% of Non-Users had achieved the same (and had lower income overall). This supports literature research findings that highest Internet usage is likely to occur amongst people with higher levels of formal education and usually higher levels of income (NTIA 1995, 1998; Lloyd & Hellwig, 2000; ABS, 2001).

5.2.1.6 Social Characteristics

While the focus groups were clustered around four particular social characteristics as displayed in the Tables (5.1; 5.2), other information that was not specifically sought from all participants but was collected from the surveys and recorded in the transcripts, indicated that participants placed in one focus group also had one or more characteristic of another focus group. Actual numbers of participants with shared or multiple characteristics cannot be presented as this information was not consistently available across the sample. Note that age was a characteristic specifically sought across the four groups. For example:

The participants in G4 (Culturally and Linguistically Diverse [CALD]) comprised people of Latin American, Lebanese, Israeli or European background and G3 (Rural/Remote) also consisted of several people of non-English speaking background, namely Spanish and Italian.
The participants in G2 (Disability) declared having one or more disabilities associated with mobility, hearing impairment (several were profoundly deaf), English literacy and learning. Some participants in G1 (Aged Over 50) also indicated being mobility, vision or hearing impaired. Two participants in G4 (CALD) indicated that they had a learning disability associated with language and literacy.

The following two tables show the results for the closed questions included in the survey (those requiring a tick in response or either a Yes/No answer) for Internet Users (Table 5.3) and Non-Users (Table 5.4). The tables are followed by discussion on the sample's material access to the Internet in section 5.3.

Table 5.3: Internet Users – Survey Results for Closed Questions

Internet Users	Aged Over 50 G1	Disability G2	Rural/Remote G3	CALD G4
Total n=34	**n=10**	**n=8**	**n=8**	**n=8**
Where do you access the Internet?				
At home	5	4	4	5
Workplace	2	4	2	1
Public Library/School	1	0	2	1
Internet kiosk/cafè	1	0	0	2
Where would you prefer to access the Internet?				
At home	10	8	8	8
At a public place	0	0	0	0
Do you know that you can get health information on the Internet?				
Yes	9	7	5	7
No	1	1	3	1
Have you used the Internet to get health information?				
Yes	9	7	5	7
No	1	1	3	1
How often do you use the Internet to get health information?				
Never	1	1	3	1
Rarely	3	3	0	4
Sometimes	3	2	4	2
Once a day	0	0	0	0
Once a week	2	0	1	0
Once a month	1	1	0	0
Frequently	0	1	0	1

Table 5.3: Internet Users –
Survey Results for Closed Questions Cont.

Internet Users	Aged Over 50 G1	Disability G2	Rural/Remote G3	CALD G4
Questions below only for participants who accessed health information:	**n=9**	**n=7**	**n=5**	**n=7**
Does it provide greater choice?				
Yes	7	7	5	7
No	2	0	0	0
Does it give more control over health and improve self-reliance?				
Yes	7	5	5	7
No	2	2	0	0
Do you have greater knowledge of health issues and services?				
Yes	6	6	3	7
No	3	1	2	0
Do you have access to people and networks that you wouldn't have had otherwise?				
Yes	7	6	3	7
No	2	1	2	0
Do you have access to services that you would not have had otherwise?				
Yes	7	6	5	6
No	2	1	0	1
Has this increased your support networks for health and well-being?				
Yes	4	6	3	5
No	3	1	2	2
Do you trust the information?				
Yes	4	4	2	4
No	5	3	3	3
Do you trust the provider?				
Yes	4	3	2	3
No	5	4	3	4

Table 5.3: Internet Users –
Survey Results for Closed Questions Cont.

Internet Users	Aged Over 50 G1	Disability G2	Rural/Remote G3	CALD G4
Questions below only for participants who accessed health information:	**n=9**	**n=7**	**n=5**	**n=7**
Do you use email to communicate with providers?				
Yes	4	2	2	3
No	5	5	3	4
Do you participate in online health networks?				
Yes	2	3	2	1
No	7	4	3	6
Do you use email to communicate health information to people and organisations?				
Yes	3	4	4	4
No	6	3	1	3
Do you share health information from the Internet with family & friends?				
Yes	8	6	4	6
No	1	1	1	1

Table 5.4: Non-Users –
Survey Results for Closed Questions

n=34	Aged Over 50 G1	Disability G2	Rural/Remote G3	CALD G4
	n=10	n=8	n=8	n=8
Where would you prefer to access the Internet if you were to use it?				
At home	10	8	8	8
At a public place	0	0	0	0
Do you know that you can get health information on the Internet?				
Yes	4	3	2	4
No	6	5	6	4
Do you know how you would access the Internet from home or a public place?				
Yes	5	4	3	3
No	5	4	5	5

5.3 Internet Access

This section explores how the Internet is accessed by Users and explores the issue of material and physical access for Non-Users. Although it focuses on the material aspects of access, it introduces a discussion on perceived barriers to access (further explored in the following chapters).

5.3.1 Means of Internet Access

The Internet Users accessed the Internet mostly from their homes (n=18), workplaces (n=9) or from a public facility such as a public library or school (n=4), Internet kiosk or cafè (3). Therefore, over 50% of Internet Users had a computer in their home with Internet access and/or were able to use the Internet at their workplace. Internet use in the workplace suggests, generally, that they may be engaged in 'white-collar' work that enables access to the Internet in the workplace, even for limited personal use:

> I am a heavy user of the Internet because I've got it at work, so I'm basically connected to the Internet for the seven and a half hours that I'm there, so I really have the access, and in my spare time, which is normally lunchtime and stuff like that, I can actually sit down and do things to inform myself or help others.
> (Participant 1, M, Internet User – G4)

All Internet Users indicated that their preference was to access the Internet at home for personal use rather than from public facilities. All Non-Users also indicated that, when given the choice of home access or public facility access, their preference would be access from home if they were to become Internet Users. This suggests that electronic government policy should encourage access from home instead of public settings, perhaps through strategies for home subsidies and training and maintenance support:

> I'd rather do it at home. It's much more comfortable to stay at home and do it.
> (Participant 7, F, Internet Non-User – G2)

Regarding access from public facilities, the majority (56%) (including Internet Non-Users) generally knew that the Internet was available for use in public libraries and from some community centres and government organizations. They were also aware that the Internet was available for use by the public, for a fee, in Internet cafés and certain other commercial outlets.

A common perception about public facilities emerged that resources were limited and that user support and training were inadequate. Several personal advantages were identified for home access, such as privacy (particularly when accessing information about health) and not having restrictions on time. Internet Non-Users who wanted to use it and were aware of public facilities that enabled access expected it would be difficult to gain adequate access, training or support at those facilities:

> There's Breakaways, that's an internet café. They've got a bank of machines there. If I really needed to know something I'd ring the doctor or find out a different way. If I thought I could get something off the Internet that was useful I would make an appointment and use the net through the office. It's there; we can use it, it's just that for certain things…such that use is not easy to facilitate.
> (Participant 1, F, Internet Non-User – G3)

> We had it originally connected through the school because that was the only way you could do it, about four years ago. There's only one available in the town now and it's no longer through the school…it's only on one because of the cost.
> (Participant 3, M, Internet Non-User – G3)

5.3.2 Non-Access

Internet Non-Users were defined as people who were not current users of the Internet. The Non-Users gave various reasons for why they were unable to access the Internet and/or why they chose not to use it. While approximately 50% of the Non-Users indicated that they did not have any particular interest in using the Internet, the two greatest barriers to Internet access amongst the Non-Users who would like to access the Internet were: (1) the prohibitive cost of installing the requisite computer equipment at home together with access charges (perceptions of costs varied); and (2) the lack of ability to use the Internet (knowledge and skills; including computer literacy and English language literacy):

> But from a financial point of view, it is a several thousand dollar investment, isn't it?
> (Participant 2, M, Internet Non-User – G1)

> It's probably less than $2,000 now but to a lot of households in this country that's still huge.
> (Participant 3, F, Internet Non-User – G1)

> Most of us are in poverty and we can't own a computer.
> (Participant 5, F, Internet Non-User – G2)

Approximately 20% of Non-Users expressed the view that the Internet was not relevant to their lives and they received no significant personal benefit from using it.

There were no specific comments made by participants about relevance of level of formal education they had attained and their use of the Internet (although there were more Internet Users that had attained a higher level of formal education than Non-Users). Any other comments relevant to formal education were concerned with requirements for Internet use such as general awareness of the Internet, English and computer literacy skills and the time and resources required. Comments of this nature from participants showed a concern on behalf of others and were not necessarily related to themselves:

> Whether you use it for health or other things, I think depends a bit on your own abilities and whether or not you know that there's stuff about it.
> (Participant 1, M, Internet User – G1)

> It does take time to get familiar with it.
> (Participant 8, F, Internet User – G3)

> First of all we have to learn how to get to the net, to start up, that's the first thing. If you get it wrong how to fix it up, you need to know that first. I don't know.
> (Participant 3, M, Internet Non-User – G2)

There were no specific comments by Internet Users or Non-Users over the age of fifty about age potentially being a barrier to accessing the Internet. The only relevant comment was made by a male Non-User aged between 36-45, stating he was *"too old to learn how to operate a computer"*. However, participants over the age of fifty did note an emerging theme – the perception contemporary society and indeed human service delivery had become increasingly depersonalised as exemplified by Automatic Teller Machines and Interactive Voice Recognition systems (i.e. computer-operated call centres). This view was more strongly represented in the Non-Users aged over fifty where they indicated a preference for either face-to-face or telephone contact with people instead of via Internet access, for service provider contact as well as social interactions:

> I tend to rely on my relationships with people, to be able to look them in the eye, get their expression, see the body language, all that stuff, which you can't possibly do, and maybe that's what people like, that they can hide themselves away from giving away their real feelings.
> (Participant 2, F, Internet Non-User – G1)

> We've got an ever changing society, there's no doubt about that, and learning to cope with it, still without dehumanising our personal relationships I think is tremendously important.
> (Participant 6, F, Internet Non-User – G1)

The anonymity of the Internet for accessing information and enabling ‘faceless’, ‘voiceless’ and, given certain circumstances, ‘nameless’ interaction can be seen as an advantage. This is in contrast to the disadvantage indicated in the lack of ‘personalisation’ when a more human approach and response is desired.

5.4 Reasons for Internet Access

This section explores the reasons why Internet Users access the Internet and why. This exploration of Internet general use is important for understanding the overall participant patterns of Internet use and behaviours, diversity of use and attitudes towards the Internet, particularly as accessing health information online was not prominent (88% of Internet Users accessed health information only ‘sometimes’ or ‘rarely’). Also, in order to explore Internet use in the context of social capital it is important to understand the themes of general communication, information exchange and social networking.

Participants used the Internet for a variety of purposes in addition to seeking health information. For most participants, the main reason or purpose for Internet Use related to a specific individual need, such as someone using it for information and support regarding their hearing impairment or someone living in a remote town to overcome the problem of communication over distance resulting from their geographic isolation – or simply to support a personal hobby such as kite-flying. This suggests that ‘access’, defined as material or physical access to the Internet, cannot easily be separated from the reason or purpose for use. Therefore, it would be limiting to consider low income and low level of formal education as barriers to Internet use without further exploration.

It is relevant also to discuss the choice of contacts for information. The data suggest that the contacts are quite deliberate and based on the information required. Johnson (2004) demonstrates that although it is an almost universal finding in studies investigating human behaviour that people choose other people as their preferred source of information because they are easier to approach than formal sources and are therefore the least effort option. Following a social network analysis using social capital as a conceptual framework, respondents chose people who had better resources than they had and were not well known by them. This suggests that respondents were deliberate in their choice of people information sources and therefore it is speculated that people

are not necessarily chosen because they are easier to access but may require considerable effort to seek out and consult.

The next section discusses the health information seeking behaviour generally of both Internet Users and Non-Users from the sample and discusses perceptions of the Internet as a medium for health information.

5.4.1 General Internet Use

Internet Users had wide-ranging reasons for using the Internet. Currently employed and unemployed participants stated that they used the Internet to search for employment. Three participants who were in paid employment and voluntary work indicated that they used the Internet for research related to their work. For one voluntary worker this meant searching for health or other services information on behalf of customers. One participant who identified himself as a student used the Internet for research related to his study and also for personal interests, including recreational pursuits (i.e. sport). Internet Users also used it for 'personal administration', i.e. online transactions such as banking and household account payments (telephone, electricity and water accounts, motor vehicle registrations). A few Internet Users also indicated that they used it to peruse 'real estate' for the purpose of looking for a new house or investment property.

All of the Internet Users referred to general use of the Internet for various personal interests related to 'lifestyle'. These included, for example: to find information on travel for holidays, various hobbies, general knowledge, sports, food recipes, news and current affairs, accessing websites advertised on television programs and in newspapers and magazines. The most common reason for using the Internet emerged as 'communication' using electronic mail and online discussion groups ('chat' groups/rooms or topic-based support groups).

One Internet User had formed a network of people world-wide to conduct research on family history. It was acknowledged that this sort of network would not have existed without the Internet, nor would it have been able to have been established as quickly through means other than electronic mail:

> How else would you go about sitting down and writing a letter to an unknown person, an unknown quantity?
> (Participant 1, M, Internet User – G1)

5.4.2 Communication and Connection

The themes of communication and connection include social communication and networking, either using the Internet as an alternative means of communication or participants' reliance on it for particular types of communication. For example, a young male Internet User who identified himself as 'deaf' used the Internet in order to meet young women socially with self-declared greater ease than in a face-to-face situation. All the Internet Users with a hearing impairment indicated they used the Internet to explore worldwide issues regarding hearing impairment, research on deaf sports in Australia, and also to communicate with people with a similar disability. The ability to 'broadcast' communications and establish a 'one-to-many' relationship, not only 'one-to-one', was considered by them to be a benefit of Internet communication. This reflects the findings of the most recent Australian Government report on E-Government: *Australians' Use of and Satisfaction with E-Government Services, Commonwealth of Australia, 2005* (AGIMO, 2005a), discussed in Chapter 2, in which the capability of 'one-to-many' communication and relationships was reported as a major attraction of the Internet for Australian citizens.

Internet Users living in a rural or remote location indicated that they used the Internet as part of their business management, including seeking farming and agricultural information, and communication with rural associations, government organizations and others in the farming industry. They indicated that Internet access played a positive role in their lives by facilitating their contact with people and organizations and made access to information possible. Particular mention was made of this benefit from a few of those participants who indicated they had previously lived in urban locations; the Internet facilitated 'keeping in touch' with their previous contacts.

In keeping with the emerging theme of the Internet being used in some way to minimise or overcome social isolation caused by physical or geographic isolation, Internet Users of culturally and linguistically diverse background indicated they used it to communicate with their same cultural and language groups and retain contact with friends and family members in other countries. The Internet was acknowledged, particularly by these groups, as enabling communication across geographical and cultural boundaries, and for providing information services in other languages.

Internet use for contacting family and friends living in other towns or countries was also given as a major reason for Internet access by participants over the age of fifty (including those participants who also lived in a rural or remote town).

> Well, I find that we send emails more to England than we have ever written letters. It's terrific.
> (Participant 1, M, Internet User – G1)
>
> It certainly helps communication.
> (Participant 3, F, Internet User – G1)
>
> …but email, I've found fantastic to stay in touch… I wonder how we ever did it before.
> (Participant 4, M, Internet User – G3)
>
> The way I use it is for emails to friends and stuff like that. Both my brother and sister live now in the United States and I contact them. I have friends and family in Israel, I have friends in other places.
> (Participant 3, M, Internet User – G4)

Social communication via the Internet, although apparently welcomed in certain situations by many Internet User participants was generally considered to be best as supplementary communication instead of complete replacement for face-to-face contact. For example:

> It [THE INTERNET] assists me actually. I think we need a balance. I think you need to say to yourself that you still need to look in other people's eyes.
> (Participant 2, F, Internet User – G1)

This quote infers that one must not lose sight of the need for human contact. Perhaps the comment, "look in other people's eyes" also infers that direct communication is necessary for trust in communication? The nature of the communication, that is the subject and relationships of the sender/receiver or provider/consumer, is critical in the analysis of access or non-access in terms of individual and group communication preferences and behaviour.

5.4.3 Health Information

Participants responded that to obtain health information they relied mostly on GPs, doctors in public or private hospitals, health workers in community health centres, pharmacists and associations, such as the Arthritis Foundation and Diabetes Association, for their information about health. Health information was also accessed from pamphlets/brochures, newspapers, magazines, television, radio and the Internet:

> I go to a doctor because he's easily accessible and because I get what I want straightaway.
> (Participant 8, F, Internet User – G3)
>
> I think it's a matter of habit in my case. It would not occur to me to seek information from other sources.
> (Participant 4, F, Internet Non-User – G3)

Of the total sample, less than 50% were aware that health information was available via the Internet. The majority of Internet Users (88%) had used the Internet to access health information. Of these, the most indicated that they used it for that purpose only 'sometimes' or 'rarely'. None of the Internet Users responded that they had a regular or frequent habit of accessing health information via the Internet.

Internet Users that had used the Internet to access health information were mainly older persons and/or had a (dis)ability and were predominantly female. This supports the findings of Hopkins and Fogg (2002) that females were more likely to use the Internet to access health information. The types of health information accessed from health-related websites and available from Internet 'chat' groups or rooms, or support groups, included information about heart problems; medication; mental health issues; information from associations such as the Anti-Cancer Foundation and Cancer Helpline; information and resources about a particular condition and treatment options. Specific information sought by Internet Users that accessed online health information included information about: musculoskeletal problems; diabetes; gluten-free foods; foot and mouth disease; pregnancy, baby and infant care; pre-menstrual tension; stress; lower back pain; meditation; asthma; menopause; eczema; deafness; and kidney disease. As mentioned in the previous chapter, one of the limitations of the study noted in hindsight was the lack of questioning to inform of any relationship between existing health condition or concern and online health information sought.

5.4.3.1 Gender

Australian research on population health status identifies a range of social and environmental factors that influence the patterns of both wellness and illness in Australia, including the differences in the living and working conditions of men and women. This includes their access to a wide range of resources which puts them at differential risk of developing some health problems, while protecting them from others (AIHW, 2004; 2006).

Health is a composite of biological make-up and socio-economic circumstances and gender is not attributable to biology. Differences in health and illness patterns of men and women are attributable both to biology and social factors such as powerlessness, access to resources and constrained roles (Eisler, 1995). Research on the social determinants of health suggests explanations for population and individual level health outcomes are not attributable to biology (Eisler, 1995; Doyal, 2001; Courtenay, 2000). Income inequality, social connectedness, and social capital are all associated with health and illness. Distinguishing between sex and gender, a common practice in the social sciences, has begun to percolate into the language of prevention, aetiology and causative health care. Roles and expectations attributed to men and women given society roles which change over time, place and life stage demonstrate where gender is a social rather than a biological construct and where gender is an important consideration in the sociology of health (West & Zimmerman, 1987). In this context, there are gender differences in health information seeking behaviour in both online and offline environments.

Anonymity and confidentiality appeared relevant for some participants, particularly men, who were affected either by geographical isolation or social isolation through disability. The Internet was not identified as the primary or most preferred source of health information, except in the case of two male participants (both Internet Users living in a rural/remote town and with a [dis]ability) who indicated they would rather get information about certain health conditions anonymously via the Internet than consult with a medical practitioner in the interests of confidentiality. Although there were some direct comments from males about possibly being more comfortable using the Internet to access health information than other channels, research in Australia shows that men, regardless of cultural background, are much more likely than women to ignore signs of health problems or consult with their doctor, particularly men living in rural or remote areas (AIHW, 2004, 2006). A common problem appears to be that they would prefer not

to know if they had a serious health condition (Doyal, 2001; Courtenay 1998, 2000; Eisler, 1995; Hall, 2003; AIHW, 2004):

> I would be much more inclined to go to the Internet to figure out how I can give up smoking and to help me do it than I would go to a doctor. A lot of things, as a male, I reckon the Internet would be good for, and I wouldn't sort of...feel self-conscious.
> (Participant 7, M, Internet User – G3)

> When I think about the Internet and using it for health information, I think it is quite a confidential way. Like, it's not like going to a library and finding a book or having to talk to a doctor about something. You can find out something really quite weird and nobody, supposedly, knows that you're finding it out. A lot of women I know are more health conscious than men, I think. What I've done more lately is I've found myself more interested in men's health.
> (Participant 2, M, Internet User – G3)

> In our culture [Latin American] it's women that deal with the health things. They are the ones that find out and talk to the doctor and talk to other people.
> (Participant 8, F, Internet User – G4)

> There's any number of urban myths about men's health, things that fellas don't – they might tell a woman who is close to them that they can confide in…but if you are talking about blokes…if they're got to talk to anybody they might talk to a mate or mention it very, very briefly, very quickly, and get a message back and they'd go, oh yeah, no worries. Whereas the Internet might be something they could go to and get something.
> (Participant 3, M, Internet User – G3)

> You do have that confidential aspect, you can go and find out about something without anyone else knowing that you're looking for information on something.
> (Participant 4, M, Internet User – G3)

> …men, it is an ego problem and if it is available and you can start getting them on there, I think it will benefit them a hell of a lot more, because for a lot of them you're not going to get them up to the doctor's, you're not going to get them going in picking out pamphlets.
> Participant 2, F, Internet Non- User – G3)

The attitudes in the above examples were expressed mostly by male participants (or females commenting about males) who lived in rural or remote towns and came from culturally and linguistically diverse backgrounds, suggesting an intersection of gender and social isolation and men's attitudes to their bodies and masculinity. Male gender is strongly associated with health risks where men and adolescent males who adopt traditional or stereotypical beliefs about masculinity have greater health risks than their peers with less traditional beliefs (Eisler, 1995; Courtenay, 2000). The literature on men's health identifies that men have poorer health outcomes than women (Doyal, 2001). These outcomes include lower life expectancy, increased cardio-vascular mortality and increased rates of injury, poisoning and suicide (AIHW, 2004). As discussed in Chapter 3, men in rural and regional areas of Australia face additional health issues by virtue of their location, work and lifestyles. For rural men, particular health problems include

mental stress (attributed to, among other things, lack of work or over work, loneliness and lack of emotional skills), alcohol dependency, obesity and physical inactivity (Hall, 2003; AIHW, 2004, 2006). There are also more opportunities for urban men to access preventive health and public health education programs, such as sexual health clinics and counsellors, than for rural men. In addition, rural men have reduced access to recreational facilities once they cease the traditional sports-oriented pastimes of football, cricket and tennis (Hall, 2003).

Several Internet Users and Non-Users who were hearing impaired, stated that they received health information principally by mail or via an interpreter in a clinical setting. One of the hearing impaired participants indicated that he preferred not to visit the doctor, especially when an interpretation service for the hearing impaired was not available:

> For health information in English I'd rather have it printed out and then have an interpreter translate for me, turning it into Auslan and make it clear; it is all visual. I believe most of the deaf feel like that.
> (Participant 2, M, Internet User – G2)

Other hearing impaired participants who were Internet users said that when they visited their doctor without an interpreter present they would have them write down their diagnosis and other necessary information and then would then do their own research with friends, family and the Internet. While not peculiar to people with (dis)abilities, the literature on health information seeking behaviour discussed in Chapter 2 supports the use of familiar networks for health information (Wellman, 2000).

The majority of Internet Users who accessed the Internet for health information used the information to supplement consultations with medical practitioners and/or conversations with people with knowledge or experience of certain health conditions. The Internet and other sources of health information were also preferred instead of "wasting the time of a busy doctor":

> I had a fever and depression which I thought might be related to menopause or something. So I read up on it all and then went to the doctor and he gave me tablets to control my fever.
> (Participant 6, F, Internet User – G2)

> I guess, because doctors are such busy people in general practice, you go along to them with a problem and they talk about it, but you don't like to spend a lot of time wasting their time talking about the extended things associated with that. It's probably therefore the less well known sort of complaints that I would have used the Internet for – things like, let's say, psoriasis.
> (Participant 4, F, Internet User – G1)

The majority of Internet Users and some Non-Users expressed concern about the potential for incorrect disease self-diagnosis that could result from people relying solely on health information accessed online. They were also concerned generally about information integrity and quality:

> The concern I have with the Internet…from listening to other people as well as what you see, I think with the Internet we could have a problem where too many people are going to self-diagnose themselves from the information, and, I mean it comes back to: you can read a hell of a lot into it, and I've seen people already sort of saying, "Well I've got these symptoms, so this is what I should be having.", whereas if we go back to the doctor we have the personal thing and he actually is trained in that area and he will know a hell of a lot more than what people get picking up things over the Internet. I think it will stop a lot of people from going to doctors because they are going to sort of self-diagnose themselves.
> (Participant 1, M, Internet Non-User – G1)

> I'm always a bit dubious about the information quality.
> (Participant 6, M, Internet User – G3)

Concerns about information quality and integrity, and risk of self-diagnosis will be explored further in Chapter 7 in regard to trusting systems in contemporary society that are perceived to be ambiguous and complex. It was noted that these concerns about health information are held not only about health information from the Internet, but the difference is that it enables access to more information means:

> I mean, people have been buying those medical journals and books and diagnosing themselves for years, haven't they?
> (Participant 8, M, Internet User – G3)

While consulting with health professionals was found to be the primary source of health information for the sample, participants who used the Internet for accessing health information indicated they shared information about health with family and friends, including via email using the Internet. In contrast, Johnson (2004) found there was a propensity for people to choose other people to share information about their health before seeing health professionals. However, participants for this study were not specifically questioned about whether they consulted other people for health information or discussed their health conditions before consulting with a health professional. Some participants that accessed online health information found support group information for specific conditions on behalf of others. This was particularly the case for Internet Users searching for information on behalf of family members or friends with specific health conditions and who did not have access to the Internet, or for assistance to others in a volunteer employment capacity. Accessing the Internet for health information on behalf of others also occurred among Internet Users from culturally and linguistically diverse backgrounds. They

assisted others with poorer or non-existent English skills and/or without access to the Internet (including women accessing health information on behalf of men):

> Personal friends and relatives who have not got email or Internet access, they often ask questions, "What can you find out about so-and-so?" So we do that, and give them the information.
> (Participant 5, F, Internet User – G1)

> "The volunteer work that I do, I do a shift for the Anti-Cancer Foundation working on the Cancer Help Line, so we use the Internet specifically for that role, because people ask you a lot of things that you don't just have off the top of your head. We give them like a list of Web addresses, because we are also trying to be correct with the information, because a lot of things you can look up on the Web aren't always factual. So, of course, naturally, if people are ringing with cancer concerns, we try to only use Web addresses that have been supplied to us by the Anti-Cancer Foundation so that we know that we are giving people the correct response.
> (Participant 1, F, Internet User – G1)

The benefits of accessing information about health that were explored with the focus groups included the ability to become knowledgeable about a health condition/topic, either before, after or instead of consulting with a health professional in certain circumstances, and to be able to help themselves and others. These benefits were not suggested to be exclusive to Internet searches for information but the Internet was believed to have some advantages over other methods, such as the depth and breadth of information likely to be found and the opportunity for unhurried and confidential exploration of information while remaining anonymous by choice.

5.5 Conclusion

Despite government and social policy aims for universal access, not everyone uses the Internet. Studies on the digital divide over the last decade has focused more on material access and barriers to Internet access (NTIA, 1995, 1998; Lloyd & Hellwig, 2000; Norris, 2000, 2001; Gibson, 2003), but not on why people use it. This chapter has discussed issues affecting access and non-access to the Internet and has also explored why people use it and for what purpose. The reasons were touched upon in this chapter but will be explored in more detail in Chapter 6. Internet use or non-use and attitudes and perceptions towards it are important to explore in order to understand the digital divide, its relationship to social capital and implications for online health information policy.

A significant research finding was that Internet users were easily found even amongst the expected categories of 'disadvantage' for access to the Internet, although low levels of income

and formal education/computer literacy were found to be significant barriers to access (as perceived or experienced by participants). This is despite the claimed effectiveness of some state and local government programs, strategies and support for public access and training, i.e. availability of Internet access and support in public libraries and other community facilities, in increasing uptake of the Internet. The data suggest that more should be done by government to enable access from home instead of public settings. Although income, formal education and personal ability/computer skills play critical roles in Internet access, it is difficult to identify a particular 'type' of person who would be an Internet User other than someone who chooses this mode of communication and transaction with social and other networks as well as authorities such as government organizations.

Findings from the research generally support the literature regarding characteristics of people most likely to have access to the Internet (Lloyd & Hellwig, 2000; ABS, 2001). In other words most Internet usage occurs amongst people with the highest levels of formal education and income. Males are more likely to use computers than females and (to a lesser degree) that older people are less likely to be using the Internet than younger people (Lloyd & Hellwig, 2000); Internet use was almost equally as high as in the younger age groups. Such research indicates also that low income earners who have not attained a high level of formal education are considered to be 'disadvantaged' in their ability to access the Internet. Furthermore, for different reasons, this could also be said of women, older people, people with a disability, people living in rural/remote areas and people from non-English speaking backgrounds, when compared to people most likely to be active Internet Users.

Another finding was that the Internet supplements and complements other means of obtaining information (including health) transacting with organizations such as banks, government organizations and associations, and pursuits related to lifestyle interests and employment. It is also used simply to communicate with other people in a familial, social or other context: individuals and groups. It can also be surmised that users found that the Internet could be used to transcend geographical, cultural and other boundaries that restrict communication and access to information. While some concerns were expressed that related to reliability of information and impersonal nature of this communication medium, overall it was found to be of benefit to users with self-determined discretion and control. These uses and the positive effects on people's lives complement the assumption that the Internet supports the accumulation of social capital.

Overall, knowledge about the availability of health information and services on the Internet was low for the total sample (38%) but users accessed health-related websites and online discussion groups for information on specific health conditions for themselves or on behalf of families, friends or clients. Direct and personal communication with health professionals was identified as the principal source of information about health, supplemented by printed reading material, other media such as radio and television, as well as the Internet. Specific concerns were raised about the risks associated with using the Internet for self-diagnosis and/or in preference to sources that were considered to be more reliable or authoritative.

Compared with other means of obtaining information, information on the Internet was considered to be more comprehensive and detailed, potentially more up-to-date and offering many different perspectives through one encounter, as well as presenting more opportunities for unhurried and even anonymous interaction. Interactivity and the particular advantages of a virtual communication environment, such as the one-to-many communication opportunities provided by Internet e-mail and websites, were considered to be complementary to other forms of communication but not replacements. These were expressed as positive aspects but the Internet was also found to be sometimes cumbersome and subject to "information overload" that requires to have advanced searching skills and invest significant time in order to obtain value. Internet User and Non-User participants acknowledged the challenges to themselves as individuals and to society by the introduction of the Internet, other ICTs and transaction systems such as Automatic Teller Machines and interactive voice recognition telephone systems. The challenges for the aged and for people on low incomes were of particular concern in relation to capacity, ability and personal relevance. Another major challenge was found to be the perceived impersonal nature of the Internet and, regarding Government services, concern about Internet-based information and other transactional services taking over from other forms of service delivery that may still be needed or preferred by citizens.

The health literature indicates that gender influences the way in which women and men use health services (Doyal, 2001). While there did not appear to be major differences regarding access to and use of the Internet by men and women participants, differences were evident in their reasons for using it to access health information and in their information-seeking and communication behaviours. That is, a preference by male participants to use the Internet for health information instead of consulting with a health professional and of women to be time-

efficient. It is also noteworthy that although the methodology for this research included the aim for an equal gender balance in the sample, it was easier to recruit female Internet Users and Non-Users than men in those categories.

It can be concluded that the Internet plays a role of differing importance to individuals who use it. In certain circumstances, for example, for convenience of access or to retain anonymity when searching for information about a sensitive health issue, it may be the primary reference point or source. Research participants who did not use the Internet, but were aware of it, expressed differing opinions about whether it may be useful or not to their lives, but indicated feeling societal pressure to "get online" regardless of their interest, ability or other issues affecting their access. This was particularly the case with older people. Generally, people who already have access to the Internet have a more positive attitude towards it, despite the above concerns, and find it of benefit to their lives.

A policy implication of this finding is that research and service strategies that 'target' social groups according to a single area of assumed 'disadvantage', where it may be subjective 'disadvantage' may be misguided in privileging one characteristic or attribute over another. This is complicated further by an individual or social group having diverse, multiple characteristics or attributes that may or may not meet the assumptions and expectations of their socio-economic situation.

The profile of Internet Users and Non-Users informs online health policy in various ways. Firstly, online health information is preferred as supplementary to – not as a replacement for - other means of accessing health information as the GP is considered to be the main source. Also, it is most likely that people who use the Internet for reasons other accessing health information may be aware of health information resources available and may use them. It is likely that older people (for example, over the age of fifty) and/or that have a particular health condition or interest may access online health information.

In addition to describing the research sample and use of the Internet, this chapter begins to explore attitudes towards information technology generally and information technology and communications services, particularly the Internet, as a conduit for information and also as an enabler of knowledge accumulation and information sharing. Health information was the key

subject used to discuss current information-seeking habits and the role of the Internet in participants' lives. This chapter also introduced Internet use for communication and social networking considered to be relevant to the concept of social capital.

The specific issues of material and social equity of access to the Internet together with 'citizenship' in relation to social capital and social inclusion will be explored in Chapter 6, while Chapter 7 will discuss 'trust' and 'risk' in the context of ICT-mediated communications and transactions and social capital. The next chapter will explore access issues in more depth and discuss how the findings relate to social inclusion or exclusion through the differences observed between: first, urban and rural dwelling participants; second, those with declared physical (dis)abilities; and third, those from a culturally and linguistically diverse background in the context of social inclusion and opportunities for the development of social capital.

CHAPTER 6: ACCESS, SOCIAL INCLUSION AND CITIZENSHIP

6.1 Introduction

This chapter explores access to the Internet in terms of social inclusion and the notion of citizenship, as introduced in Chapter 3. Social inclusion and citizenship, identified in the literature review as relevant to social capital and the digital divide, health and well-being (Phipps, 2000; Baum, 2002) are explored here with Internet Users and Non-Users. This is done with reference to access to health information, together with social connectedness and social networking, which underpins social capital and where there is growing evidence that it may be made possible in some circumstances by ICT (Seymour, 2000; Muir, 2004; DCITA, 2005a; Meredyth et al., 2006; Bolam et al., 2006; SEU, 2006).

Chapter 5 discussed the distinction between structural or material and subjective aspects of access to the Internet but focused on the material aspects, such as income affecting physical access. The previous chapter also argued that structural and subjective aspects intersect and are not mutually exclusive. In the context of social inclusion and its relationship to social capital and also to health, this chapter focuses on the individual subjectivities of Internet Users and Non-Users regarding access to the Internet and online health information.

Social exclusion, as a result of lack of access to the Internet, may be the core problem of the digital divide. The digital divide, as defined and explored in Chapter 1, refers to the social division between those people in society who are perceived to be 'information rich' and those who are perceived to be 'information poor', when information is enabled by ICT, in particular the Internet as a means of publishing public information on the World Wide Web. As this research is particularly concerned with the nexus between the concepts of social capital and digital divide and implications for policy, a key question posed that is relevant to social inclusion policy is: How does the inability to access the Internet contribute to social exclusion, particularly in regard to knowledge about health? (see Chapter 4, section 4.2.2.1).

Having outlined in Chapter 5 the profile and usage characteristics of the research participants, including Non-Users of the Internet as well as Users, this chapter explores the attitudes and perceptions of Users and Non-Users about the Internet for information, in particular health information, and for communication in general. Participant perceptions and attitudes about the Internet for communication and social networking are pertinent to understanding whether the Internet has a part to play in social connectedness and in their participation or non-participation as citizens in an information society.

6.2 Access, Health and the Potential for Empowerment

There are perspectives in the literature on the Internet's impact on society that emphasise the 'utopian' view (Negroponte, 1993; Dutton, 1995) as discussed in Chapter 2. This view is premised on universal access (a feature of democracy and citizenship), equality and the empowerment of people. It could be suggested that the reality of the tension between Internet 'access' and 'non-access' has shaped the concept of the digital divide to describe inequality as evidence of society's inability to achieve universal access. 'Empowerment' is also one of the benefits attributed to people's use of the Internet by government organizations embarking upon or conducting online services. Empowerment is gained through access to information and services via the Internet, together with the potential for increased choice, control and democratic interaction with government (DCITA, 2002). While choice and control are introduced here, they are considered in more depth in Chapter 7. This chapter explores choice with the study sample about information that can be accessed, its perceived value and the potential for empowerment.

6.2.1 Subjective Understanding of the Internet as a Source of Information

This section explores the attitudes and perceptions of Internet Users and Non-Users to the Internet as a source of information either from virtual published information or information obtained from communication with other people via the Internet. The Internet was recognised by all participants as an alternative communication channel to face-to-face and telephone contact interactive communication, as well as an alternative means of accessing textual and graphical information than printed material or other visual media. As such, participants acknowledged that the Internet is only one of several means by which to access information or to communicate. However, it had characteristics (perceived to be both negative and positive) that were different to other means:

> I would say very definitely so [improves choices], because I have, I suppose unusual interests – and I don't mind revealing some of them. One is flying stunt kites, and I wanted to know how to tie the knots, because I know just with about a two or three millimetre adjustment in your kite line makes a big difference whether it crashes or flies fantastically, and I went and had a look and there were 1600 sites on the Internet just about kit lines for the stunt kites, and I thought, this is it…but, no, it's not like that. So out of all those there are individual people plus there are clubs, organizations, magazines, shops…catalogues from several countries in the world that market them. So, it opens up your mind…
> (Participant 7, M, Internet User – G3)

> I sent some information that I just happened to get into for my cousin about air seeding for crops, and then at the same time I found some stuff that I was interested in…how he does drilling, about hard facing drill tips. Quite by accident you find out other information, more leading edge. I wouldn't normally have picked that up and I wouldn't normally have looked through magazines to find that out.
> (Participant 5, F, Internet User – G3)

> Yes, it's a network. The Cornish group have a Christmas function, and they all input to where the function is going to be held and how they are going to get there and all this sort of thing, and it's just at the end of the year a sort of fun game and we have sleighs towed by horses or something or other, and this is just a group of people that are there and that's their fun section of it [the Internet]. The rest of the time they're there to gain or give information, and you just can't set up a network like that. It's just impossible.
> (Participant 1, F, Internet User – G1)

The differences include opportunities to access information or communicate with individuals and groups in ways that would not have been possible otherwise. This supports Wellman's (2001) research as discussed in Chapter 3 about computer networks as social networks enabling new knowledge and new contacts. It could be suggested that these opportunities could be perceived as potentially empowering. Perceived differences also include 'de-humanization' or 'lack of personalisation' attributed to computer-mediated communication:

> So that's what I find about the Internet, that you can connect with people absolutely all over the world, and people that you would not normally know…When you are on the Internet you have the rest of the people that are connected, so you really have more options.
> (Participant 5, M, Internet User – G4)

> Sometimes we're forced to take over the technology…that personal touch, we'll call it, over the counter, is disappearing, and I have no choice in this.
> (Participant 6, F, Internet Non-User – G1)

Participants' individual circumstances, preferences, knowledge and experiences determined their attitudes about the value of the Internet for them as a means for access to information or for communication:

> But whether you use it for health, or other things, I think depends a bit on your own abilities and whether or not you know there's stuff about it.
> (Participant 6, M, Internet User – G3)

> There's a bit of an assumption in the system that everybody [who uses the Internet] is up with the latest fashion and knows all the latest things, but if you only use the Internet every now and then you're sort of thinking, you know – it's like picking up a magazine in another town, you don't know what context the information is in.
> (Participant 5, F, Internet User – G3)

The data demonstrate that the subjective understanding of the Internet as a source of information (including information about health) is intrinsically linked to Internet awareness and access. The data suggest that the perceived value of that information is variable depending on Internet awareness and access, and that Users and Non-Users perceive the need to be cautious about the use and value of health information accessed online. This perception of value is not only limited to Internet-available information but, across the diverse participants, extends also to health information from other sources, including information received directly from local doctors – although that information was generally considered to be more trustworthy.

6.2.1.1 Perceived Value by Participants of Health Information

The vast majority of Internet Users in the sample (95%) indicated that having access to high quality, accurate, reliable health information online would mean that they could be better informed about health and increase choice and control in their lives. It can be assumed that the health information available to them from the Internet not only increases their knowledge about health conditions, health services and available treatments but affords them greater choice, some control of the health process and empowerment in their interactions with health practitioners:

> In some respects it would probably give you more control in that you could read up on whatever the issue was and, from that, develop some questions that you could then ask the doctor if you weren't sure. So you would learn more about what's perhaps happening, and rather than just going in and being told, you will be able to actively participate in a discussion.
> (Participant 1, F, Internet User – G1)

> I really honestly believe that it gives you control, if you know what you are doing, because you really get to ask the right questions.
> (Participant 2, F, Internet User – G4)

> Like, you read an article [health] and you go straight to the person who wrote it, with a few questions.
> (Participant 8, M, Internet User – G4)

> With information, first of all I try to find all the alternative information before I even consider a GP or a hospital.
> (Participant, F, Internet User – G4)

> They [medical profession] don't have a clue what's happening. They also have to research a topic. If you have some knowledge, you can then pose that question and then sometimes they

> will go ahead and research, or, in fact, they might say, "I don't know, I'll refer you on. I think in that way the control would be better if you have some knowledge. It might not be the correct knowledge, but at least it gives you knowledge."
> (Participant 2, M, Internet User – G1)

Participants aged over fifty, compared with the rest of the sample, appeared to be the most active seekers of health information from many different sources, including the Internet. The reason given for this by participants was that they needed more information and support on health issues as they aged.

All Internet Users had discriminating views, including negative perceptions, about the quality, integrity and value of information and associated services available via the Internet, particularly health information. However, the majority (95%) still considered that the opportunity for access to information was important as it provided greater diversity of information from wider sources and increased choice:

> It makes me more aware of the information that is out there. If there was no Internet they [Government agency] would give me a little bit, a brochure, but the Internet is giving us more.
> (Participant 4, F, Internet User – G2)

> …perhaps here in [Name of Rural Area] where you have limited access to library books and GPs are very busy you'd go to the Internet first. It's a small town and so, I mean, if you want…maybe it is something that would give you more choice. But my question is: how credible is the information on the 'net?
> (Participant 7, M, Internet User – G3)

> You get a bigger perspective. It gives you choices – that looks good, that doesn't.
> (Participant 2, M, Internet User – G1)

> The other thing that I found is that there is a lot of information on alternative therapies. I think that alternative therapies are there for the people who want a different approach to normal medicine, and I think that, for them, there is quite a lot of information, and that is not normally what the GP is going to say that you go along to, unless you've got somebody that's well versed in both fields."
> (Participant 3, F, Internet User – G1)

> Yes, the Internet definitely gives me wider choices for health information.
> (Participant 2, F, Internet User – G2)

Although approximately 20% of Non-Users did not attribute similar value to the Internet, the majority of Non-Users said that they may be 'missing out' on information by not having access:

> My understanding was that a particular ailment could be called…and there was information on the Internet on that subject. So from that point of view I think it is easier to find, I understand, on the Internet than trying to find it through a million books, where you wouldn't know where to start.
> (Participant 9, M, Internet Non-User – G1)

> Every time we look at the TV there's something interesting to hear about, and they say go to a website…whatever it is, and I miss out on it. It's like 'damn'. I don't have a computer; it's on there and it's telling me about it, but I miss out on it because I don't have a computer.
> (Participant 3, M, Internet Non-User – G2)

The Non-Users, when advised that health information was available via the Internet and then asked what they would search for and expect to find if they were using it, indicated that they would expect to find information about diseases, where to go for various health services, diagnostic and treatment information, access to support groups and information about aged care (health and domestic support services and nursing home information).

A few participants over the age of fifty commented that newspaper and pamphlet availability seemed to have declined due to the increased number of online publications and information. While there were mixed views about the availability and value of printed material over online material, depending on whether participants were Internet Users (positive) or Non-Users (negative), there was a general concern for society expressed by Internet Users and Non-Users about the increasing reliance on the Internet for information service delivery from government services and other service providers when there is not universal access to the Internet. Another reason given was the desire by service providers to cut costs:

> The other thing is that when we came here [to this country] we were frantic about leaflets, a pamphlet about everything…but there aren't so many now and that's a good thing.
> (Participant 5, M, Internet User – G4)

> That [Internet service] is going to happen more and more, because they're [service providers] saving money, aren't they?
> (Participant 3, M, Internet Non-User – G1)

> Then there's this generalisation [by government and society] that everyone's got a computer at home. That's a lie. Lots of people do not have a computer at home, and even if they have a computer at home not all people have access to the Internet.
> (Participant 8, M, Internet User – G4)

> …but certainly my own experience is that more and more things are only available in a website or web-based or using the Internet.
> (Participant 6, F, Internet Non-User – G1)

> It's all progress, isn't it? It's all coming gradually.
> (Participant 9, M, Internet Non-User – G1)

> How are we going to oblige every household in the country to have access to the Internet?
> (Participant 9, M, Internet Non-User – G1)

Particularly where health information was concerned, there was an indication of wariness about the integrity or validity of information from the United States published on the Internet. This was most evident in Internet Users aged over fifty years old that perceived that the majority of available information was of American origin. The inference was that such information was less relevant to Australians and, potentially, less reliable. This perception will be discussed further in the next chapter as it is relevant to the values of 'trust' and risk':

> If they [web sites] are all glorious and glamorous and they're saying, "This is Dr So-and-so and he's got this", then I start to treat them very, very carefully, because the Americans tend to glamorise the whole thing. You can't be sure until says on the bottom that it was published in a reputable book or journal, but a lot of them don't say that.
> (Participant 3, M, Internet User – G1)

> …and also I have found that quite a lot of the information is American, and probably not enough information about local things. There is not enough Australian information, especially about nutrition, I suppose.
> (Participant 2, F, Internet User – G1)

> Certainly that is one of the things that Internet users quickly find out, that there's a huge amount of American information that you may not find useful.
> (Participant 2, M, Internet User – G1)

> I use the Australian Yahoo search engine to find out about health issues and stuff like that.
> (Participant 4, F, Internet User – G2)

Access to information via the Internet, health information or other, was perceived to be very important by the participants used for the research sample, particularly if it was factual, accurate, reliable, and of high quality and integrity. The Internet Users acknowledged that it provided more information than may be available through other channels, albeit information that was not always factual, accurate, of high quality and integrity, or of value. Access to information over the Internet could increase control over health or improve self-reliance, independence and choice and provide a complementary resource to other means of obtaining health information:

> The volunteer work that I do, I do a shift for the Anti-Cancer Foundation working on the Cancer Help Line, so we use the Internet specifically for that role, because people ask you a lot of things that you don't just have off the top of your head.
> (Participant 2, F, Internet User – G1)

The data suggest that the Internet provides Users with the capacity to access more information than would otherwise have been available and provides opportunities to build and expand social networks and enhance social connectedness. This supports Granovetter's (2003) thesis on the strength of weak ties in networks and the value of linking and bridging social capital that is not

restricted to the local and familiar. As discussed in Chapter 3, Lin (2001) and Szreter (2002) place high value on linking and bridging forms of social capital to reduce inequities although Szreter (2002) is concerned about a relative decline in bonding social capital.

6.3 Citizenship and Social Connectedness

In the context of social inclusion, the notion of access to the Internet is broadened to include all dimensions of participation in social and civic life and promotes potential benefits to individual and community health and well-being. As the Internet is a medium for social and civic interaction in today's society, use or non-use by individuals and communities may result in social inclusion or exclusion (or perceptions of inclusion or exclusion) from certain aspects of participation in civic life and society. This has the potential to impact on the ability of individuals and groups to produce and benefit from social capital, through 'virtual' social networks and social connectedness enabled by the Internet, and also impact on their health and well-being. Social networks are one of the structural aspects of social capital and are important to social capital for the 'connections' that can be made with individual and communities, and the reciprocated value that may be achieved from social support networks and access to public information resources.

6.3.1 Citizenship

The notion of citizenship, defined as 'participation' in civic and social decision-making, implies 'membership' within a society with expected 'rights' and 'rules' for participants, where the citizen is not just a 'consumer' of services but is empowered to contribute to government and community decisions (Miller & Rose, 1993; Fletcher, 2000; Hill, 2001). Citizenship is linked with universality in the provision of benefits. This notion of citizenship could serve to amplify social inequality and lack of empowerment for 'non-participants', particularly people without Internet access in an age of electronic government, when citizenship may be premised upon equal rights for access but is unable to be applied equally:

> Not having the Internet or being able to afford it makes me feel like a second class citizen, really.
> (Participant 3, M, Internet Non-User – G1)

> So the cost of getting a computer and operating the Internet can cut a lot of people out from that [access to services]. If I haven't the equipment, you can't be sending me any kinds of messages.
> (Participant 9, M, Internet Non-User – G1)

The data suggest that self-perception of empowerment as a citizen is tied to access to resources and services for the public. A citizen is not just a voting constituent and government itself in the age of globalisation does not limit citizenship or citizen participation to the confines of local, State, or national 'government' entities. The concept of citizenship in the context of globalisation is relevant to social inclusion/exclusion policies as globalisation presents wider and diverse domains from which to be included and excluded and therefore can be deemed to divide as well as unite (Hill, 2001).

Exploration of Internet usage and non-usage shows that access is a multi-dimensional issue that is not only related to social inequality but also to perceived value and individual choice. Therefore, an individual who does not have Internet access cannot necessarily be classed as socially 'unequal'. Although Internet access can depend on socio-economic status, access also incorporates psycho-social factors such as capacity, literacy and confidence. As such, using the Internet becomes a matter in the social policy debates about the relationship between social inclusion/exclusion and social capital (Phipps, 2000; Bullen & Onyx, 1998). Social capital is relevant in these debates in the contexts of social policy and service delivery, given that social capital is an expected product/outcome of social inclusion, that is, of a participative, interactive society.

The Internet and other ICT are considered to have a beneficial impact on communities and societies by facilitating social and business communication across networks (Phipps, 2000). As such, they are expected to have a positive impact on social connectedness: connections with support groups and communities of interest or practice, and with government organizations and the community services sector.

Theorists on the digital divide and people who miss out on the social benefits resulting from access and use of ICT (Loader, 1998; Seymour, 2000) conclude that these people are least able to make use of socio-technical advancements such as the Internet. That is, people who are socially isolated and have poor access to social support and resources would benefit most from improved social participation, civic interaction and access to resources. A general theme from the research sample was the consideration of the Internet and support to use the Internet as a 'public responsibility' that should be publicly funded or subsidised where there was an expectation by government organizations that the public should be using the Internet for information.

> So I think that places like community centres and even the hospital, maybe they could have like a little room or something where people have access to the Internet for health related issues, but I also think they need to have support staff, so you go there and they teach you how to do this, because it is not very hard, and I have seen it. I have taught really, really old people and everybody learns, but you really need to get a little bit of help at the beginning if you've never touched a computer or if you've never used the Internet before.
> (Participant 2, F, Internet User – G4)

> For some reason they are blocking people from using it. For example, at university when I came here you could access it. It was restricted to students, but almost anyone could go into it. In a way, you had to put your student card there, but they were not too strict about it. People could go in and use it even if they were not actually from the University. But now they are prevented. You need a password. The University library could have at least two computers added that are open to everyone, for people coming in. It would be at no extra cost because they are connected all the time.
> (Participant 5, M, Internet User – G4)

> Whenever we talk about health it seems to be that we are always talking about crises, we are talking about solving a problem. What about preventative medicine?...Medicine is not only about being sick; it's also about being healthy, and I think that's something that could happen socially, and, for people who do not have access, you do go to pick up your children in the morning, you do go to pick them up in the afternoon – you can be there an hour earlier, you can have a common room for health related issues, and have staff people. But you really need health workers, you really need people to support these programs. You just can't say, okay we're going to open a room, we're going to have three computers, and that's it. That would never work.
> (Participant 5, M, Internet User – G4)

Social inequality is evident in many domains other than the digital divide where low income and limited formal education have contributed to socio-economic contrasts and issues of equity of access to public services such as health. However, factors such as low levels of income and formal education are not mutually exclusive. Social capital and social inclusion are related concepts. Social inclusion can be characterised as social structures enabling conscious awareness and insight for people as well as personal choices and individual control, which promotes and is supported by social capital (Bullen & Onyx, 1999). The relationship between social capital and the health of communities was discussed in Chapter 3 in the context of the social determinants of health (Marmot & Wilkinson, 1998, 2003; Macinko & Starfield, 2001, 2003; WHO, 2003). Central to that relationship is the positive impact of social networks and support on the health of individuals and groups. Poor physical and mental health are linked with social inequalities arising from low levels of income and formal education as well as other social determinants of poor health such as social isolation which may include lack of information, lack of access to services and lack of choices and support (Baum, 2002):

> Although social, who's to say that's not part of your health?
> (Participant 10, F, Internet User – G1)

‘Electronic Government’ (NOIE, 2001, 2003) refers not just to the public’s connection or access to the Internet but their “online participation”, thereby attributing a social or public role for the Internet in supporting and making participation possible. Related to this, the term used in the United States to describe community participation using ICT is “community informatics”, meaning the adoption of ICT to enable community development and social participation from which community demographics emerge (Simpson, 2002). Whilst ICT may provide technologies to enable empowerment for community groups and individuals, the problem of the digital divide highlights that their existence and non-universal use can also create increased powerlessness, social isolation and exclusion. This concern is reflected in the data shown here through the perspectives of individual participant experience and concern or fear on behalf of society.

6.3.2 Social Connectedness

Social networks that promote social connectedness, and health and well-being are potentially facilitated by the particular communication attributes of the Internet. These attributes, discussed in Chapter 2, include the ability to interact with diverse others over social and spatial boundaries in computer-supported social networks (Wellman, 2001), conduct ‘one-to-many’ interactions and send communiqués regardless of the recipient(s) being mutually available to receive them. Wellman et al. (1996) state that computer-supported social networks can be viewed as social networks because they link people as well as machines (p. 213). Further, they enable more uninhibited and creative interactions within virtual communities than in-person communications. In virtual communities created by computer-supported social networks it is likely that the members would never have otherwise had contact with each other without the Internet.

In addition to communications with people who may never have had contact or may never have met, or never will meet in person, the Internet may provide an alternative means of communication with more ‘bonded’ or familiar contacts of family and friends where contact would otherwise be minimal or non-existent for a period of time in certain circumstances. Although the Internet is not essential for all types of social networking or social connectedness, it may enhance and support social connectedness by enabling the establishment of wider information and communication networks and support groups than would otherwise have been possible for specialized or broad-based topics:

> One of my relatives in Canberra has got a website for premmie babies and they had a very, very small baby and back at the time they had it the resources and the hospitals weren't what they are today, and they have a website and there are a lot of people hitting that and emails going through, "Can you tell us more about what you went through?"
> (Participant 2, F, Internet User – G1)

> I've used it when a friend of mine was diagnosed with non Hodgkin's lymphoma. I've never heard too much about that. I have heard about lymphatic glands and cancer and so on. The Internet gives the information about those well known things.
> (Participant 3, F, Internet User – G1)

> They are support. These people weren't doctors…but nice people that had been sick. Some of these people have had the disease or known that they have the condition for more than 20 years, so they are very, very sympathetic and very caring. But this is a mailing list, this is not just searching on the Internet, this is actually becoming part of a group of people who have this in common.
> (Participant 8, F, Internet User – G4)

> My niece has a fairly rare illness…and I believe there's an internet support group from around the world of about 300 or 400 sufferers, and they are in contact all the time with all their symptoms and how to handle them and stuff like that, and I know she finds that really helpful.
> (Participant 5, F, Internet User – G3)

> My nephew…we were in contact with people through the Internet and learning he's got that disorder called dyslexia…you can get in contact with other people who can help.
> (Participant 7, F, Internet User – G4)

The particular attributes of the Internet for communication, social connectedness and access to diverse and broader knowledge were recognised and understood by Internet Users. These attributes played a part in their choice to become Internet Users. The following comment from an Internet User suggests a responsibility to use the Internet's capabilities to share knowledge and information:

> The value is what you do with the information that you get and this [the Internet] allows you a method of passing it on.
> (Participant 4, F, Internet User – G3)

Internet Users go online to maintain social contacts with family, friends and colleagues, in ways that could not have been achieved without Internet access. This is not to imply that there would have been no other means of contact used for 'known' individuals or groups but the Internet offered a means of more regular contact than would otherwise have been the case. Professional contacts, for example, were considered to be more easily maintained through Internet contact than specific intermittent or regular telephone or postal mail contact. Internet Users aged over fifty, in particular, expressed benefits from their use of the Internet for social support from companionship and knowledge access. Increased contact compared with telephone and postal mail contact by using email with relatives and friends interstate and overseas was common

amongst older participants, despite noted significant reductions in the cost of interstate and overseas telephone calls:

> In professional relationships it's probably more important in a way now to be able to maintain professional contacts over the Internet.
> (Participant 6, M, Internet User – G3)

> …basically I use it now a lot to maintain social relations with people, wherever they are, my family. Both my brother and sister live now in the United States and I contact them. I have friends in Israel, I have friends in other places and I use it in that sense.
> (Participant 5, M, Internet User – G4)

This suggests that Internet contact is easier when the intended recipients are geographically dispersed and/or when a less formal or planned approach is preferred when compared with telephone or postal mail communications. The majority of older participants agreed that the Internet communication was very different to face-to-face contact and that whilst it had significant advantages, it was an impersonal form of communication that would negatively affect the nature and quality of those relationships. In the same group, however, the convenience of online communication was seen as beneficial for both sender and receiver:

> You are not relying on people actually being there when you ring. You can actually email people and the message is there and they check it and they will email you back so you don't actually have to talk to them.
> (Participant 10, F, Internet User – G1)

> I have reached 65 and I wanted information about my superannuation and I was able to access information without going and talking to the organisation, which happens to be in Victoria, and I was able to have a different sort of relationship to them.
> (Participant 8, M, Internet User – G2)

Computer-mediated communication has limited social presence compared with in-person contact with loss of voice tone and volume and non-verbal cues (Berry et al., 1993; Ostrom, 1988). There does not appear to be any specific body of literature about the impact of computer-mediated communications on the nature and quality of familiar relationships over time. However, Wellman et al. (1996) researched the impact of computer-mediated communication on small group relationships compared with in-person contact and found that people communicated more freely and creatively and that there was less centralized leadership in decision-making. A factor of the 'freer' communication style is the potential for misinterpretation due to the absence of verbal nuances and tone, or to inflame others by using more extreme language than might have been the case in an in-person interaction. This, of course, may have an impact on trust and reciprocity in

relationships and across social networks, as discussed in Chapter 3 (Palfrey & Rosenthal, 1988; Rocco & Warglien, 1995).

A general view supported by all participants was that social connectedness is valuable for health and well-being and may be able to be facilitated or supported by the Internet. This supports the suggestion in the literature that the Internet could be a "conduit for social inclusion" (Phipps, 2000; SEU, 2005).

6.4 Social Exclusion

Social exclusion and discrimination, of course, are social issues that are not only relevant to the Internet. However, in contrast to the views outlined in the previous section, the Internet could be considered to be another means by which to be excluded potentially from receiving essential and beneficial services, such as health information:

> I know someone in Israel who got pregnant after she was on IVF for a long time and she couldn't get pregnant, and then she found through the Internet, through a support group from all over the world, some doctor in America and then privately paid him and he treated her eventually and she got pregnant. So, in the way that the health system is privatised, it is all over the world, so you can go anywhere – if you have the means. The Internet doesn't change that. It can actually reinforce it, that people with means, as always, get better care than people who have no means.
> (Participant 2, F, Internet User – G4)

This perception suggests that only those people with adequate income and formal education can participate in Internet access and networking and, therefore, can achieve better health outcomes. The following sections explore this belief and find both challenges and support in the data.

6.4.1 Perceptions of Access and Overcoming Barriers

Non-Users expressed views about how the Internet could be of use to them should they have the means and ability to access it. Contrasts emerged about the perceived value of the Internet. For example, on the basis of what they understood about the Internet, Non-Users from culturally and linguistically diverse backgrounds were strong advocates for its potential benefits. Furthermore, Non-Users, particularly people with disabilities of those from culturally and linguistically diverse backgrounds, expected their ability to access information (including health) and opportunities for wider communication would be facilitated through Internet use, while some Non-Users, particularly females aged over fifty, believed it had little or no potential value to their lives:

> No, I wouldn't [use the Internet] because I'm fortunate to have other resources available.
> (Participant 2, F, Internet Non-User – G1)

Non-User attitudes and perceptions of information on the Internet varied according to individual knowledge about the Internet and experience or with Users of the Internet.

As outlined in the previous section, the majority of Non-Users acknowledged the potential value of the Internet as an empowering information resource although they tended to be more negative about information service providers and of information integrity and value. Compared to the Internet users, there was a stronger emphasis on the structural barriers to access to information and expectations of universal access and support. For example, a few Non-Users identified the need for training and support of users and potential users as a public right. Time to learn how to use the Internet and time to actually use it was given by a few Non-Users (particularly women aged over fifty) as a reason for not using the Internet:

> I know there are plenty of busy women around who have to do about six different jobs [and don't have time for the Internet].
> (Participant 6, F, Internet Non-User - G1)

This was the case also for retirees and pensioners aged over fifty where there may have been an assumption of more time being available to such people for computer skill acquisition and Internet browsing.

Some female participants who were not Internet Users and had male partners who were Internet Users indicated that they considered that the Internet was their partner's domain. Although they did not have a particular interest in accessing it directly they would sometimes benefit from their partner's use of it. The quote below also suggests that the Internet is an exploratory pastime for the husband and not as important as the wife's practical household tasks:

> In my household we have got access to a computer and the Internet. My husband uses it very fruitfully and gets a lot of information. I simply don't use it because I've got too many other things I've got to do and I don't have time.
> (Participant 1, F, Internet Non-User – G1)

Interest in having the skills and income to access the Internet was expressed most significantly by participants from non-English speaking backgrounds. Reasons given for this interest were based on self-recognition of the importance of communication and connectedness not only for integration in local and broader networks and communities, but for other methods of connectedness and communication with their own cultural communities locally and internationally, as well as access to information.

There was a general balance of both interest and disinterest towards potential use of the Internet for Non-Users who were either aged over fifty, living in rural and remote towns and with disabilities. Reasons given for such interest and disinterest were based on perceived individual relevance of the Internet to their current and potential connectedness, methods of communication and access to information. The common indicator determining the perceptions and attitudes of various social groups in the sample towards access to the Internet was the level of interest based on personal or individual relevance.

As discussed in Chapter 2 some 'electronic government' policies and strategies attempt to address the problem of the digital divide by enabling free access to the Internet from certain public facilities. When the Non-Users who wished to use the Internet were questioned about their attitude towards Internet access from public facilities, to ascertain whether their non-usage was due to lack of means to access from their home, they indicated a strong preference for home use:

> Can't get access at work and don't want to use it a library. I should put it on at home but I think it is expensive and I'm not sure that I can get it properly, anyway.
> (Participant 6, F, Internet Non-User – G3)

> The only way for us without a computer is to join the library and learn how to run the computer, how to start it up and go to the Internet and things like that. We'd rather have one at home.
> (Participant 8, M, Internet Non-User – G2)

> Who is the person that upgrades your skills? All of a sudden there's this assumption that you're going to know how to do it. You are sort of sitting there thinking, 'Oh, who am I going to ask and reveal my ignorance?' I don't know how to do it. That's part of the problem of public places.
> (Participant 10, M, Internet Non-User – G3)

The data infer that significant barriers to the adoption/use of ICT by people who are excluded may arise from the inappropriate location of public access sites and ICT training, which could be perceived as irrelevant or lacking in value. This would suggest that a key challenge for

government online information policy-makers might be to foster and sustain virtual community 'spaces', informal training opportunities, and appropriate access which is identified, developed and shaped by the perceived needs of people in the excluded social groups. The current policy framework to provide limited Internet access and very basic support at existing community centres/public libraries is challenged by involving local communities in planning for community Internet access and training through all levels of government. This planning needs also to address the more pervasive features of the digital divide and why people may find the Internet irrelevant, unhelpful or not 'user-friendly'.

Older participants did not specify 'age' as being a barrier to using the Internet. In contrast, several of the older participants (Internet Users and Non-Users) referred to older people having the capacity for change from past ways of doing things. For example, one participant over the age of fifty had stopped posting birthday cards to relatives overseas and telephoned instead because calls had become cheaper and the social interaction had improved as a result. A few other older participants opted to use the Internet instead of telephone calls for those types of social interactions:

> I've still got relations back home, and I don't send birthday cards now, I phone them, because it costs me roughly about $4 to phone them and speak to them for 10 minutes, and I get interaction there, whereas it costs me $4 for a card so I talk to them now and it's better anyway.
> (Participant 10, M, Internet Non-User – G1)

> There is Internet for very beginners, and some of the people never even used a computer let alone the Internet and….was born in 1901, so that's how old he was, and he was very sick at home and he knew that if he had the Internet at least he would be able to do something. He didn't know exactly what, but he's using the Internet today.
> (Participant 7, M, Internet User – G1)

> I have taught really, really old people and everybody learns but you really need to get a little bit of help at the beginning if you've never touched a computer or if you've never used the Internet before.
> (Participant 10, F, Internet User – G1)

The data, generally, demonstrate the perception and individual experience that use of the Internet can overcome perceived barriers such as age, geographical and physical isolation.

Internet Users with disabilities supported findings from the literature review about people with disabilities being able to transcend the limitations of their body when communicating (Seymour, 2000). The participants described how they were able to more easily make connections to people

with similar health issues or other interests. Deaf people were able to 'meet' others over the Internet. One participant was a young man who found it easier to strike up friendships with non-deaf people over the Internet, particularly as a way of meeting and having online conversations with young women. A participant who had profound deafness stated that she used the Internet to look up information about health conditions instead of seeing a doctor as she could not afford the doctor's account and preferred the type of non-intrusive and non-hurried online interaction. Inability to access the Internet for Non-User participants with disabilities was not necessarily due to the disability (e.g. mobility, etc.) but due to income, skills and support. The majority of these participants lacked awareness about the availability of Internet facilities at public sites (e.g. libraries). This suggests lack of opportunity to be informed. Literacy in English is a widespread problem for people with a severe hearing impairment, complicating access to information and health services:

> There's one thing – in plain English. We don't want to long words, just plain English, that's the important one.
> (Participant 2, F, Internet User – G2)

> If I have a problem understanding the stuff on the Internet, to find out about it I'll ask someone. It depends on what the topic is. I might ask for it to be translated in Auslan for me – that's our deaf language.
> (Participant 2, F, Internet User – G2)

> If I'm really ill and something goes wrong they go, yeah, wait for an interpreter, two days in advance and stuff.
> (Participant 5, M, Internet User – G2)

Internet Users with disabilities spoke positively about how the Internet empowered their lives, used as a primary source or complementary alternative source of information and social contact. For example, a young man with a hearing impairment was enabled by the Internet to contact people and meet young women:

> If I can go on the Internet, I can contact people, contact girls, go and see girls.
> (Participant 5, M, Internet User – G2)

This resonates with Welman's (2001) proposition that boundaries are more permeable in networked societies, enabling interactions with diverse others.

The Non-Users living in rural/remote towns expressed concern about their lack of access due to telecommunications infrastructure constraints, a digital divide issue that has been researched

(NTIA, 1995, 1998; Buckeridge, 1996; BF, 1998, 1999; DCITA, 1997; Chen & Wellman, 2004). There was a perceived greater need expressed for the Internet where geographical isolation is a problem for people. This was also mentioned by participants outside this group as a concern for country dwellers:

> The thing is that country offices are isolated from the city centres… It's a question of access.
> (Participant 6, F, Internet Non-User – G3)

> Perhaps here where you have limited access to library books and GPs are very busy you'd need the Internet.
> (Participant 7, F, Internet User – G3)

> I think you have to qualify having a bigger perspective and choices to where you live. In the metropolitan area, if we had some unusual name, a medical problem, we could probably pick up the phone and talk to a mate that we know who has had that problem and find out something about it, but if you are stuck in an isolated rural community where you don't have ready access to information from others, social groups and so on, it would probably be vital.
> (Participant 2, M, Internet User – G1)

A former Internet user from metropolitan Adelaide had experienced a sense of having something taken away by moving to a remote country town. Although the comment below referred to access to the Internet, the participant inferred that, in general, communication opportunities and various contacts were being missed:

> I use to use it all the time in Adelaide but when I came to [Remote Town] it was like being cut off…
> (Participant 6, F, Internet Non-User – G3)

In contrast to the above attitude, the data also demonstrate where social isolation had been minimised by Internet Users living in rural or remote locations. Several Internet Users living in rural or remote towns and had previously been urban dwellers inferred that access to the Internet reduced their feelings of remoteness or social isolation. They indicated the positive role that Internet connectivity played in keeping them in contact with people and information and in establishing communities.

A general theme from Internet Users of culturally and linguistically diverse backgrounds was the problem of language in Australian society, with particular difficulty experienced when dealing with illness and health service providers. Participants told stories about themselves or people known to them with poor or non-existent English skills that would use their children to interpret

with General Practitioners and with doctors at hospitals. Or they would rely on other English-speaking individuals to help them, such as cleaners and cooks working in the hospitals:

> I remember when we came here and…had to go to the hospital. We did not speak English, they did not speak Spanish. It was such a mess and at the hospital we had the cook who was Italian translating for the doctor. It's a big problem [not being able to communicate in the same language], especially in relation to sickness.
> (Participant 2, F, Internet User – G4)

> They [migrants] use their children as interpreters.
> (Participant 5, F, Internet User – G4)

> Or you talk to somebody on the other side of the line and you say something and even to me, and I've been here for 20 years, and they say, "Eh?" so, like I said, "I just don't want to talk any more". Is it really that hard?
> (Participant 8, M, Internet Non-User – G4)

> I mean, not that I'd use it, but I put myself in this position: I can't speak English very well, and people feel in a way very humiliated sometimes and I have seen it, and I know why people feel like that, because you are treated like – you speak with an accent, and that alone puts you in a category of sub normal. But if you don't speak with an accent you don't speak at all, and that would put you even further into the sub human category. So you go and you try to get help and you try to get information, and in those circumstances it is not very easy and it makes you even sicker.
> (Participant 5, M, Internet Non-User – G4)

Compared with the Internet Users in the other groups, they indicated a higher use of health support groups via the Internet and sourced health information in languages other than English. From the positive perspectives, it can be suggested that the Internet assists in removing some of the barriers to communication and access to information experienced by people of culturally and linguistically diverse backgrounds, and people living in rural and remote towns:

> The Internet doesn't treat you like you don't count!
> (Participant 8, M, Internet User – G4)

In this regard, the South Australian policy for electronic government (DAIS, 2000) is supported as meeting its desired outcomes to some degree. There has not been a comprehensive evaluation of South Australian electronic government information services since the Information Economy Scorecard in 2002 which, although it provides evidence of access improvements in rural and metropolitan areas, does not explore barriers or removal of barriers.

All Internet Users of CALD background also indicated that they were aware of the existence of health information and other information on the Internet in other languages:

> On the Internet, you can get information in other languages.
> (Participant 7, F, Internet User – G4)

One participant with a Spanish background considered the Internet to be very useful to her. She recounted a circumstance where she found out from it what questions she thought her friend with a particular health disorder should ask the doctor. She also praised the Internet for being non-discriminatory in relation to cultural background.

The importance of the link between health and community support is evident in the quote below from someone of a culturally and linguistically diverse background:

> I'm not saying that it is not the right thing to do, but this is the mentality they're coming from. For example, when we got here in 1989, my children went to primary school, and all the dental health care was collective. They had everything done at school. They used to have a bus that did the whole group, like all the year sixes and all the year fives and they went together to the dental hospital and they were all given talks and all checked, and then when they came back – it was really social. They talk about how you brush your teeth and what did the doctor say. It was a real social activity. No, it's all to the parents. They have to take the children to the clinics. So they have to leave school and sometimes you need to leave work because you have to organise to take your kids, and it's not very effective. They're saying that it could happen again, that in primary schools and maybe high schools, there should be a room dedicated for public health. Then it would integrate the families.
> (Participant 5, M, Internet User – G4)

This suggests an expectation for public health services to support families and communities for access to health care and a noticeable decline of supportive and integrative health and community services from the late 1980s. While the Internet was considered to be one way to connect people in communities and enable access services, many different strategies would be required for improved community involvement and improved health outcomes.

6.5 Conclusion

The focus groups made it possible to explore participant attitudes towards social inequality in access to the Internet for information and communication. Social inequality does not exist solely as a result of low levels of income and formal education. Many reasons contribute to individuals not being able to participate as citizens in virtual or other communities and thus not gain the benefits in terms of support and information. As a result, the potential exists for such support to become dominated by middle-class, educated and articulate individuals who are already more

likely to make more effective use of services. Consistent with top-down policy models, the emphasis for many community social capital building projects has tended to be on the necessity of providing physical access and training for particular groups of citizens. This perspective, while consistent with a safety net approach, falls short of the more pervasive features of the digital divide.

Access, although important, is not the only factor or even the most important one, influencing Internet adoption by 'disadvantaged' individuals and communities. The new media may be attractive to middle-class users who are already highly literate, well-educated and keen to exploit the interactive potential of these media in their information and communication rich lives. Whilst the barriers to access have been described in this research study, the sample used here also demonstrates that Internet Users exist even in the various 'disadvantaged' groups and that characteristics of use are sometimes associated with perceived need and individual communication and networking preferences. This challenges assumptions made about those perceived to be disadvantaged and the abilities and resources available to them in the context of civic and social participation. Social inclusion or exclusion is largely an issue of equity in society and the key themes on that issue as far as the Internet is concerned are abilities, resources and choice.

Does the inability to access the Internet contribute to social exclusion, that is, the inability to participate fully in society? Yes, it may, as it is a medium for communication in today's society that has the potential to widen the divide between those who cannot participate but participation is more complex than structural access. Although the findings from the research sample used here do not clearly reflect major 'disadvantage' to access that is directly related to gender, age or ethnicity in particular, they do highlight specific characteristics of usage or non-usage of the Internet that are relevant to those issues. In networked societies, boundaries are more permeable and there are more interactions with diverse others (Wellman, 2001). There are many examples in the data of positive outcomes from computer-mediated communication arising from the loss of verbal nuances, physical context and observable information about social characteristics (e.g. deafness or impaired mobility, race, gender, etc.).

As summarized in Chapter 5, one of the findings of this study is that Internet Users can be found even in the specific groups identified in the literature as 'disadvantaged' when it comes to

accessing the Internet (NTIA, 1995, 1998; Loader, 1998; Lloyd & Hellwig, 2000). These Internet Users place varying levels of importance on the role of the Internet in their lives as do Internet Users in the groups that would be considered more privileged when it comes to access. That is, people with high income, higher educational status and without (dis)ability. Similarly, the Internet Non-Users place varying and contrasting levels of importance on what they perceive about the Internet and what it could mean for their lives. As such, their self-perceptions of social inclusion or exclusion vary depending on the reasons why they are Non-Users, including personal choice.

CHAPTER 7: TRUST AND RISK

7.1 Introduction

The literature on social capital defines the concepts and values of trust and risk as being fundamental to social capital-producing social networks that are based on reciprocity (Putnam, 2000). As trust and risk are recognised as important attributes of social networks, these concepts are relevant for the examination of social capital as a multi-dimensional concept premised on social connectedness and embedded resources. The concepts of trust and risk are applicable to linking and bridging social capital and to social networks that include Internet interactions for communication and access to public information resources (Latham, 2000).

While a social network for accessing health information and sharing experiences that is enabled by the Internet is an interactive relationship of reciprocity, health information accessed from a government website (social institution) may be less likely to be interactive or reciprocal. This may be despite the fact that a common capability exists on such websites for the Internet User to ask questions and comment via email. The Internet User in this setting is more likely to be a passive consumer of information and the relationship with the information provider is not outwardly reciprocal in nature, although there is the potential for some exchange or interactivity. The reciprocity in the relationship is most likely found within the mutual expectations inherent in 'citizenship'. It could be said that the power relationship of government agency or online health service provider and citizen is unbalanced, particularly as health information is an expert knowledge domain.

This chapter focuses on the themes of trust and risk evident in participants' attitudes towards health information accessed via the Internet and in relationships with government or other authoritative health service providers. The notions of trust and risk in the context of Internet use for health information are concerned not only with trust and risk between individuals and organizations of authority, particularly in health, but with trust and risk associated with technology and society (Toffler, 1980; Giddens, 1990; Beck et al., 1997; Lupton, 1999). Trust and risk are intertwined, with trust normally serving to reduce or minimise the dangers for particular types of activity (Giddens, 1990).

The creation and functioning of communities that information and communication technologies enable are not confined to geographical location but operate through different connecting factors, such as common interest. Internet Users and Non-Users are different in their community interactions and attitudes of trust and risk associated with different information and communications channels used. However, they also have commonalities in their attitudes to interactions for the consumption or exchange of health information:

> Modernity institutionalizes the principle of radical doubt and insists that all knowledge takes the form of hypotheses: claims which may very well be true, but which are in principle, always open to revision and may have at some point to be abandoned… In circumstances of uncertainty and multiple choice, the notions of trust and risk have particular application (Giddens, 1990).

The above quote is particularly relevant to the Internet as a system or institution of 'modernity' with its own processes and rules and with potentially ambiguous content and content sources. The Internet potentially presents an environment of risk that threatens security while it also creates opportunity for access to information and multiple communication networks. This enables the development of trust and knowledge for individual and community empowerment. Trust and social capital may, therefore, be built in different ways via use of the Internet.

The body of literature on trust and ICT proposes that it is the trust in systems (or lack thereof) rather than interpersonal generalized trust that accounts substantially for the differences in the diffusion of ICT in developed societies (Volkens, 2002). It differentiates trust in systems from social trust (generalized trust) that is dependent on solidarity and identity and is harder to achieve, while trust in systems can be promoted and learned by experience. Social trust stabilized by individual/community experience may lead to trust in institutional entities (i.e. government) and systems such as the Internet but not the other way around. This construct of trust by Volkens (2002) is in contrast with Putnam's theory of social capital where civic trust is understood to create social trust and therefore must be a prerequisite to social capital. Volkens' (2002) position on social capital and trust is supported also by empirical evidence about social trust as an indicator of system trust (Job, 2005), and starts to at least broaden, if not shift, the debate about the causes of the digital divide away from levels of income and formal education. However, as indicated in Chapter 4, empirical research so far has not adequately addressed the complexity of trust which, in any case, appears to lack an integrative theory (Volkens, 2002; Lupton, 1999).

Increased trust in government and the Internet cannot be created simply by providing Internet access to citizens, but trust in technology is important to increase public trust and confidence in electronic government service delivery (Raab, 1998). Electronic government initiatives in Australia, the United Kingdom and the United States have focused intense efforts on citizen information privacy and security, particularly for online payments. It is noteworthy that research in Australia found that while a perception existed about Internet contact being unnecessarily risky, i.e. having the potential for personal financial loss when providing credit card or banking details, this was less of an issue for trusted organizations, such as "big, reputable companies" (Participant) or government departments.

The concept of risk is evident in health policy for health service delivery as well as in the subjective understandings of health information and the Internet. Risks in health are usually about individual and population risk factors that indicate poor health or probability of disease, such as high blood pressure, but also regarding health information and treatments (products and services) and service delivery mechanisms. Chapter 2 outlined the policy objectives for online service delivery and Chapter 3 discussed social inclusion and health policy related to choice and risk. These have been tested with the participants in terms of: first, expectations of government; and second, trust and risk associated with health information and health professionals.

7.2 Trust

The body of literature on social capital not only defines the norm of trust as a key component of social capital but stresses the importance of trust for the optimal functioning of civil society and for the facilitation of a range of outcomes including civic engagement and democracy (Latham, 2000). As shown in Chapter 3 the literature describes three main types of trust relevant to social capital (Stone, 2001). One type of trust is trust of 'familiars', being 'personalised trust' or social trust of familiars, for example, between individuals with family members and friends or trust with other known entities, such as the relationship between a doctor and long-standing patient or between an individual and a social group/club, long-standing workplace or other social institution with which there is a personal relationship. The second type of trust is 'generalised trust' with no specific entity targeted in the interaction but a broad trust relationship by which to engage, for example, the publication of one's identity or services on a public billboard or Internet chat site. The third type of trust defined is 'civic' or 'institutional trust', which may be found in the

relationship between citizens with organizations of authority such as local councils or government organizations.

Each of these types of trust is demonstrated by the data, and is relevant to the topic of Internet access and non-access to health information. Lack of trust by participants is also evident, particularly in regard to information and identity security and other risks concerning health information. In the context of social capital, the product of trust is an outcome that is potentially mutually beneficial to the parties involved in the transaction or interaction. As a potential enabler for social capital, within a virtual network environment, the Internet may be thought of as a different and new system for producing risk as well as trust.

While the body of literature on social capital points to the development or creation of 'trust' in social networks, it is unclear whether social trust can be generalised to include government institutions, i.e. political or civic trust, although the literature states this is possible (Misztal, 1996). However, there is little empirical evidence to support either of these assumptions and the literature has focused mainly on the rational perspective of trust, where trust is a product of social and political arrangements resulting from rational choice (Coleman, 1988) and from a socio-psychological and cultural perspective to analyse civic or government performance (Putnam, 1993). According to Putnam, civic engagement creates social trust and generalised reciprocity, which make government more effective. Yet, there is no strong argument or empirical evidence to support this or to contradict socialisation theories that trust is an attitude learned within families and personal social networks and, therefore, a precondition for civic engagement.

Transferable trust is where an organization may be trusted to deliver a particular service but not others. For example, the Smith Family Case Study (DCITA, 2004) constitutes a relationship with some of the defining features of social capital (social norms surrounding the intervention and the role of trust and reciprocity and a network of users. However, the purpose and nature of this relationship is likely to differ fundamentally from online relationships that are more social in nature.

Although the data support the distinction between social/generalized trust and trust in government (civic trust), the reasons behind the different perspectives are not comprehensively explored, although there some common and some contrasting views about risk and trust

specifically about Internet-enabled health information and technology. Interesting questions could be raised from consideration of the potential causes and also the potential consequences of trust. Are people with high social trust more likely to trust in government? Does trust in government translate to a higher trust in social networks outside of familiar domains? Is it possible to have trust in government in the absence of trust in social networks with strangers?

While there does not appear to be an integrative, comprehensive theory on trust, it is clear that trust is a complex, multi-dimensional concept, operating at different levels in many different contexts. In the context of health information, its sources and the various mechanisms for information delivery, including the Internet, trust is relevant to the relationships with people and with a 'system', being the information providers and the system infrastructure. Trust in government as a provider of health information over the Internet and trust in other organizations of power and authority (both local and remote) that deliver health information and services are relevant as they are beyond the generalised trust of social networks. Therefore, trust in power and authority in this context is important for the examination of social capital that is potentially created within and derived from government health information service delivery via the Internet. It is a public good and the potential for missed opportunities for social capital development that may be created by citizens' lack of access to the Internet.

7.2.1 Power and Authority

Power and authority are important considerations in network hierarchies and impact on the production of resources or opportunities for network participants, i.e. social capital. Putnam (1993, 2000) and Latham (2000) suggest that a society's power structure will affect the nature of trust and reciprocity, which are inherent within that network. Further to the discussion about the role of government versus the role of the third sector in Chapter 3, Latham (2000) suggests that vertical (hierarchical) relations such as those between citizens and people in authority are the types of social relations relevant for understanding trust in authority. On the other hand, horizontal (equal, democratic) relations such as those between citizens are relevant for understanding trust in civil society. Both vertical and horizontal relationships are demonstrated in the data, with participants accessing health information via the Internet provided by government organizations, independent health professionals and commercial health entities, and

also by people ('the general public') who participate in health condition support networks facilitated by Internet technology.

Although no-one actually 'owns' the Internet, it can be deemed a system of power relationships between providers and consumers. Authoritative providers of Internet health information target citizens and consumers for the purpose of providing information and education ('social marketing'), advice on available health services/treatments, products and the promotion of self-management (the shift away from reliance of face-to-face interactions with health experts to consumers accepting responsibility for their own health). The relationship between the recipients of that information with the provider could be examined regarding the importance or otherwise of 'trust' in achieving a positive or desired outcome from their interaction. Access to online health information or non-access itself creates a power relationship, making it pertinent to compare non-Internet access to health information and the relationship between providers and recipients to examine similarities and differences regarding trust.

7.2.1.1 Health Professionals

The majority of participants, including all those over the age of fifty, reported having greater trust in the health information received from their GP than any other source. This was the case for Internet Users as well as Non-Users, for reasons including familiarity with the health professional and the reliability of the expected knowledge and experience held by that health professional:

> The horse's mouth, the doctor – you know he is a professional and you know the information you are getting, you hope, is good information. You don't always know that from the Internet. If you've been with your doctor for many years like we have, you sort of know the advice he's going to give you is going to be sound advice. It's specific to you, because he knows your particular complaint.
> (Participant 1, F, Internet User - G1)

> [More information] would make you feel more undecided, because you can actually access lots of information, whereas perhaps if you went to your doctor, he just tells you straight down the line. If you access it yourself, you can be getting it from all different sources, so it can perhaps build our hopes up in one way without you really perhaps understanding the whole story, because you are reading it as you sort of see it.
> (Participant 2, M, Internet User - G1)

> If I feel crook, I go see the doctor.
> (Participant 1, M, Internet User - G1)

While this was the case for most participants, many comments reflected discriminating views regarding the health advice received from doctors even when their information was considered, generally, to be trustworthy, for example, phrases like "you hope it is good information" provided by doctors. Other participants, specifically the Internet Users from culturally and linguistically diverse backgrounds and participants with a disability, expressed more direct concerns and doubts about the information and treatment received by doctors. They favoured other sources of primary and supplementary health information, such as their own social and support networks and the Internet. Reasons for this may include concerns about potential personal discrimination (racial or other), and/or lack of familiarity with the health professional(s) concerned and a 'healthy' doubt or discriminating, even cynical, view about health advice:

> Yes, doctors tend to be a lot more conservative, don't they, before they say yes to something? They are pretty cautious.
> (Participant 2, M, Internet User - G1)

> Because I don't particularly feel comfortable when there is a big power differential between you and the doctor.
> (Participant 10, M, Internet User - G3)

> I go to the doctor but he only gives me a little bit of information. He doesn't give me much. Like, I've got a skin problem and the doctor has given me only a little piece of information and I don't know what to do, so I mainly ask friends and see what their thoughts are. If I don't get anywhere with that I go on the Internet.
> (Participant 2, F, Internet User – G2)

> I think one of the things is that a lot of people think their doctor is a specialist in all areas and they are not, and they are often not versed in all conditions, so quite often they don't have a clue, to be honest.
> (Participant 2, M, Internet User - G1)

> I asked the doctor how he felt about red wine being good for you and he said, 'It's good for the doctor! and gave me the opposite view that red wine is not good for you – but they [doctors] don't all think that. It depends who you get.
> (Participant 2, M, Internet User - G1)

The data support the reported feature of the 'new public health' and the health citizen regarding disillusionment with health professionals and expert knowledge, which opposes the medical model-based construction of the medical practitioner as omnipotent (Lupton, 1999). Online health information and the informed contemporary health citizen challenge health professionals and expert knowledge sources with suspicion and alternative information sources. The data also support the value of linking and bridging social capital in which new resources are embedded that may have an impact on public health (Muntaner et al., 2001)

7.2.1.2 Government

Trust in government as a provider of health information services via the Internet was explored, with participants referring to their expectations of public services and of government as an authoritative source of health information. A common perception amongst participants regarding government was the expectation, by Internet Users and Non-Users, for support from the government for equity of access by the to Internet-based health information (that is, a perceived responsibility for government subsidy and support).

Some participants indicated their suspicions that responsibility for health appeared to be shifting from publicly-funded health services to the individual or consumer of health services – particularly as these entities are largely responsible for the health information available via the Internet. State government-based health services, particularly public hospitals, were known to be in financial crisis, as is often reported in the media. Some older participants expressed the view that government services appeared to be heading in the same direction as banking institutions, with increasingly impersonal service delivery and forcing unwelcome change as a cost-cutting mechanism:

> Yes, it has just made my relationship [with Government] get worse, because I know what the bastards are up to. "It's cheaper to give the service by the Internet", isn't it?
> (Participant 2, M, Internet User - G1)

> To start off with, everything is free, to get everyone into it, but once it becomes user pays for printing out information, that, yes the information is out there now but if you want it you're going to have to pay and, as you said, you've got to join up and pay some much. That then could put a big stop to people actually going in to use the Internet to find information, because we all know the user has to eventually pay. It's not going to be an ongoing free service.
> (Participant 10, M, Internet Non-User - G3)

Although these comments express cautious, even suspicious, attitudes towards government directions for online service delivery, other data support the notion that information provided by the private sector, or commercial entities, is likely to be perceived as less trustworthy:

> I guess if there's some commercial interest in information, I'd be concerned about that.
> (Participant 6, M, Internet User - G3)

> As much as the integrity of the information on the one hand may be problematic, on the other hand if it's public, if the organization's integrity and the content are guaranteed…then I would hope that we are getting better quality information.
> (Participant 5, F, Internet User - G3)

Perceptions of ambiguity and lack of absolute confidence in the information provided, even by authoritative sources, were also demonstrated in the data. A recent national survey on use and satisfaction with electronic government services (AGIMO, 2005a) highlighted the lack of perceived 'accountability' of the Internet; complex and ambiguous purposes were significant barriers for using the Internet to access government services (apart from payment and other transactions). This is an important issue in the context of trust in government for online service delivery. There is a general perception that the government information provider will not accept responsibility for information that is incorrect or misleading. Furthermore, it will not respond in some cases to requests for further information, clarification or complaint.

7.2.1.3 Social Networks

The data support the notion of trust in social networks (also reliance upon) for accessing and exchanging health information. These social networks comprised of contacts that were a combination of familiar and unfamiliar where the Internet was used in the communication. The data support the assumption that there was greater trust in other people (familiar and unfamiliar) compared with organizations of authority, particularly government. However, a general attitude of wariness about the validity and integrity of health information was evident, regardless of the mechanism for delivery. That is, the concern about trustworthiness of the information is not specifically related to the Internet, although it may not be the channel of choice for either the first contact or further investigation where the issue of trust may be of higher importance:

> I certainly like face-to-face contact, but by the same token, I don't mind if it's just general information. If it's personal stuff and I've got serious concerns about something, I would rather go to somebody that I know and trust and talk to them about it and then, depending on what their response is, I then go further with them.
> (Participant 1, F, Internet User - G1)

> We're talking about when you ring up a mate, is that they're not going to talk untruths or tell you something that isn't accurate because of your credibility and your trust and faith in them, and likewise theirs in yours, depends on that relationship, and you don't bullshit to your friends, or not about stuff like that [health].
> (Participant 7, M, Internet User - G3)

> I don't think you can beat talking to another person, not necessarily a doctor, even another person who might have the same sort of concern or anxiety that you've got. I don't think you can beat that sort of information.
> (Participant, Internet Non-User - G1)

> I use it by searching specifics, family and friends who, having got email and having got Internet access, and I just go around and have a look at the sites.
> (Participant 6, M, Internet User - G3)

Participant preferences regarding the channel for contact with government/health information providers and their attitudes to technology also impact on perceptions of trust of the system and trust of the information.

7.2.2 Choice and Control

Choice and control regarding health information is concerned principally with personal/individual confidence or sense of empowerment and security within which trust and risk play important roles. As explored in previous chapters, access to the Internet increases choice where health information and services are concerned by providing wider sources of knowledge and contacts than would otherwise be available (bridging and linking social capital). This is reflective of changes in attitudes toward health treatments emanating from improved knowledge and greater choice and acceptance of risk (Lupton, 1999):

> We are looking at the alternatives as well, anyway. There are no barriers now…as long as it doesn't counteract with what they are taking, it's acceptable now, a lot more than it used to be in the past.
> (Participant 3, F, Internet User - G1)

With improved choice comes not only the expectation of acceptance of risk; citizenship has an inherent expectation of responsibility to become informed and to make choices that are respectful of health knowledge and government promotion of self-care (Miller & Rose, 1993; Turner 1994; Lupton, 1999). Lupton (1999) also recognised the complex relationship between dominant norms and individual behaviour and risks in relation to health with citizens dealing with health experts and expert knowledge.

Generally, Internet Users accessing information about health on the Internet used this information more as supplementary information. However, Internet Users with some common attributes reported using the Internet to access health information as the primary source of information, to find answers to health concerns instead of asking questions of a General Practitioner. These were men who accessed health information on the Internet as well as people with hearing or mobility impairment, as explored in Chapter 6.

As inferred by the participants below, trustworthy information may be linked to increased personal choice and control regarding one's health:

> There's probably also an aspect of feeling comfortable going to the Internet about not smoking in that you're not going to get evangelised into giving it up, you've got the right to choose. Like, you know, you can get the information and then you can decide what you do with it, sort of thing.
> (Participant 7, M, Internet User - G2)

> Sometimes with things like natural herbs and stuff like that [the Internet] explains how to make it, so I know how to make it myself, home medicine, so I don't have to go to the doctor to get it.
> (Participant 6, F, Internet User -G2)

> Mind you, they try to sell you stuff. They seem to have a vested interest in it. I don't know that I would trust them implicitly. You get the information from them. Whether you actually take it on board, that's a different thing, but at least you have contacts with lots of them.
> (Participant 1, F, Internet User - G1)

The following quote from a Non-User living in a rural town in South Australia demonstrates how choice and control need to be exercised in a particular way to reduce risk, engender trust for the purpose of keeping the health condition confidential:

> But when I'm very sick, when I think I need an interpreter when I go to the doctor [sign language for the hearing impaired], I have to call one who's not related to me, of course.
> (Participant 3, M, Internet Non-User - G2)

Citizen trust in government for the delivery of public services, including online health information, impacts on public confidence and security as well as individual choice and control in relation to information services. Trust in technology is important also for citizen trust in online health information and in online service delivery generally.

7.3 Risk

This thesis has drawn into focus issues that operate at a population or society level and also that have a relationship with individual level characteristics. That is, social capital, the digital divide and population health are all premised on aggregated individual characteristics that create societal effects which systematically impact on individuals. Similarly, the notion of risk operates at two levels: at society level and at an individual level. Beck's notion of a 'Risk Society' (1992) is that of a society living with uncertainty about the speed of change worldwide. Social research on risk (Giddens, 1990; Beck et al., 1997; Lupton, 1999) has been concerned with the development of a risk culture in contemporary society. Risk culture attempts to respond to technological advances and the changing political, social and cultural environment:

> Modernity reduces the overall riskiness of certain areas and modes of life, yet at the same time introduces new risk parameters largely or completely unknown to previous eras. These parameters include high consequence risks: risks deriving from the globalised character of the social systems of modernity….because it introduces risks which previous generations have not had to face….With the development of mass communication, particularly electronic communication, the interpretation of self-development and social systems, up to and including global systems, becomes ever more pronounced (Giddens, 1990).

Risk culture focuses on managing and minimising emergent risks at a society level. Risk management is demonstrated by the policy responses to social capital (for improvement to education, crime, and health outcomes), to the digital divide (for the creation of an information-enabled society for social and economic benefits) and to population health (for better health outcomes and reduced burden on the public health system).

New social systems bring new social risks that present a mix of both threats and opportunities at societal and individual levels. The Internet is easily characterised as a new social system of threats and opportunities for society and for individuals. The Internet presents new risks to security, including increased concerns about the integrity of accessible information from varied and potentially ambiguous sources. It presents new risks also for personal information privacy and confidentiality, as well as risks from the attitude of lack of trust of technology. Other risks arise from non-participation in ICT-mediated service delivery, including the risk of 'missing out' on information, knowledge, and social networking opportunities, and potentially falling behind others in society. This may have a detrimental effect on self-esteem and class relations. Online health information carries the additional risk or threats of access by individuals to 'more' information and 'more' contacts of potentially questionable accuracy and integrity. On the other hand, non-access to online health information may limit the opportunities for health knowledge and access to services by denying the ability to make wider contacts with health professionals and others than would otherwise be possible. This may have a negative impact on individual and population health and well-being outcomes.

7.3.1 The Unfamiliar

In addition to demonstrating trust of health information shared with familiar people within social networks (not confined to Internet-mediated contacts and networks), the data support trust of Internet-available health information where the sources are familiar. Of the Internet Users, 50% of participants accessing health information indicated that they generally found the information to

be trustworthy, depending on the sources of the information, but had to be discerning about what they believed and how they used the information (as explored in the previous chapter in regard to the integrity of health information). They were more likely to trust health information accessed via the Internet that originated from local sources, i.e. originating from or at least delivered from South Australia or Australia. Internet User and Non-User perceptions about information content on the Internet, for general information and health information, were that the Internet is dominated by American information and commercial health industry advertisements:

> [The information] needs some sort of vetting, especially if it's from overseas.
> (Participant 7, F, Internet User - G1)

> [NAME], who has had a lot of media exposure and he has said a lot on the radio, TV and so on – the media – and he's given talks at various Council on the Ageing functions, for seminars and so on, and he has a very strong mind not on alternative medicines but on vitamins and so on. Then you stop and think, wait a minute, he's fairly closely associated with [COMPANY] who manufacture vitamins. He's got a connection there. You think: Are you really pushing the product? So I guess that's where you would always want to be cautious with regard to that aspect.
> (Participant 7, M, Internet User - G1)

> It's so garish. I feel like it has living ads that pop up in your face.
> (Participant 2, F, Internet Non-User - G3)

Internet Users living in rural or remote areas of South Australia commented also on the lack of local health information, especially in regard to access to specialist health services. While it is expected that health websites from other countries would not provide relevant local service information, there is an expectation that the South Australian online health information, being locally based, would carry such information. This is an indication that a 'one-stop-shop', 'one-size-fits all' generic model of information service provision, regardless of where one lives, as per the current policy approach can be ineffective where local service information or services are required for individuals and communities – not just general information about a skin condition, for example, but where the nearest dermatologist can be found who can provide the recommended treatment. The current policy approach is focused on widespread access and connectivity in rural and remote areas. Access alone to relevant general information may ultimately not be useful if a local service response is unavailable.

Amongst the Internet Users there were a few participants who described themselves as having only basic skills in Internet use and were generally unfamiliar and unconfident with the Internet.

This unfamiliarity and lack of confidence – and relationship to trust and risk - may impact on perceived benefit and reliability.

> I like things where I understand what I'm doing.
> (Participant 5, M, Internet User - G4)

Most Internet Non-Users were unfamiliar with the Internet and were less likely to think it trustworthy for the provision of health information and generally as a means of information delivery and communication. This lack of trust was reflected principally in Non-User comments on negative impact on themselves as individuals or on society of computer-mediated communication and technology.

7.3.2 Misinformation and Overload

In contrast to trust relationships with increased choice and control that may be facilitated or enabled by the Internet and the perspective of the contemporary citizen (Miller & Rose, 1993), the potential risks of misinformation from Internet health information providers (i.e. from unauthorised providers and providers with a vested interest) and cumbersome information searching ('hit and miss') were highlighted in the data. A consequence is distrust of the source of information and the means of access:

> I just think you have to watch some of the information that comes off the Internet. It might not always be accurate, because anybody can put information about anything on the Internet and it can get read, and it can be interpreted in very many different ways, too. I hear maybe one or two doctors or specialists or experts in their field saying, 'Don't take everything literally when you get on the Internet.', because then you get people comparing their own experiences and things, and thinking, "My experience isn't quite like that, what's wrong with me?", and a lot of anxieties.
> (Participant 3, M, Internet Non-User - G1)

> But any one of us could be having our own website and popping up stories we like on pimples or pneumonia or whatever it is – but anybody can do it, and that's where I think there isn't, apparently to me, a way of checking the integrity of the data.
> (Participant 5, F, Internet User - G3)

> There has been a lot of stuff about celery and stuff with arthritis. If you hear all that and there are lots of positive things being said by a variety of people, people don't always know that they can contact an organisation like the Arthritis Foundation and say, 'Are you aware of this research? Is it approved research?' There's research and there's research. So they will hear it from lots of different people and think, well, everybody is saying that, so it's still a narrow point of view, but to some people that's everybody saying it, so it must be right.
> (Participant 3, M, Internet User - G1)

> From the little bit of use I've made of it, I have sort of found that the information is like magazine articles. It's not a profound, in-depth study with references, which is what I would like to have if I was researching something. So, I would prefer reading the solid stuff.
> (Participant 6, M, Internet User - G3)

> …how do you know it's not some kid in the backyard who's put it there…who's made up this…beautiful pictures that his cousin took somewhere in America and it's just flashing up bits of ideas about it, and they can say, it's been done by Dr…and it's authorised by the Department of Human Services.
> (Participant 5, F, Internet User - G3)

Information overload was identified by the Internet Users as a problem, where one needed to be highly skilled in doing specific searches to find what one is looking for and having the time to do much Internet searching. Some participants stated that they did not use the Internet because they did not have time to waste and felt that the Internet had too much irrelevant information and advertising that they would have to wade through. This is consistent with the findings of Hopkins and Fogg (2002) regarding online health information as outlined in Chapter 3:

> …when you look up something, there may be a thousand choices. You don't read a thousand; you only select a few and you may just happen to have not read perhaps the right view – you may really have had to read more. A search for 'gallstones' returned 11 million hits.
> (Participant 10, F, Internet User – G1)

> One problem, if I pick one word like asthma and research it…there are a hell of a lot of topics, what am I going to do? There are so many topics. Some are really good and some you don't use.
> (Participant 7, F, Internet User – G3)

> You put in Search and you get to a million sites, or whatever, and you start to go one by one, or just go through the links and you might get somewhere.
> (Participant 3, M, Internet User – G4)

> I've seen information from the Internet – there is quite a lot of advertising that I find it hard to get through.
> (Participant 9, M, Internet Non-User – G1)

> We have the Internet at home and I have never accessed it. I have never felt the need for it. What I have seen of it, I do see a lot of advertising and too much information when you only want one thing.
> (Participant 1, F, Internet Non-User – G1)

> …with searching, it's a bit hit and miss – even when you narrow it down.
> (Participant 8, M, Internet User – G4)

> I don't have time. I mean, we all know experimenting and researching takes a fair amount of time on a computer. When I want to know something I want an answer straightaway. So to the time value, no, I wouldn't even be interested in it.
> (Participant 1, F, Internet Non-User – G1)

Some participant comments regarding health information over the Internet are reflective of their attitudes towards available health information generally, i.e. frustration at general public

confusion and lack of awareness raising by Government and health professionals and lack of definitive knowledge on causes, treatments and effects. The Internet could be seen as both a threat, exacerbating the problem and an opportunity, providing information to alleviate some of the confusion:

> People aren't told that. Unless somebody has told you, you wouldn't know. [knowledge about problems with generic brand medicines]
> (Participant 1, M, Internet User - G1)

> What's good for you one week is bad for you the next.
> (Participant 4, M, Internet User - G1)

> You have to take a variety of information at its face value.
> (Participant 2, F, Internet User - G1)

The general conclusions by Internet Users and Non-Users on the problems of health information were: (1) to be wary of all information but some sources were more trustworthy than others; (2) to draw on the knowledge of known health professionals and authorised, reliable research; and (3) to draw on the experiences of other people with similar situations.

7.3.3 Technology

Related to the potential lack of trust in the 'unfamiliar' is lack of trust in technology. Internet use may be partly dependent on trust or of technological advancements that generally have the potential to impact negatively on individual confidence, identity and security. A theme common amongst the Non-Users over fifty years old was the perception of the impersonal nature of service delivery via the Internet, particularly for a health information service and some individuals' use of Automatic Teller Machines for banking.

The following comments indicate a concern for the impact on society of increasingly impersonal interactions through computer-mediated communication:

> Whilst I am curious to have the Internet myself, I am concerned that the older person is going to be forced, or seems to be forced into getting the Internet, when anything, your bank statements, or things from your department stores, go Internet, that's the way to go.
> (Participant 10, M, Internet Non-User - G1)

> It's [having to use the Internet] like forcing you into the ATM, isn't it? I don't like standing out in the street getting money.
> (Participant 9, M, Internet Non-User - G1)

> Don't trust the library at [suburb] then. They're not going to have books, they're only going to have electronic communications in the new library at [suburb]. There's been quite a lot of controversy about it.
> (Participant 9, M, Internet Non-User - G1)

> Given that it is inevitable that this is going to take over our lives in due course, to a larger or lesser extent, what happens to our interpersonal relationships with one another?
> (Participant 2, F, Internet Non-User - G1)

> We've got an ever changing society, there's not doubt about that, and learning to cope with it, still without dehumanising our personal relationships, I think is tremendously important. We've got to find that balance. How we do that, I don't know.
> (Participant 1, F, Internet Non-User - G1)

> I know that my local supermarket, for instance, has changed dramatically. It is different. People don't stay in there any more to chat or talk. One old lady I know used to go down there every day because she could talk to the people that she saw there. That doesn't happen any more. She misses that. What is all this electronic revolution going to do to people. Well, it's got nothing to do with the Internet, what has happened at our supermarket. It's become just a food outlet. They all just work shifts. It's not owned by a local company like it used to be. It's faceless, sort of. It's become more efficient with bigger profit margins. You're in and out. You're not encouraged to stay and chat.
> (Participant 7, M, Internet User - G1)

> You can ask the person…you can still ask them individual questions. I frankly could get on to some individual on the Internet, they have a prescribed formula that they put together that obliges you to fit in with their requirements, whereas if you are talking to a person who might be available, even for cash, you can quickly find out by quizzing them whether or not you feel that they do know their stuff and they're infinitely ore flexible and adaptable in responding to you than a machine could ever possibly be, and I object very strongly and I find it utterly boring and miserable to have to conform with all these rotten steps you have to take. I just go cold, and it's because I'm very keen to find out an area I'm involved in that's not terribly common. Anyway, personal interaction would give me the opportunity to check them out.
> (Participant 2, F, Internet User - G1)

The Internet Users expressed relative ease in using computers for Internet access whereas the Non-Users indicated they had very poor or non-existent computer skills. A negative attitude towards computers and the Internet was evident from the comments of Non-Users who indicated that they lacked computer skills and did not want to access the Internet:

> I'm not terribly interested in…I certainly have used or tried to use the Internet…it's not necessarily easy, very unfriendly.
> (Participant 2, F, Internet Non-User - G3)

> You know the banks have been advertising for Internet: "Get on the Internet, get on the 'Net. I mean…I haven't and I won't.
> (Participant 4, M, Internet Non-User - G3)

Some of the participant views, expressed in the comments below, indicated a general 'dislike' of computers for causing the participants to feel as if they are "behind the times" and excluded from what was becoming part of the norms of everyday life. This common attitude of participants

from the Internet Non-Users who were over fifty years old was also related to their own perceptions of intelligence and the impact of ageing on attitude and ability to take on new ways of doing things. The data show a variety of attitudes towards technology that are related to resistance, insecurity and a sense of loss of power or control in communication in contemporary society. These may be perceptions that are not able to be easily linked with any systematic disadvantage to certain social groups and that cannot easily be redressed, as stated by Garson (1995):

> If you feel dehumanized when you use an ATM machine rather than the services of a human bank teller, for instance, then it is difficult for someone else to tell you that you aren't.
> (Garson, 1995, p. 11)

These attitudes relate to the aforementioned perception of the Internet as an impersonal form of communication:

> I tend to rely on my relationships with people, to be able to look them in the eye, get their expression, see the body language, all that stuff, which you can't possibly do, and maybe that's what people like, that they can hide themselves away from giving away their real feelings.
> (Participant 6, F, Internet Non-User - G1)
>
> Even in the paper you get more personalised information than what you do in the telephone systems today.
> (Participant 8, M, Internet User - G4)

The above attitudes refer to information and communications technologies and, implicitly, trust. They infer a lack of trust in people who 'hide' behind the Internet and impersonal communication systems that include interactive voice recognition systems, for example call centres.

The attitudes of Internet Non-Users are generally in contrast to those of Internet Users where communication and social networking were enhanced by the Internet. Such concerns regarding the impersonal nature of information and other services provided using technology and imperatives for people to use these services are contrary to the view that information and communications technologies are a conduit for social capital and promote empowerment for individuals (Phipps, 2000). The Internet, being a means for communication via computer, could be 'anti-social' rather than a form of social contact or interaction.

The Australian and South Australian Government policy documents and promotional material about the information economy and government online services (see Chapter 2) focus on the

positive opportunities for social (and agency) connectedness. They focus on efficiency rather than the potential loss of effective customer service and degree of 'personalisation' and individual customisation. An assumption can be drawn from the policy documentation that online information is better than information obtained through other means because it is accessible 24 hours a day, seven days a week, and that it is up-to-date and consistent. While government websites are slowly becoming more interactive, the capacity to deal with complex issues or specific individual requirements is limited. The data support a requirement for greater interactivity and the provision of specific information and services tailored to individual needs. Generally, Internet Users are more positive than Non-Users about the role that the Internet and ICT play in society. However, in each focus group session, there were both positive and negative comments from Users and Non-Users about the impact of computers in today's world. Focus group participants who commented generally on the benefits of the Internet acknowledged that there were advantages and disadvantages:

> We've needed to acquire all these skills, like in record time, incredibly complicated skills, and you sort of feel like you're dumb or you're behind the times.
> (Participant 10, M, Internet Non-User - G1)

> All of a sudden there is this assumption that you're going to know how to do it. You are sort of sitting there thinking, Oh, who am I going to ask and reveal my ignorance? I don't know how to do it.
> (Participant 9, M, Internet Non-User - G1)

Pervasive societal change for the uptake of new technologies is generational. The majority of Non-Users expressed a preference not to be 'forced' to participate in new technologies but recognised resultant personal and social tensions caused by non-participation. Despite this, a perception was also evident that Australia appears to be lagging behind the rest of the advanced Western world in technology and its uptake:

> But you shouldn't have to feel guilty about the fact that you don't have those skills and if you don't want to use modern technology…Long term there could be some disadvantages in not keeping up with technology, as the old ways drop off the end of the road. Well, if that happens then eventually you do change, because if it means that you don't have another system to use then you change. Hopefully, when I'm 90 that might happen.
> (Participant 3, M, Internet Non-User - G1)

> In many ways now we're being forced into using these systems, which you're not really happy with, but you don't have any choice. People say, "Well you have the choice, and that you always will have", but I'm not sure about that.
> (Participant 9, M, Internet Non-User – G1)

> We've got so many miles to go, haven't we, in this country?
> (Participant 3, M, Internet Non-User - G1)

This attitude was not evident in the focus group discussions for the majority of younger Internet Non-Users. Participants younger than fifty years old focused on access issues not related to age or capacity to develop computer skills. However, as per the older participants, it was a generally expressed perception that increasingly, more information and other services were becoming available via the Internet and other ICT at, potentially, the expense of more personal forms of service delivery.

The notion of risk and ambiguity associated with technology and the future was also evident in the data in terms of not keeping up with technology, as in the example below:

> Long term there could be some disadvantages in not keeping up with technology, as the old ways drop off the end of the road.
> (Participant 10, M, Internet Non-User - G3)

While the lack of personalisation or 'dehumanization' in the perceptions of technology is subjective, the experience of being 'deskilled' as a result of technological advancements is objective and presents policy and service delivery challenges for electronic government. The quotes below are from participants over the age of fifty expressing reluctant acceptance of the Internet as a contemporary 'way of life':

> I'm afraid it's a way of life.
> (Participant 10, F, Internet User - G1)

> It's like we found the microwave and the answering machines on the phone. We gradually accept it.
> (Participant 9, M, Internet Non-User - G1)

In addition to the risks associated with the perceptions of the impersonal nature of the Internet and the risks of not adopting new technologies, other risks include security from misuse and abuse of the Internet for purposes that are perceived to be harmful to individuals and society (shadow-side or dark side of social capital?). The inference is that Internet use cannot be controlled and that carries varying degrees of personal and societal risk:

> A lot of people are starting to choose the Internet. But they go into programs probably that they shouldn't. I think there is a lot of information on the Internet that can be dangerous, if it is taken up by someone who might – I don't know; this is all that I hear and read – is that you can

> go on there and find out how to make a bomb or how to change a pistol into a semi something or other, and all these sort of things. And then, of course, there could be sex programs and all sorts of things. I think it just depends who's getting into that.
> (Participant 6, F, Internet Non-User - G3)

> I don't like to give personal information over the Internet. I don't like to give my name. I don't like to give my address. I don't like it, even though they say you can have your user password and all that.
> (Participant 8, M, Internet User - G4)

> Oh sure, sure, sure, [people use the Internet for pornography, etc.] but that choice is free will. You won't stop people from doing that.
> (Participant 10, M, Internet Non-User - G1)

The Internet, electronic government and online delivery of health information present new risks to the security (and perceptions of security) of individuals and society. While health information, advice and treatments are accepted as having inherent risks, these may be heightened regarding health information in terms of accuracy, integrity and relevance of the information.

Other risks are associated with technology and include negative attitudes and perceptions of technology/ICT, such as the view that Internet service delivery is 'impersonal' and 'dehumanizing'. Negative attitudes regarding technology and the Internet also include individual indifference and/or techno-fear associated with the lack of skills and confidence in the use of computers and the Internet. Lack of trust in technology and the Internet may also manifest as public concern for personal information privacy and confidentiality, even though this concern may be reduced when the Internet interaction is with a familiar government agency.

7.4 Conclusion

This chapter has explored the concepts of trust and risk as they were identified through the subjective understandings of health information and the Internet. Trust and risk were evident in the literature on social capital as well as the literature on the social impact of technology and policy directions for health information service delivery. Risk operates at two levels - society and individual - which are explored in the context of social capital, the digital divide and health. Risk culture at society level is focused on risk management and risk minimisation and is evident in the intent of policies for social capital, the digital divide and population health. The Internet could be considered an institution or system of modernity, according to Giddens' (1990) thesis on modernity, with trust being an abstract capacity. Social capital could also be considered an abstract capacity or concept, of an intangible nature, which is why it is problematic to describe and measure as having absolute qualities and characteristics. As a system, the Internet challenges

trust and risk in public interactions with the system, as with public/citizen interactions with government. The Internet provides the potential for different ways of forming trust in systems, generalized trust and social trust in contemporary society.

Trust is conditioned by culture and learning experiences at a personal, individual level. Social trust is built over time and shaped by experience regarding social networks and broader interactions of generalized trust and civic trust. Trust is highest in that which is 'familiar' – familiar social contacts/networks (relationships based on reciprocity), familiar systems of health information service delivery and familiar 'local' health information providers and 'local' health information. Health information, online or otherwise, is more likely to be trusted when provided by a 'public' entity such as government or known health authority rather than an unknown and suspicious commercial entity.

Trust in technology is higher in Internet Users than Non-Users, suggesting a link with familiarity as well as confidence and skills in using the Internet. Another important aspect of trust is individual choice and control in a particular context, supported by familiarity and confidence. This is applicable to the relationship with government and to wider health information and other information resources enabled by the Internet as well as social networks operating on social trust and reciprocal relationships.

Risk is inherent in relationships of trust when trust operates to avoid risk and promotes individual and group security. Risk protection, in a system/government sense in Internet service delivery has focused on security provisions for the protection of personal information privacy and confidentiality. Risk is also inherent in the area of health information, advice and treatments – the known and unknown effects and risks and the integrity and reliability of health service providers and products. It can be stated that trust and risk impact on the perceived value of health information and on the perceived value of the health information service delivery mechanism.

Differential access to the varying types of social capital may be linked to the broader processes of social exclusion. For example, Briggs (1998) argues that the poor often have less bridging and linking social capital (which may offer better access to resources), than those economically better off. If social capital is indeed related to health outcomes, these differences in access to aspects of it have the potential to reinforce existing health inequalities. Muntaner et al. (2001), as discussed

in Chapter 3, implore the field of public health to embrace a broader view of social capital beyond parochial confines and focus more on bridging and linking social capital. Many social capital indicators such as trust and resilience are correlated with features such as social status, inequality and types of government (Knack & Keefer, 1997). Some indicators suggest that health outcomes refer to perceived inequities rather than poverty of resources above certain base levels. Research indicates that trust is distributed unevenly in all communities and nations. Higher resources, which include power and status, also include higher trust of strangers and systems (Hughes, Bellamy & Black, 1998). Those with less power display lower levels of trust, which has an impact on social capital.

The interrelationship between inequality and distrust raises important broader political issues for social capital theorists, since generalised trust and social capital are related. Communities, societies and nations with low levels of trust need to look at the structural causes and at the expectations and experiences that may reduce trust. Racism, fear of crime and other hostile reactions to perceived threats indicate loss of trust and the consequential erosion of social capital.

The processes of social capital accumulation can be found in the way through which people express their expectations. The role of perceived inequality in the generation of transferable trust requires further exploration. Once certain minimum standards of resources are available, power inequality remains the major problem (Whitehead, 1995). This raises the interesting issue of whether it is the material resources that create the social climate, or whether it is the way the distribution of these is interpreted that is more significant. While relative deprivation has been recognised in the past, it has primarily been interpreted through material needs (Shaw, Dorling & Smith, 1999).

There are several implications for policies for electronic government and online health information services. Online health information services should be supplementary and complementary to more personal forms of service delivery and the benefits of access to wide reaching sources of information should be promoted. While this access may increase the risks and reduce the trust associated with online health information sources, there are potential community gains from the development of bridging and linking social capital. Government-sponsored online health information services should be more interactive and personalised and should address ‘local’ information needs and advice about services and should avoid interference by commercial

entities through sponsorship or advertisement. Strategies aimed at increasing access to the Internet should focus on increasing the familiarity of the public with the Internet, reducing the risks from fear or lack of confidence in technology, and increasing awareness of public information resources. Strategies aimed at increasing access to online health information should focus on the quality of health information - accuracy, integrity and relevance – and the presentation and analysis of diverse authoritative/expert perspectives.

CHAPTER 8: CONCLUSION

8.1 Major Findings

This thesis contributes to the policy debates around online health information service delivery through its focus on the nexus between social capital and the digital divide and subjective analysis of the digital divide. The concepts of social capital and the digital divide were discussed in terms of their relationship to government policy and health policy. In particular, social inclusion, electronic government and online health information service design and delivery were explored. The thesis integrates social capital theory with research on social inequalities.

The literature review demonstrated that social capital is certainly in the political and health lexicon, even though social capital remains an abstract or imprecise concept, having been borrowed from the language of economics for its justification as an economic as well as social benefit. It is difficult to distinguish social capital as anything much more than simply the social benefits arising from social cohesion, networking and contemporary notions of active citizenship including 'e-citizenship' which may or may not derive economic benefit for society. Although, when the different types of social capital are explored, 'bridging' and 'linking' social capital appears to be enabled by access to the Internet and to online health information. As a socio-economic construct, social capital warrants vigorous further analysis and empirical research. The relationship between social capital and health, specifically health outcomes, is also ill-defined apart from the central notion of the anticipated benefits of social cohesion and support within local communities.

The digital divide is not a 'neat' divide of a coherent whole population. Although it can be relatively easy to determine who has access to the Internet and who does not, a heterogenous population group may typically comprise individuals with diverse and overlapping characteristics that make categorization according to causes for non-access difficult. It is difficult to box or label 'disadvantage' since disadvantage is a relative and not an absolute construct, and can change in various situations and over time. The concept of the digital divide may wrongly be premised on the 'have-nots', in relation to the Internet, wanting to 'have', yet that has been found to not necessarily be the case where access to the Internet and online health information is concerned.

Government policy directions for online services and social pressure have an influence even if individuals cannot easily or clearly establish relevance and need.

8.2 Key Research Questions Explored

(1a) *Is social inclusion enhanced by the Australian Government and related South Australian Government policies for online health information?*

(1b) *If so, how?*

(2) *What can be learned from the links between social capital and the digital divide that informs and challenges electronic government and health policies and the body of social knowledge?*

(3) *Are Internet Users with access to online health information more likely to have higher social capital and, potentially, better health and well-being than Internet Non-Users? That is, how does the relationship between Internet use, social capital and health have an impact on social capital for Internet Users and Non-Users?*

The three related key research questions were explored by bringing together theories and evidence of social capital and the digital divide for analysis in the context of electronic government and online health information, with a focus on subjective aspects which impact on access to the Internet and online health information. This necessitated an articulation of the research participant profile and people's perceptions and attitudes on access to the Internet and online health information. The major findings in regard to the key research questions and the sub-questions for this study posed in Chapter 4 are summarised below.

8.2.1 The Digital Divide is the Dark Side of Social Capital

The digital divide demonstrates the dark side of social capital because Internet Users are positioned as 'privileged', that is, able to access and benefit from resources, while Non-Users are excluded from opportunity. The Internet Users represent an exclusive group. Despite government and social policy aims for universal access, not everybody has access to the Internet or will

probably ever have access. Social capital intersects with the digital divide in that the concepts share common egalitarian aims for social connectedness and debatable social 'good' where social capital is something to be strived for and the digital divide is a problem to be acted upon. Social capital contrasts with the digital divide because the latter represents network breakdowns and the lack of opportunity to form ICT-mediated networks, where networks are considered to be fundamental to the development of social capital for individual and community benefit. While social capital is an intangible resource and not a precise concept, it relates to individual and community resources (human/social capital) embedded in networks and available as a consequence of networks of mutual support, service, reciprocity, trust and obligation.

Social capital may be developed without ICT, but ICT can facilitate extension of networks especially for 'bridging' and 'linking' social capital. Therefore, ICT can create opportunities for the development of social capital and facilitate social inclusion. However, 'bonding' social capital, either Internet enabled or not, may be reflective of mainly homogenous groups with shared values that are exclusive. The dark side of social capital also represents fear of the unfamiliar or unknown within the domains of technology and society.

8.2.2 Internet Users Have Higher Social Capital than Non-Users

Internet Users accessing information about health and health services are likely to have higher social capital than Non-Users but not only for the reason that they are Internet Users. They are likely to have other socio-economic characteristics, such as average or above average income, have attained greater than secondary level education and have language and computer literacy skills that facilitate their social and civic engagement online. Not specifically for the reason that they are Internet Users, they are also more likely to have better health and better access to health services. Internet Users who access online health information are likely to have higher social capital than Internet Non-Users due to the wider opportunities that are available for social networking in addition to the interaction with government organizations and other information providers enabled by the Internet. Internet Users may themselves be socio-economically disadvantaged but this has proved no barrier in their efforts to access the Internet. In understanding the digital divide, it is therefore important to acknowledge that not all socio-economically disadvantaged people are Internet Non-Users and not all Internet Users are devoid

of aspects of socio-economic disadvantage. In addition, there are subjective reasons for individual access or non-access.

8.2.3 Computer + Internet does not = Access

Providing physical access to ICT and basic training is one thing – giving citizens good reason to want to make use of it is another. Type of information or service, quality and relevance of content can be either a determinant or barrier to access. It is important to understand information needs, the patterns of information use and social and cultural barriers to accessing information.

Investigations of Internet access and of access to online government services should not be limited to material access alone (e.g. purchase of personal computers and Internet access), nor should it be based on untested assumptions about potential 'disadvantage'. Investigations should seek to understand why people use the Internet and online government services, including online health information, and interrogate those services for value and relevance rather than relying on specific policy directions and service delivery design based on one-way perceptions of value. Investigations should also seek to understand why people choose not to use the Internet, online government services and online health information.

The emphasis for many community social capital building project-based initiatives has reflected top-down policy models and tended to be on the necessity of providing physical access and training for people that are 'targeted' as 'disadvantaged'. This perspective, while consistent with a safety net approach, falls short of the more pervasive features of the digital divide and may serve to marginalise. Access, although important, is not the only factor or even the most important one, influencing Internet adoption by 'disadvantaged' individuals and communities. Other factors include choice, perceived need and individual communication and social networking preferences. This challenges assumptions made about those reckoned to have socio-economic reasons for their lack of access, and of the abilities and resources available to them for civic and social participation.

8.2.4 No 'Typical' Internet User

Internet Users were sought and found to exist even amongst the expected categories of potential 'disadvantage' for access to the Internet, although income and education/computer literacy were

validated as being significant barriers to access (as perceived or experienced by participants). This was found despite the claimed effectiveness of some state or local government programs, strategies and support for public access and training (for example, availability of Internet access and support in public libraries), which were not highly regarded when home access is the strong preference. This suggests that electronic government and online health information policies should privilege strategies for enabling access and support for the Internet from home rather than public settings.

Although it must be acknowledged that income, education and ability play critical roles in access to the Internet, it is difficult to try to identify a particular 'type' of person that would be an Internet User other than someone who chooses this form of communication and transaction within social networks and with authorities such as government organizations and expert health information providers. Findings from the research generally support the literature regarding people most likely to have access to the Internet (Lloyd & Hellwig, 2000). That is, highest Internet usage occurs amongst people with highest levels of education and income, males are more likely to use computers than females, and (to a lesser degree than expected) older people are less likely to use the Internet than younger people (Lloyd & Hellwig, 2000). The rationale for the latter point is that Internet use was found to be almost equally as high in the older age groups as in the younger age groups in the sample. While the data did not sharply contrast the research literature presented in Chapter 2 that Internet use declined with age (Lloyd & Hellwig, 2000; NOIE, 2003), it did not strongly support it. There were no major gender-based differences found regarding access to the Internet but differences were evident in their reasons for using the Internet to access health information and in their information-seeking and communication behaviour. Male participants preferred to use the Internet for health information instead of consulting with a health professional and women were more concerned about time-efficiency.

Place of residence, i.e. urban or rural/remote, was not represented as a major reason for access or non-access but a matter of choice and recognition of benefit to overcome isolation and improve access to services, including health information.

Research and service strategies that 'target' social groups according to a single area of assumed 'disadvantage', where it may be subjective disadvantage and not an absolute aspect for analysis, may be misguided in emphasising one aspect over another. An individual or social group may

have diverse, multiple characteristics or attributes that may or may not meet the assumptions made about the implications of their socio-economic situation.

8.2.5 Technology and Exclusion

ICT has the potential to transcend inequality and help build social capital but can also widen pre-existing disparities and inequalities. Social exclusion is relevant to social capital and the digital divide in that it links social elements to material deprivation and poverty. Social exclusion is also linked with the processes of marginalisation. Social networks are central to social capital and are a metaphor for social inclusion. One of the most important developments with ICT is the many-to-many nature of communications facilitated by the Internet. ICT means that citizens and communities can become information providers themselves, sharing information about themselves and shaping identities for their outward interactions.

It can also be surmised that Internet Users found that the Internet allowed users to transcend geographical, cultural and other boundaries that restrict communication and access to information. It also improves bonds with specific cultural groups and/or local communities. While some concerns were expressed about the reliability and trustworthiness of information and the impersonal nature of the Internet as a communication medium, overall it was found to be of benefit to Internet Users with self-determined discretion about information and services, and choice and control within a virtual environment.

The evidence of positive effects from participants' experience supports the notion that the Internet assists the accumulation or development of social capital and the benefits of social capital. Socially excluded people can positively engage with certain types of ICT and ICT is used by a very wide range of people in society, including those groups who have traditionally been regarded as digitally excluded, for example, the aged, (dis)abled and those for whom English is not their first language.

Does one's inability to access the Internet contribute to social exclusion, that is, the inability to participate fully in society? Yes, potentially, as it is increasingly gaining momentum as a mainstream medium for communication and information access in contemporary society. As such, it has the potential to widen the divide between those who can and can not participate (or

choose not to), recognising that participation is more complex than structural access and depends also on individual subjectivity.

Although the findings from the research sample do not clearly reflect major 'disadvantage' to access that is directly related to gender, age or ethnicity in particular, they do highlight specific characteristics of Use or Non-Use of the Internet. There are subjective reasons relevant as a challenge to notions of the digital divide and strategies to bridge the divide, and relevant to the relationship of the digital divide to social exclusion.

Technology and change challenges people – no one likes being left behind, particularly those that are made to feel that they have been left behind by pressing government policy directions for online services and social pressure to conform to Internet use. Lack of opportunity or ability to access can make one feel like a 'second-class citizen', an example cited in the data of a perception of relative inequality. Does this have a relationship to 'the culture of inequality' (Muntaner et al., 2001) and psychological reductionism as a cause of inequality? Can it be overcome by community ties and social capital? The challenge of lagging behind the rest of society is particularly prevalent for the aged and for people on low incomes. Other challenges concerned with technology are the impersonal nature of the Internet and the fear of traditional services upon which one is reliant no longer being available.

Social inequality is not specifically a consequence of low levels of income or formal education attained alone. Many reasons contribute to individuals being unable to participate in communities, including virtual communities, and cause them to miss out on information and support. The potential exists for the participation in such support to become dominated by middle-class, educated individuals who are already predisposed to benefiting from services. Yet there are more pervasive features of the digital divide, for example personal choice, that warrant further exploration to bring a different perspective to the digital divide and to strategies for bridging the divide, such as making the cost and effort for access worthwhile for the individual.

8.2.6 Citizenship is Risky Business

Citizenship comes with rights and obligations in the contexts of social capital and social inclusion, electronic government and public health policies. Citizens are obliged to participate in

civic and social life – and also to use the Internet to access government services and for online health information. In relation to networks, citizen-to-government ties are weak but important ties and are relevant to the development of 'bridging' and 'linking' social capital. The Internet demonstrates a combination of strong and weak ties dependent on the relationship between the sender and receiver, provider and consumer. The Internet is not considered to be a system that is accountable, where the User can expect redress for ambiguous or complex issues or when something goes wrong. A policy implication of this is to restrict online service delivery to simple information transactions and improve interactivity or find alternative means of presenting potentially ambiguous or complex information with a corresponding improvement in direct interaction and quick responsiveness that parallels and/or improves upon the benefits of telephone or face-to-face communications.

With regard to online health information, there are specific concerns about risks associated with using the Internet for disease or health condition self-diagnosis and treatment and/or in preference to sources that were considered to be more reliable or authoritative, such as doctors. Risk is inherent in relationships of trust when trust operates to avoid risk and promote individual and group security. Security for online government services should not be limited to considerations about privacy and confidentiality of personal information, but should focus on integrity of information and reliability of source. Where the Internet and the World Wide Web is concerned, the delineators are somewhat blurred between what is an authorised government-provided online health service and what information from other sources is facilitated by the government service.

8.2.7 Trust is in the Eye of the Beholder

Online health information is preferred as complementary to and not as a replacement for the predominantly preferred methods of telephone or face-to-face information service delivery. It must be recognised, however, that preferences can change over time. Perceptions of trust and risk impact on the perceived value of health information and that of the Internet as a service delivery mechanism. Generally, the Internet is used to supplement and complement other means of obtaining information, transacting with organizations such as banks, government organizations and associations, and pursuits related to lifestyle interests and employment. The Internet is also used simply to communicate with other people in a familial, social or other context with individuals and groups.

Trust is highest in that which is familiar and personal. It corresponds that perceptions of risk are more prevalent where weak ties are concerned and in circumstances where distrust is present. It is not surprising that Internet Users have more trust than Non-Users when it comes to the online environment due to their relative familiarity and confidence in the mechanism. Internet awareness-raising and advertisement of services may have an impact on Internet take-up. Essentially, however, online service design and operation that enables improved interaction and direct communication and customisation, that is, relevance to the individual and local context, may be effective participation strategies.

Government-delivered online health information should not confuse customer service with political or commercial agenda and should seek to improve choice and control over the interaction experienced by the User. People who feel less powerful display lower levels of trust and this has implications for social capital as well as the effectiveness of government online services.

8.2.8 ICT is Good for Your Health

ICT can support desirable public health outcomes through online health promotion, networking and facilitating social inclusion in circumstances of geographic and social isolation. Access to online health information is not necessarily about better health but it is about citizenship and access to information which may promote social opportunity and social networking. In that context, social capital is also good for one's health. One of the means by which social cohesion and support can be facilitated is by extending social networks with far reaching virtual communities or local communities that may be facilitated through government organizations.

Social capital and the development of supportive societies and communities should be at the heart of public health strategies for the future. The relevant strategies should include public policies, legislation, public interaction and activity at a local community level. Social capital and the trust upon which it relies are likely to be central to public health endeavours in the information and knowledge age.

The political agenda for social inclusion and public health policies are linked in their aims for population health outcomes with a primary health care focus for illness prevention and early

intervention, citizen self-determination and reliance, and social connectedness and support. Social inclusion and public health both stand for universal access to services and attempt to focus on services for those most in need. Ironically, political, financial, social and cultural constraints may mean that those least in need, that is, those that also have alternative resources, may end up benefiting most.

8.2.9 Communication is a Two-Way Highway

Awareness of the existence of online health information was low for the total sample, regardless of the source being a government agency or others. Again, take-up can partly depend on awareness, familiarity and trust. There is a User (and Non-User) preference for greater interactivity with government organisations and for direct service provision that is tailored to specific need, hence the preference for telephone or face-to-face contact in most cases. As discussed in section 8.2.6 the Internet is unlikely to be used for ambiguous or complex issues where government services are concerned.

The Internet is recognised as facilitating access to wide information and knowledge networks that are central to certain types of social capital (‘bridging’ and ‘linking’) and reliant upon trust and reciprocity in the network and agency relationships, albeit in a different construct to traditional networks. The Internet is used to supplement and complement other means of obtaining knowledge and information, including health information, transacting with organizations such as banks, government organizations and associations, and pursuits related to lifestyle interests and employment. It is also used to communicate with other people in a familial, social or other context.

8.2.10 Information is Power

Upon analysis of electronic government policies, it may be concluded that Federal and State policy directives implore that, for the benefit of the Australian and South Australian economy, an information-enabled society must be cultivated. Generally, compared with other means of obtaining information, the Internet is considered to be more comprehensive and detailed, potentially more up-to-date and offering many different perspectives through one encounter. It also presents more opportunities for unhurried and even anonymous interaction. The Internet presents access opportunities in being available twenty-four hours a day, seven days a week in

home settings. It can also be a source of frustration when the right information cannot be found. The potential for interactivity and the particular advantages of a virtual communication environment, such as the one-to-many communication opportunities provided by Internet e-mail and websites, are considered to be complementary to other forms of communication but not replacements for them, although men wanting anonymity in their search for information about disease or health conditions may use the Internet as the primary source. The Internet has positive attributes but can be found also to be cumbersome and capable of subjecting the User to "information overload", requiring advanced searching skills and investment in time.

Health professionals, particularly GPs, were considered to be the primary source of health information, although trust and reliability in information and advice received was considered variable. Doctors' advice was supplemented by printed reading material and other media such as radio, television – and the Internet. Health is an emotive topic and subject to variable personal responses dependent on individual preferences and circumstances where access and use of online health information is concerned.

8.3 Further Research

Questions raised for further research are identified below together with noted requirements for further theoretical development relevant to the research topic.

A gap in the body of literature on computer-mediated communication was identified in Chapter 6 regarding the potential impact on the nature and quality of familiar relationships over time by computer-mediated communications. The concern about such effects was raised by older participants who were Internet Users about the negative impact on their relationships with family members, friends and colleagues of their use of this 'impersonal' means of communication. How does the nature and quality of these relationships change if the Internet becomes the principal means of contact? What period of time does it take for any negative impact to be noticeable and how does it manifest itself? Related to this is Szreter's (2002) concern for the relative decline in bonding social capital potentially resulting from an increase in linking and bridging forms of social capital. This is a complex area as it involves many subjective factors, variable relationships and personal circumstances but the differences between computer-mediated and non-computer-mediated familiar social networks are worth further pursuit.

There appears to be a research gap in defining and measuring social capital to the degree that it is possible to link social capital with actual health outcomes as opposed to generalizations about 'health and well-being' in the context of a better environment of social support. Is social capital the same as social cohesion in relation to health outcomes? Social capital is 'under-theorized in its public health usage and its application in public health research and practice' (Muntaner et al., 2001). What is transmitted or transacted in social networks and how is it relevant or able to be linked with health outcomes? How does the online environment affect these transactions? Further research into the relationship between health promotion and online health information is warranted for a better understanding of purpose and effects of online health information.

Complex and critical health and human services information services designed for universal access cannot be exclusively reliant on online delivery when 100% of the citizen population do not access online services. The quantum of unmet need is unknown and the costs are likely to be prohibitive in providing personalised and customised support for Internet access. Is it unrealistic therefore for online government policies and health policies to refer to universal access? What would be the ramifications of targeted and rationed service delivery for only those that are 'at risk'? That is, people perceived by policy makers to be 'disadvantaged' in regard to access to the Internet and online health information services. In relation to characteristics of 'disadvantage', further research on the impact of (dis)ability on social capital and on access to online information and services could focus on different types of (dis)abilities in the context of diverse populations.

This thesis has not considered the design, type and quality of online health information specifically in relation to equity of access and relevance. An in-depth study of relevance of accessible online health information should include analysis of the potential link between existing health condition(s) and health information sought. A study of the sources, nature and styles of online health information in relation to user acceptance would further support knowledge of this area.

8.4 Concluding Remarks

Methods of delivering public information and services in the information age are being revolutionized by the application of ICT by government, business and communities. Governments have high expectations of the economic and social benefits that will result from electronic networking and e-government initiatives. Policies for electronic government generally

are time-limited and resource-constrained in their capacity to deliver, tied to the government in power and dependent on the political environment and cultural factors. Policies for electronic government and online health information demonstrate the intent of risk management at society level for creation of an information society for social and economic benefits and for better health outcomes and reduction of the financial burden on the public health system. It is unlikely that the momentum of these policy initiatives can be carried through to completion and effective longitudinal evaluation when they are subject to political and resource constraints. Public policies that aim for 'universal access' set up failure but do not appear to modify their ambit presumably for political and social reasons.

The electronic delivery of health information to the public is one major area of e-government effort to increase access to quality, timely information to improve opportunities for better health outcomes through the reduction of risk from health advice and potentially resulting from social capital. The major critique of Putnam's (1993) thesis on the decline of social capital in America and negative social impact with the metaphor of 'bowling alone' is that it did not take cultural and technological changes in society into consideration. A contemporary metaphor may be that not only is 'bowling' good for your health but 'online bowling' is also good for your health.

The existence of a digital divide means that the most disadvantaged members of the community may be denied access to potentially valuable information services. Electronic networking and increased access to knowledge and information provides opportunities for improved quality of life for the socially disadvantaged – those on the 'dark side' of the divide. ICT has the potential to transcend social boundaries and inequality and help build social capital but can also widen pre-existing disparities and inequities. Social exclusion is the core problem of the digital divide. Phipps (2000) concludes that social exclusion is a complex and multi-faceted condition and must be recognised as a long standing social problem which existed and exists irrespective of the development of ICT and the information society. Electronic communications are not inherently a cause of social exclusion but lack of access to the means of communication, increasingly used by the rest of society has the potential to worsen the relative position of excluded individuals and groups. As new ways of learning, working and engaging with others develop, those whom we do not enable to have access will be additionally excluded. The increasing trend toward use of electronic communication may exacerbate social exclusion, but may in some ways offer opportunities for social inclusion, especially for less mobile groups and for social discussion,

exchanging information, for education and training. This could also have an impact on individual and community health and well-being.

I have observed and participated in electronic government developments and explored digital divide and social capital issues beyond the last decade as a full-time South Australian Government employee and as a part-time graduate and post-graduate student in communication studies in the social sciences. From 1996 to 2006, the language in the literature relating to the social impact of the Internet and ICT has changed, from referring to the people accessing the Internet as 'users' and 'consumers' to 'e-citizens' and referring to 'social networks' instead of 'electronic networks' regardless of whether they were ICT-mediated networks or not. The concept of the digital divide is now more comprehensive than consideration of the Internet alone. ICT incorporates telephones. The problems for the disadvantaged are the same but there is mounting evidence to support the early propositions that ICT could help bridge some of these social divides. That is, create opportunity for the socially excluded.

One of my conclusions is that Internet information and communication technology enhances and enables social capital. The Internet is a resource for the production of social capital, including social capital that is produced through the delivery of services by a government agent. If social capital is important in the relationship between government and citizens and between citizens, then government policy should support access and ability to the Internet and Internet- based services. The Internet represents a structural resource for social capital. Early attempts at measurement of social capital have not addressed structural resources but have focussed on individual attributes and social capital outcomes of collective citizen action. It presents a challenge to public policy about the involvement of the state in resource provision. This is a similar challenge as that with health care on the basis of citizens' rights and welfare versus self-reliance. Public policy on social inclusion introduces another dimension to how the issues of the digital divide can be analysed.

Improving access to the Internet alone, however, does not necessarily directly improve social capital as there are many social and cultural variables, not just infrastructure and environment. The nature of social capital is that it is intangible, often has indirect benefits and outcomes, rarely involves a clear cause and effect, and does not suit traditional performance indicators and

measures of inputs and outputs (Cavaye, 2004). It can also strengthen power structures that do not promote or support the positive objectives of social capital.

The theories of social capital and health have parallels in that they are focused on population-level outcomes and have egalitarian aims for universal access to the benefits of social services and resources. Social capital can contribute to reducing health inequalities but it is only one part of an approach to health improvement, which must also include measures to raise the absolute income levels and material living standards of the worst off in society. Definitions of social capital have shifted and mutated as the concept is applied to many disciplines, including the field of health where it appears almost synonymous with social cohesion. I agree with Lynch et al. (2000, p. 404) who have stated that social capital attempts to explain too much with too little and is used indiscriminately, applied imprecisely and adapted uncritically. However, it is hard to do otherwise when it is not a precise concept with absolute indicators. Social class relations and politics should be incorporated into the income inequality and social cohesion health discourse, which has started to happen with the growing body of literature on the social determinants of health.

Most conceptions of social capital focus on attributes of civil society. They explore participation in networks based within that nebulous place between the family and the state, excluding the economic sphere, and focus on trust among members of such networks and the collaborative actions they enact. This trust can potentially extend to government organizations and information providers and linking and bridging social capital can be built from the transactional networks and contacts facilitated by the Internet.

This research challenges, informs and extends the concepts of social capital and the digital divide and builds upon the body of knowledge that links information policy to social policy. In doing so it contributes to social and government policy debates about electronic government service delivery and online health information.

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APPENDIX 1a

INFORMATION SHEET

SOUTH AUSTRALIAN DEPARTMENT OF HUMAN SERVICES AND THE UNIVERSITY OF SOUTH AUSTRALIA

SOCIAL CAPITAL AND THE DIGITAL DIVIDE

EQUITY OF ACCESS TO GOVERNMENT HEALTH INFORMATION SERVICES VIA THE INTERNET

This research aims to understand the relationships between the Government's provision of human services online, specifically health information services, and access and equity for clients of health information services.

The study is focused on the South Australian Government's provision of health information online, via the HealthySA website – www.healthysa.sa.gov.au – and other sources of health information via the Internet, and whether access to these services improves the general quality of life for the South Australian community.

There is concern that the lack of access to these services by people has a negative impact on the community. This study seeks your views on the value of such access and your concerns or issues regarding lack of access as well as your preferences of ways by which to receive information about health and well-being. The expected benefits from the results of this study include a better understanding of the South Australian community's access to online government information services about health and well-being and improvements in this method of service delivery.

During the focus group session you will be asked some questions to collect your views on the value or otherwise of getting information about health and health services over the Internet, your access to the Internet, your current health support networks, and how you would prefer to receive such information. The session will be audio-taped to maintain an accurate record of the discussion.

Participation is entirely voluntary and you may withdraw at any time without any adverse repercussions.

All records containing personal information will remain confidential and no information that could lead to identification of any individual will be released.

All information collected as part of the study will be retained for seven years at Murray House, University of South Australia, St. Bernard's Road, Magill, South Australia.

Thank you for your participation.

Contact: Ms Iolanda Principe, Director, Information Management Services, SA Department of Human Services, telephone 08 8226 7276

If you have any specific concerns, you are invited to contact Linley Hartmann, Chair, Human Research Ethics Committee, University of South Australia on 8302 2956.

APPENDIX 1b

CONSENT FORM

Project Title **SOCIAL CAPITAL & THE DIGITAL DIVIDE**

Researcher's name **IOLANDA PRINCIPE**

Supervisor's name **DR. LIA BRYANT**

- I have received information about this research project.
- I understand the purpose of the research project and my involvement in it.
- I understand that I may withdraw from the research project at any stage.
- I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential.
- I understand that I will be audio-taped during the interview.

Name of participant .....

Signed ..... **Date** .....

I have provided information about the research to the research participant and believe that he/she understands what is involved.

Researcher's signature and date .....

APPENDIX 2a

SURVEY - INTERNET USERS

Section 1 Some Information About You

Which of the following age ranges describes you? Please place a √ in the space provided Under 25 26 – 35 36 - 45 46 – 55 56 - 65 66 -75 Over 75
Employment Status Seasonal Casual Part-time Unemployed Pensioner Other
Income Under $25,000 per annum Between $25,000 - $50,000 per annum Between $50,000 - $75,000 per annum Over $75,000 per annum
Formal Education (highest level reached) No formal education Primary Secondary Tertiary Other
Please provide your postcode here.
Please indicate the nature of your disability.[1]
Please indicate your ethnic/cultural background[2]
Where do you access the Internet? Please place a √ in the space provided

	at home
	workplace
	public library/school
	Internet kiosk/cafè

Where would you prefer to access the Internet? Please place a √ in the space provided	
	at home
	at a public place

Section 2 Health Information and the Internet

[1] Used with disability groups only

[2] Used with NESB/CALD groups only

Q 1	Do you know that you can get health information on the Internet?	Yes	No
Q 2	Have you used the Internet to get health information?	Yes	No

If you answered No to Q1 you have finished the survey.

How often do you use the Internet to get health information?

Never

Rarely

Sometimes

Once a day

Once a week

Once a month

Frequently

If you answered Yes to Q1, please complete Section 2 below.

Section 3 Using the Internet for Health Information

Q 3	Does getting health information from the Internet provide greater choice?	Yes	No
Q 4	Does getting health information from the Internet give more control over health and improve self reliance?	Yes	No
Q 5	Do you have greater knowledge of health issues and services available to you?	Yes	No
Q 6	Do you have access to people and networks that you wouldn't have had otherwise?	Yes	No
Q 7	Do you have access to services that you wouldn't have had otherwise?	Yes	No
	Which services?		
Q 8	Has this increased your support networks for health and well-being?	Yes	No
Q 9	Do you trust the information you are getting?	Yes	No
Q 10	Do you trust the provider of the information?	Yes	No
Q 11	Do you use email to communicate with health and well-being service providers?	Yes	No
Q 12	Do you participate in any online health networks?	Yes	No
Q 13	Do you use email to communicate health information to people and organizations?	Yes	No
Q 14	Do you share health information from the Internet with family and friends?	Yes	No

Thank you for taking the time to complete this survey

APPENDIX 2b

SURVEY - NON-USERS

Which of the following age ranges describes you? Please place a √ in the space provided Under 25 26 – 35 36 - 45 46 – 55 56 - 65 66 -75 Over 75		
Employment Status Seasonal Casual Part-time Unemployed Pensioner Other		
Income Under $25,000 per annum Between $25,000 - $50,000 per annum Between $50,000 - $75,000 per annum Over $75,000 per annum		
Formal Education (highest level reached) No formal education Primary Secondary Tertiary Other		
Please provide your postcode here.		
Please indicate the nature of your disability.[3]		
Please indicate your ethnic/cultural background[4]		
Do you know how you would access the Internet in your home or at a public place?	Yes	No
If you were to use the Internet, where would you prefer to access it? Please place a √ in the space provided at home		
at a public place		
Do you know that you can get health information on the Internet?	Yes	No

Thank you for taking the time to complete this survey

[3] Used with disability groups only

[4] Used with NESB/CALD groups only

APPENDIX 3a

FOCUS GROUP QUESTIONS AND PROCESS

INTERNET USERS

Activity	Method	Resources Required
Welcome and Overview	Welcome and thank people for their time Explain the purpose of the study Explain how the session will be conducted: ◊ I wish to gather information about how you access information about health and health services ◊ Some questions will be in a short survey for you to tick YES or NO ◊ You might like to talk with others or to facilitator as you do the survey ◊ Other questions we will discuss as a group ◊ Explain the session will be audio-taped ◊ Explain how the information will be used ◊ Assure that no individual's information will be identified	Information Sheet
Gain Consent	Explain that written consent is required Distribute then collect Consent Forms	Consent Form
Discussion (break at end of first hour of the session)	◊ How do you get information about health issues and health services? ◊ Does/how does getting health information from the Internet provide greater choice? ◊ Does/how does getting health information from the Internet give more control over health and self reliance? ◊ Do you/who do you have access to people (networks) that you wouldn't have had otherwise? ◊ Has it changed the relationship you have with the government, community or private organization providing the information? ◊ What is your preferred way to receive information about health and health services? Why? ◊ What would you need to help you get health information via the Internet?	Audio/transcription and Whiteboard and butcher's paper Tea, coffee, milk, sugar, urn, mugs Water and glasses
Wrap Up	◊ Ask if there are any questions ◊ Summarize the process from here ◊ Thank participants	

APPENDIX 3b

FOCUS GROUP QUESTIONS AND PROCESS

NON-USERS

Activity	Method	Resources Required
Welcome and Overview	Welcome and thank people for their time Explain the purpose of the study Explain how the session will be conducted: ◊ I wish to gather information about how you access information about health and health services ◊ Some questions will be in a short survey for you to tick YES or NO ◊ You might like to talk with others or to facilitator as you do the survey ◊ Other questions we will discuss as a group ◊ Explain the session will be audio-taped ◊ Explain how the information will be used ◊ Assure that no individual's information will be identified	Information Sheet
Gain Consent	Explain that written consent is required Distribute then collect Consent Forms	Consent Form
Discussion (break at end of first hour of the session)	◊ How do you get information about health issues and health services? ◊ What is your preferred way to receive information about health and health services? Why? ◊ Do you know there is a South Australian Government SA website that provides health information? ◊ Do you feel that you are missing out on information by your inability to access the government services online, including health information services? ◊ What would you need to help you get health information via the Internet? ◊ Where would you prefer to access the Internet – i.e. at home, or at a public place?	Audio/transcription and Whiteboard and butcher's paper Tea, coffee, milk, sugar, urn, mugs Water and glasses
Wrap Up	◊ Ask if there are any questions ◊ Summarize the process from here ◊ Thank participants	