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Exploring Measures of Low Social Capital

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Low Social Capital

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EXPLORING MEASURES OF LOW SOCIAL CAPITAL

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ABSTRACT

Developing measures of social capital across individuals and communities has attracted a large amount of attention and policy interest. However, this is a difficult task. The enumeration of the 2006 General Social Survey provides an important opportunity to explore a range of measures of social capital and see how they are related to each other. A number of the questions used to capture aspects of social capital have not been asked before in such a large survey, whereas others have not been collected alongside as wide a range of demographic and socio-economic information. To explore measures of social capital, the analysis presented in this paper is structured around four research questions:

1. What is the incidence of and associations between the social capital items?

2. Are there unobserved factors that explain the variance across the social capital data items?

3. Is it feasible to produce meaningful composite items from the dimensions of social capital?

4. How do the social capital measures vary across demographic groups?

In answering the above research questions, the results presented in this paper show that although a single measure of social capital is useful in summarising the patterns across the population, there is sufficient variation to warrant a number of dimensions of social capital to be analysed separately. An upcoming paper will test the validity of the composite measures created in this paper in terms of their associations with aspects of well-being, and whether these associations remain after controlling for demographic characteristics.

1. INTRODUCTION

The Australian Bureau of Statistics (ABS) defines social capital as the "networks, together with shared norms, values and understandings which facilitate cooperation within or among groups" (Organisation for Economic Cooperation and Development, 2001: p. 41). While the concept of social capital has received a reasonably large amount of attention and policy interest, identifying measures that quantify the levels of social capital held by individuals and/or communities has been more difficult.

The enumeration of the 2006 General Social Survey (GSS) provides a unique opportunity to analyse a number of different aspects of social capital and how they are related to one another. This paper presents results that empirically explore the concept of social capital in more depth than has been possible before due to the new data collected, and it examines associations between the various social capital items.

The exploration of measures of social capital presented in this paper is structured around four research questions. In addition to improving our understanding of the concept of social capital, it is also hoped that progress towards answering these research questions will help in the development of future ABS collections and, in the longer term, provide the tools to enhance policy making. Specifically, the research questions that we consider are:

1. What is the incidence of and associations between the social capital items?

2. Are there unobserved factors that explain the variance across the social capital data items?

3. Is it feasible to produce meaningful composite items from the dimensions of social capital?

4. How do the social capital measures vary across demographic groups?

Section 2 of this paper discusses the concept of social capital and how the research presented in this paper fits into the literature. Section 3 outlines the 2006 GSS, the main source of data used in this paper. Section 4 looks at the incidence and associations between the social capital data items. In Section 5 we consider whether there are a common set of factors that explain the variation across the social capital data items and from this develop a set of composite items for low social capital. Section 6 explores the variation of these composite items across demographic characteristics of the individual. Section 7 summarises the important points from the paper.

2. SOCIAL CAPITAL: CONCEPTS AND FRAMEWORKS

Social capital theory attempts to deal with relationships: relationships within and between groups of people, and across society. Therefore, social capital is a complex concept that is difficult to define and even more difficult to measure. This section will discuss the framework used by the ABS to measure social capital, briefly overview the social capital literature, and consider the issues involved with measures of social capital.
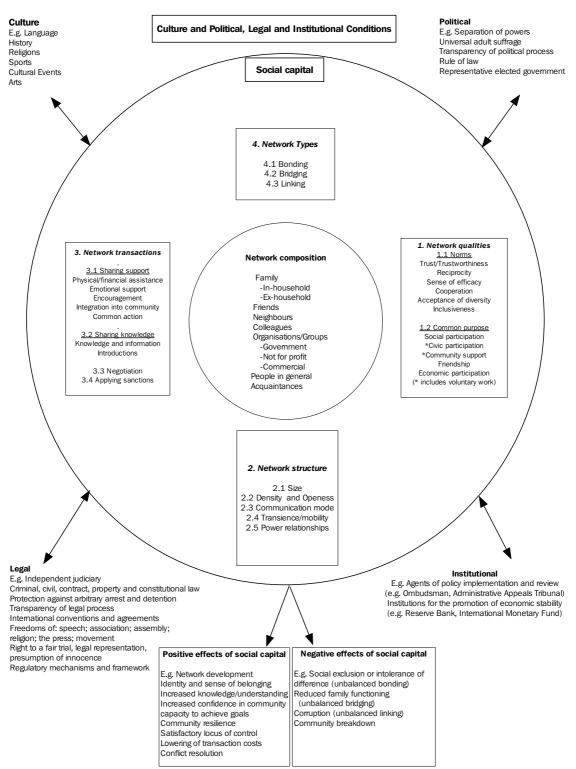
2.1 The social capital framework

There are a number of different ways to define social capital. The ABS uses as its starting point the definition from the Organisation for Economic Cooperation and Development (OECD). That is, social capital is the "networks, together with shared norms, values and understandings which facilitate cooperation within or among groups" (OECD, 2001: p. 41). An alternative way to think of social capital is that, while "... economic capital is in people's bank accounts and human capital is inside their heads, social capital inheres in the structure of their relationships" (Portes, 1998, p. 7).

Within this broad definition of social capital, the ABS has developed a comprehensive Social Capital Framework, which is depicted in figure 2.1 (ABS, 2004). Under this framework, social capital is seen as being a resource which draws on and feeds into other types of resources (natural, produced economic and human capital). Social capital resources can be classified into a number of attributes of networks including network qualities, network structure, network transactions and types of networks. The aim of this paper is not to extend the ABS (2004) framework but rather to consider measures that fit within it.

Under the Social Capital Framework, network qualities include norms such as trust, reciprocity and inclusiveness, and common purposes such as social, civic and economic participation. The structure of networks refers to size, frequency of interaction, density and openness, power relationships and transience/mobility. Network transactions are those interactions which at the same time invest in and maintain relationships, and also draw resources from them, such as sharing knowledge and sharing support.

Sitting across these other resources is the higher level classification of network types. In the framework adopted by the ABS, 'bonding' refers to relationships between similar kinds of people or groups; 'bridging' refers to connections where members have less in common, or even differences; and 'linking' references to vertical relationships with sources of influence or authority which assist with access to financial and other resources.

2.1 Social Capital, Culture and Political, Legal and Institutional Conditions in Australia

Culture
E.g. Language
History
Religions
Sports
Cultural Events
Arts

Culture and Political, Legal and Institutional Conditions

Political
E.g. Separation of powers
Universal adult suffrage
Transparency of political process
Rule of law
Representative elected government

Social capital

4. Network Types

4.1 Bonding
4.2 Bridging
4.3 Linking

3. Network transactions
.
3.1 Sharing support
Physical/financial assistance
Emotional support
Encouragement
Integration into community
Common action
.
3.2 Sharing knowledge
Knowledge and information
Introductions

3.3 Negotiation
3.4 Applying sanctions

Network composition

Family
-In-household
-Ex-household
Friends
Neighbours
Colleagues
Organisations/Groups
-Government
-Not for profit
-Commercial
People in general
Acquaintances

1. Network qualities
1.1 Norms
Trust/Trustworthiness
Reciprocity
Sense of efficacy
Cooperation
Acceptance of diversity
Inclusiveness

1.2 Common purpose
Social participation
*Civic participation
*Community support
Friendship
Economic participation
(* includes voluntary work)

2. Network structure

2.1 Size
2.2 Density and Openess
2.3 Communication mode
2.4 Transience/mobility
2.5 Power relationships

Legal
E.g. Independent judiciary
Criminal, civil, contract, property and constitutional law
Protection against arbitrary arrest and detention
Transparency of legal process
International conventions and agreements
Freedoms of: speech; association; assembly;
religion; the press; movement
Right to a fair trial, legal representation,
presumption of innocence
Regulatory mechanisms and framework

Institutional
E.g. Agents of policy implementation and review
(e.g. Ombudsman, Administrative Appeals Tribunal)
Institutions for the promotion of economic stability
(e.g. Reserve Bank, International Monetary Fund)

Positive effects of social capital

E.g. Network development
Identity and sense of belonging
Increased knowledge/understanding
Increased confidence in community
capacity to achieve goals
Community resilience
Satisfactory locus of control
Lowering of transaction costs
Conflict resolution

Negative effects of social capital

E.g. Social exclusion or intolerance of
difference (unbalanced bonding)
Reduced family functioning
(unbalanced bridging)
Corruption (unbalanced linking)
Community breakdown

Source: Measuring Social Capital, an Australian Framework and Indicators, 2004 (cat. no. 1378.0)

2.2 Social capital literature and previous research

While some of the concepts of social capital have been used and discussed by authors and philosophers for centuries, common usage of the term social capital to define the effects of networks and social relationships is relatively recent. Although there is some debate about who first coined the term social capital, it is generally accepted that Pierre Bourdieu, James Coleman and Robert Putnam were the first authors to systematically develop the theory and implications (see Schuller, Baron and Field, 2000 for a discussion). In Australia, Eva Cox's Boyer lectures, *A Truly Civil Society* (Cox, 1995) gave social capital a relatively high public profile.

Social capital theory attempts to deal with relationships: relationships within and between groups of people, and across society. These concepts are therefore relevant to all of the social sciences, and a vast array of related concepts and theories have been developed. These include social cohesion, social exclusion, socio-economic disadvantage, deprivation, psychosocial factors and human capital. Although social capital theory itself is relatively recent, it appears to have been a vehicle for attempts to separately identify the similar concepts from various fields of research. However, while difficult to disentangle theoretically, empirical measures of the different concepts will prove even more difficult to disentangle in practice.

In the social capital literature, there have been two strands of quantitative analysis which drew upon, and contributed to, the development of the theory of social capital. The first strand looked at the measurement of social capital. In Australia, Onyx and Bullen (1997 and 2000) tried to establish whether the concept of social capital is empirically measurable. The authors developed their own survey instrument (with 68 questions) and collected data on five NSW communities (two rural, two Sydney metropolitan and one inner city Sydney community). With this data set, the authors developed a model of social capital that contained 36 statistically significant variables, comprising eight latent factors or dimensions. However, when the data on the five communities were analysed separately, differences were found in the factor loadings. Onyx and Bullen (1997 and 2000) conclude that there was statistical evidence to suggest differences between local areas with respect to both the pattern of social capital factors and the absolute level of social capital.

The ABS has also made a strong contribution to the measurement of social capital in Australia, mainly through the development of the ABS Social Capital Framework (ABS, 2004), but also through analysis of the 2002 GSS (ABS, 2006). This built on work by the Productivity Commission (2003) and the Australian Institute of Family Studies (for example, Stone and Hughes, 2002). A number of researchers have also looked at the socio-economic and demographic variables that are expected to influence the development of an individual's or community's level of social capital. For example, the Department of Transport and Regional Services (DOTARS): Bureau of Transport

and Regional Economics (BTRE) (2005) used the ABS (2004) framework and data from the 2002 GSS and the Household Income and Labour Dynamics in Australia (HILDA) survey to analyse social capital in Australia. The authors used Ordinary Least Squares (OLS) and logistic regression techniques to model individual indicators of social capital against a set of socio-economic and demographic variables. Although they found that these characteristics made a statistically significant contribution to explaining variation in the different social capital indicators, the great majority of variation was still left unexplained.

More recently, Berry, Rodgers and Dear (2007) conducted a postal survey in NSW that aimed to capture sixteen measures of community participation. Fourteen types of participation were identified by exploratory factor analysis, and there were significant differences when analysed by sex. Of these, nine types of community participation were found to be strongly associated with their validation measure of general psychological distress. Two types were related to high levels of distress (expressing opinions publicly; political protest). Increased participation in the remaining seven types were related to lower levels of distress (contact with immediate household, extended family, friends, and neighbours; participating in organised community activities; taking an active interest in current affairs; and religious observance). Once again, however, after accounting for socio-economic factors, these measures explained only 8% of the variance in participants' distress.

The second strand of quantitative research (comprising the bulk of the literature) relates to the outcomes of social capital. While based on theoretical arguments that suggest social capital directly influences other aspects of well-being, it is important to keep in mind that there is a high likelihood of multi-directional causality with aspects of well-being also influencing social capital. The reliance on cross-sectional data makes it difficult, if not impossible, to separate these endogenous relationships. This issue aside, the outcomes of social capital have been analysed at the micro level (between individuals), the meso level (groups, neighbourhoods, communities) and the macro level (society, country). Macro level studies often use aggregate level data (being aggregations of individual level data) to proxy a macro level measure.

Knack and Keefer (1997) undertook a study at an aggregate level where measures of social capital for a set of communities or countries were tested against other aspects of well-being. They looked at the relationship between measures of social capital and a number of socio-economic variables across 29 countries (including Australia). They found evidence of positive association between measures of trust with income and education levels.

At the individual or micro-level, measures of well-being have been tested against either individual measures of social capital (for example, Berkman and Glass, 2000) or measures of social capital in the area in which a person lives (for example, Leigh,

2006). A large proportion of this literature focuses on the relationship between social capital and health. Islam *et al.* (2006) reviewed international empirical literature on this association including three Australian studies (Siahpush and Singh, 1999; Chaves, Kemp and Harris, 2004; Ziersch *et al.*, 2005). The Australian studies were found to generally indicate weak associations between social capital and health outcomes, with mixed results and a limited set of social capital variables.

Egan *et al.* (2008) reviewed the (mainly North American) epidemiological literature to explore themes of 'psychosocial' factors that may potentially affect health outcomes. They found evidence of high (low) psychosocial factors linked to better (poorer) health outcomes, though the more robust studies did not always support these findings. There were some examples of negative association. They also found limitations in the measurement of social capital. For example, they found differences across the literature in the definition of 'psychosocial', particularly at the individual level. They recommended further research on variables measuring control, autonomy and empowerment within both households and communities; and recommended more group comparisons by characteristics such as sex, age, education, income and ethnicity.

It is clear that improved measures of social capital, a better understanding of the relationships between these measures, and a better understanding of the relationship of these measures with various demographic groups and aspects of well-being would be greatly beneficial to the social capital debate.

2.3 The measurement of social capital and the scope of this paper

As highlighted in the literature, there are many issues that need to be considered when investigating possible measures of social capital. While a discussion of the use of the concept of capital is beyond the scope of this paper, it is nonetheless important to outline a number of the difficulties in measuring social capital.

The OECD (2001) stipulates that measures of social capital should be:

• As comprehensive as possible in their coverage of key dimensions; and

• Balanced between attitudinal or subjective elements on the one hand and behavioural aspects on the other.

This need to capture attitudinal or subjective elements highlights one of the main difficulties of using the concept of capital to capture the effects of networks, norms and other social relationships. As is made clear in the ABS (2004) framework, social capital depends on a number of underlying psychological and sociological relations that are often difficult to quantify.

In creating and using measures of social capital, it is important to keep in mind three issues. First, as mentioned previously, social capital is endogenous and the direction of causality with other aspects of well-being is difficult to establish. High levels of social capital might lead to high levels of well-being, however it is also plausible that the effect may also run in the opposite direction. Second, social capital formation is a diachronic or ongoing process which individuals and communities contribute to or draw upon. With the available data, it is currently only possible to identify the activities associated with social capital formation. It is difficult to quantify the additional social capital that is associated with a particular action and even more difficult to quantify the stock of social capital that is being added to. Finally, social capital is contextual, with associations likely to be dependent on the characteristics of the country, community, group and individuals involved.

Given the difficulties in measuring social capital, the scope of the research presented in this paper is restrained in a number of ways. Firstly, no attempt is made to quantify the level of social capital in Australia in monetary or other terms. Rather, the focus will be on relative measures of social capital and how they vary across the population. Secondly, there is no structural analysis of the factors that determine whether or not a person has low or high levels of social capital and the elements that social capital might influence. Finally, the measures of social capital are restricted to those that come from, or can be derived from, the 2006 GSS. As this is an individual level dataset, area level factors are not considered in this paper.

3. THE 2006 GENERAL SOCIAL SURVEY

The 2006 General Social Survey (GSS) collected information from 13,670 private dwellings. Information was obtained across a range of topics covering various aspects of people's social and economic lives. By collecting data from such a range of areas of social interest, the GSS allows researchers to connect information in ways not generally possible in more targeted collections. This is likely to be of particular use in developing broad-based social policy that is not restricted to one aspect of a person's life. The following table summarises the topics covered in the 2006 GSS.

3.1 Topics covered in the 2006 General Social Survey

Demographics	Employment	Income and financial stress	Language and mobility
Transport	Health	Accessing service providers	Family and community
Voluntary work	Crime	Culture/ leisure activities and sports	Information technology
Education	Social capital	Housing, assets and liabilities	Visa status

Source: ABS (2007)

3.1 Collection methodology and scope of the survey

For the 2006 GSS, information was collected from one person aged 18 years and over in selected households. Information was only collected from randomly selected usual residents of private dwellings, with those usual residents in non-private dwellings like hotels, motels, hostels, hospitals and short-stay caravan parks excluded. As of June 2006, there were 376,000 or 2% of the population aged 18 years and over in non-private dwellings (ABS, 2007).

The survey was conducted in urban and rural area in all states and territories. However, the survey was not carried out in very remote Australia. For all the states and territories apart from Northern Territory, very remote Australia represents a small proportion of the population (around 2% or less). However, in the Northern Territory, this figure is closer to 20%.

Given the relatively low percentages of the excluded population, it is likely that national level estimates presented in this paper are broadly representative of the total population. However, the exclusions should always be kept in mind when interpreting results as there is the possibility that some population subgroups may be particularly concentrated in the excluded population. This includes Aboriginal and Torres Strait Islander Australians, those employed in particular industries, and potentially other groups not usually resident in private dwellings.

The 2006 GSS was collected using Computer Assisted Interviewing (CAI) by trained ABS interviewers. In addition to the person-level questions, if the randomly selected person in the household lived with one or both of their parents, then a parent may also have been asked for information reported at the household level. Furthermore, if a person was unable to answer questions because of old age, illness, intellectual disability or difficulty with the English language, then a person assisting them or an interpreter may have been used.

Where applicable, the analysis presented in this paper uses person level weights to make inferences about the total population. The first step in calculating these weights for each person was to assign an initial weight, equal to the inverse probability of being selected in the survey. These initial weights are then calibrated to align with independent estimates of the population, referred to as benchmarks. The survey was benchmarked to the Estimated Resident Population (ERP) aged 18 years and over in the scope of the survey as of June 2006. These ERPs were based on the 2001 Census and calculated using the following variables:

- State or territory of usual residence;

- Area of usual residence (metropolitan and non-metropolitan);

- Age of the person; and

- Sex of the person.

For more information on the 2006 GSS, including non-response rates, data processing and data dissemination, see ABS (2007).

3.2 Social capital variables in the GSS

The 2006 GSS is the second such survey and follows the 2002 GSS. In addition to content repeated from the 2002 GSS, the 2006 GSS cycle included questions on housing, mobility, barriers to education/training, whether work allows for family and community responsibilities, duration of unemployment and unpaid work, travel time to work, accessing service providers, support for family members living outside the household and visa status.

The most important addition to the 2006 GSS from the point of view of this paper is the module on social capital. A full list of the variables in the 2006 GSS social capital module is in Appendix A. The variables are grouped into a few broad dimensions in the data item list as outlined below:

- Network qualities (trust, efficacy, active involvement in groups, friendship);
- Network structure;
- Network transactions; and
- Network type.

While the variables collected as part of the social capital module make up a large proportion of those analysed in this paper, other data items in the survey are also related to social capital. These were also included in the initial list of variables that were analysed in the remainder of this paper.

4. THE INCIDENCE OF AND ASSOCIATIONS BETWEEN
THE SOCIAL CAPITAL ITEMS

Because a large number of the variables in the 2006 GSS have not been collected before, or at least not concurrently, in a large scale national survey, the first step in the analysis is to obtain a descriptive understanding of individual measures of social capital, as well as the interactions between them.

The analysis begins by examining the proportion of the total population who reported each of the social capital items used in the remainder of the paper. The next step will be to see how the incidence varies by a few key demographic variables. The final part of the analysis in this section looks at the interactions between social capital items.

The main objective of this section is to obtain a descriptive understanding of individual measures of social capital. This will serve as a basis for the statistical analysis presented in the remainder of the paper.

4.1 Incidence of social capital data items for the total population and by subgroup

In addition to the incidence for the total population, the subgroup comparisons made in this section are as follows:

- Males compared to females;

- Four age groups, each representing roughly 25% of the population in scope (aged 18 to 29 years, aged 30 to 44 years, aged 45 to 59 years and aged 60 years and over);

- Internal migration or the length of time the person has spent in their current dwelling (five years or more, one to four years and less than one year);

- Country of birth (Australia and overseas); and

- Area of usual residence (regional / remote areas [1] and major cities).

The results are presented across six tables where tables 4.1(a), 4.2(a) and 4.3(a) give values for the total population, by sex and by age, whereas tables 4.1(b), 4.2(b) and 4.3(b) give values by internal migration, country of birth and area of usual residence.

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1   Very remote Australia was beyond the scope of the 2006 General Social Survey.

More specifically:

- Tables 4.1(a) and 4.1(b) report the incidence of trust and feelings of safety;

- Tables 4.2(a) and 4.2(b) consider whether people feel they are able to have a say on important issues, the frequency of contact and the proportion of friends who have a number of characteristics; and

- Tables 4.3(a) and 4.3(b) examine whether individuals report a number of other social capital data items.

In order to construct measures of low social capital it is often necessary to convert the social capital variables from categorical to binary outcomes. In order to create these binary variables, however, cut-offs need to be chosen. To do this, a number of decisions need to be made, as explained by way of the following three examples.

For the question on whether people agree that in general people can be trusted, there are five categories (strongly agree, somewhat agree, neither agree or disagree, somewhat disagree or strongly disagree). In turning this particular categorical variable into a binary variable, two related decisions need to be made. First, should the binary variable measure low or high values of social capital and second, what should be done with the middle neutral category? Given much of the research literature and policy focus is on the relationship between low social capital and poor outcomes (low health, being unemployed, etc.) for this paper, binary variables are constructed to measure low social capital. Hence the neutral category is grouped with the high social capital categories.

A second potential data issue arises in that rather than having a linear contribution to social capital, it may be that extreme values indicate low social capital (or social capital that has negative outcomes). An example might be the proportion of a person's friends who are of a similar age to the respondent, where having a very low proportion of friends might indicate an absence of bonding social capital whereas a very high proportion of friends might indicate an absence of bridging social capital. For the variables where this may be an issue, sensitivity tests are undertaken to see which of the categories are the most robust measures of low social capital.

The final issue with turning categorical variables into binary outcomes is that some of the categories indicate an absence of information. For example, for the questions on feelings of safety, there are options for those who never walk alone after dark or who were never at home alone either during the day or after dark. While these and similar categories have some information, it is not readily incorporated into a binary variable. The few people who report these categories are excluded from the analysis presented in Sections 5 and 6.

Based on the above criteria, those categories marked with an * in tables 4.1 and 4.2 are those used as the measures of low social capital in the remainder of the analysis (as presented in Sections 5 and 6), and those categories marked with a + are excluded from this remaining analysis.

Only those differences that were statistically significant[2] are discussed in this section of the paper with standard errors that correspond to the following tables given in tables C.1(a) to C.3(b) in Appendix C of this paper. ABS (2007) has more information on the calculation of standard errors for the 2006 GSS. We also do not control for other characteristics of the individual when making comparisons between groups, either through age standardisation or a multiple regression style approach. Such analysis is left for future research outputs.

The first column of numbers in table 4.1(a) gives the incidence of two types of social capital variables: trust and feelings of safety. The next two columns give the incidence of these two sets of variables separately for males and females. The final four columns give the incidence by age. The proportions of the population by age and sex are given in the final line of the table.

For the 'Generalised trust' variable, table 4.1(a) shows that the majority of the population either 'Somewhat or strongly agree' that 'most people can be trusted'. This does not vary significantly between males and females or across the four age groups. A higher proportion of the population, however, agree that doctors, police in the local area and, to a lesser extent, police outside the local area and hospitals can be trusted.

Focussing on those who either 'Strongly or somewhat disagree' that these institutions can be trusted (being the category used in the remainder of the paper to measure low social capital) there are significant differences between males and females and by age in these other four measures of trust. For example, a significantly higher proportion of males 'Strongly or somewhat disagree' that police inside and outside the local area can be trusted. The proportion of the population who disagree that hospitals can be trusted follows a non-linear pattern. That is, 45 to 59 year olds are significantly more likely to disagree than 30 to 44 year olds, who are in turn significantly more likely to disagree than 18 to 29 year olds. However, those in the 60 plus age group are significantly less likely to disagree that hospitals can be trusted than those in the two middle age groups.

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2 The term 'significant' is used throughout this paper to mean 'statistically significant' (at the 5% level unless stated otherwise).

The second set of variables in table 4.1(a) are for the proportion of the population who feel safe: walking alone in the local area after dark; at home during the day; and at home after dark. Not surprisingly, a larger proportion of the total population feel safe at home than they do walking alone in the local area after dark.

Once again, focussing on the category used in the remainder of the analysis for low social capital ('Unsafe or very unsafe'), there are significant differences between males and females and by age, especially for the first feelings of safety variable. The proportion of females who feel either 'Unsafe or very unsafe' walking alone after dark is roughly three times as high as the proportion of males. Interestingly, the 60 plus age group is significantly less likely to feel 'Unsafe or very unsafe' than the younger age groups. However, this is because almost half of the 60 plus age group 'Never walk alone after dark'. When those who 'Never walk alone after dark' are excluded, a higher proportion of the older age group feel 'Unsafe or very unsafe'.

Table 4.1(b) reports the incidence of the same two sets of variables by: the length of time the person has spent in their current dwelling; their country of birth (Australia or overseas); and whether they live in a regional area or a major city.

In terms of the trust variables, those who were born overseas are significantly more likely to 'Strongly or somewhat disagree' that most people can be trusted, than those who were born in Australia. Those born overseas are less likely to 'Strongly or somewhat agree' that police can be trusted. However, because they are also more likely to 'Neither agree or disagree', the 'Strongly or somewhat disagree' incidence is not significantly different. That is, the proportion of people born overseas who 'Strongly or somewhat disagree' that police can be trusted, is similar to the proportion of those born in Australia.

In terms of the feelings of safety variables, those who have lived in their current dwelling for five or more years are significantly more likely to 'Never walk alone after dark' in the local area. This could be because those who have been in their dwelling for a longer period of time were more likely to be in older age groups who, as shown in table 4.1(a), are also more likely to 'Never walk alone after dark'. Those who were born overseas are slightly (though still significantly) more likely to feel 'Unsafe or very unsafe' at home, both during the day and after dark, than those born in Australia. Finally, those who live in major cities are significantly more likely to feel 'Unsafe or very unsafe' than the rest of the Australian population for 'walking alone in the local area after dark' and being 'at home alone after dark'.

4.1(a) Incidence of trust and feelings of safety – Proportion of the Total population; the proportion of people within sex and age groups

		Sex		Age (years)			
	Total	Male	Female	18 to 29	30 to 44	45 to 59	60 plus
Generalised trust							
Strongly or somewhat agree	0.54	0.53	0.55	0.52	0.53	0.56	0.56
Neither agree or disagree	0.16	0.16	0.16	0.18	0.16	0.15	0.15
Strongly or somewhat disagree*	0.30	0.31	0.29	0.30	0.32	0.29	0.29
Trust in doctor							
Strongly or somewhat agree	0.88	0.87	0.90	0.85	0.87	0.89	0.92
Neither agree or disagree	0.06	0.07	0.05	0.08	0.07	0.05	0.04
Strongly or somewhat disagree*	0.04	0.05	0.03	0.04	0.04	0.04	0.03
Does not have a doctor+	0.02	0.02	0.01	0.03	0.02	0.01	0.01
Trust in hospital							
Strongly or somewhat agree	0.69	0.68	0.69	0.72	0.67	0.64	0.72
Neither agree or disagree	0.15	0.16	0.14	0.15	0.17	0.15	0.14
Strongly or somewhat disagree*	0.16	0.15	0.17	0.13	0.16	0.21	0.14
Trust in police in local area							
Strongly or somewhat agree	0.76	0.74	0.78	0.75	0.78	0.77	0.74
Neither agree or disagree	0.15	0.16	0.15	0.14	0.14	0.15	0.19
Strongly or somewhat disagree*	0.09	0.11	0.07	0.11	0.08	0.09	0.06
Trust in police outside local area							
Strongly or somewhat agree	0.66	0.64	0.67	0.67	0.69	0.65	0.62
Neither agree or disagree	0.25	0.24	0.26	0.22	0.22	0.25	0.31
Strongly or somewhat disagree*	0.09	0.12	0.07	0.11	0.09	0.10	0.07
Feelings of safety walking alone in local area after dark							
Very safe or safe	0.48	0.67	0.28	0.53	0.54	0.52	0.31
Neither safe or unsafe	0.13	0.12	0.13	0.16	0.14	0.12	0.08
Unsafe or very unsafe*	0.18	0.09	0.27	0.21	0.19	0.18	0.14
Never walk alone after dark+	0.22	0.11	0.32	0.10	0.14	0.18	0.46
Feelings of safety at home alone during the day							
Very safe or safe	0.95	0.97	0.93	0.95	0.96	0.95	0.94
Neither safe or unsafe	0.03	0.02	0.04	0.03	0.02	0.03	0.03
Unsafe or very unsafe*	0.02	0.01	0.03	0.02	0.01	0.02	0.02
Never home alone during the day+	0.01	0.01	0.01	0.00	0.01	0.01	0.01
Feelings of safety at home alone after dark							
Very safe or safe	0.86	0.94	0.78	0.84	0.87	0.87	0.85
Neither safe or unsafe	0.06	0.03	0.09	0.08	0.07	0.05	0.06
Unsafe or very unsafe*	0.07	0.02	0.11	0.08	0.06	0.07	0.07
Never home alone after dark+	0.01	0.01	0.02	0.00	0.01	0.01	0.02
Population	1.00	0.49	0.51	0.22	0.29	0.27	0.23

Note: Those categories marked with a * are used as the measures of low social capital in Section 6. Those marked with a + are excluded from the remainder of the analysis. Standard errors are presented in Appendix C.

4.1(b) Incidence of trust and feelings of safety – Proportion of people by time in dwelling, country of birth and remoteness

	Time in dwelling (years)			Country of birth		Remoteness	
	5 or more	1 to 4	1 or less	Australia	Overseas	Regional/ Remote	Major city
Generalised trust							
Strongly or somewhat agree	0.55	0.53	0.51	0.56	0.49	0.56	0.53
Neither agree or disagree	0.16	0.15	0.17	0.14	0.19	0.14	0.16
Strongly or somewhat disagree*	0.29	0.31	0.33	0.29	0.32	0.30	0.30
Trust in doctor							
Strongly or somewhat agree	0.90	0.87	0.84	0.89	0.87	0.88	0.89
Neither agree or disagree	0.05	0.06	0.08	0.06	0.07	0.07	0.06
Strongly or somewhat disagree*	0.03	0.05	0.05	0.04	0.04	0.04	0.04
Does not have a doctor+	0.01	0.02	0.03	0.01	0.02	0.01	0.02
Trust in hospital							
Strongly or somewhat agree	0.69	0.68	0.67	0.69	0.68	0.67	0.69
Neither agree or disagree	0.15	0.16	0.17	0.15	0.17	0.16	0.15
Strongly or somewhat disagree*	0.16	0.16	0.16	0.16	0.15	0.17	0.16
Trust in police in local area							
Strongly or somewhat agree	0.77	0.75	0.72	0.77	0.72	0.78	0.75
Neither agree or disagree	0.15	0.16	0.17	0.14	0.19	0.13	0.17
Strongly or somewhat disagree*	0.08	0.09	0.11	0.09	0.09	0.09	0.08
Trust in police outside local area							
Strongly or somewhat agree	0.66	0.67	0.63	0.67	0.63	0.64	0.66
Neither agree or disagree	0.25	0.23	0.26	0.24	0.27	0.26	0.25
Strongly or somewhat disagree*	0.08	0.10	0.11	0.09	0.10	0.10	0.09
Feelings of safety walking alone in local area after dark							
Very safe or safe	0.45	0.52	0.50	0.49	0.45	0.53	0.45
Neither safe or unsafe	0.12	0.12	0.15	0.13	0.12	0.11	0.13
Unsafe or very unsafe*	0.17	0.18	0.20	0.18	0.19	0.14	0.20
Never walk alone after dark+	0.26	0.17	0.15	0.21	0.24	0.22	0.22
Feelings of safety at home alone during the day							
Very safe or safe	0.95	0.96	0.94	0.96	0.93	0.97	0.94
Neither safe or unsafe	0.03	0.03	0.04	0.02	0.04	0.02	0.03
Unsafe or very unsafe*	0.02	0.01	0.02	0.01	0.03	0.01	0.02
Never home alone during the day+	0.01	0.00	0.01	0.00	0.01	0.00	0.01
Feelings of safety at home alone after dark							
Very safe or safe	0.86	0.86	0.84	0.87	0.82	0.89	0.84
Neither safe or unsafe	0.06	0.07	0.08	0.06	0.07	0.05	0.07
Unsafe or very unsafe*	0.07	0.06	0.08	0.06	0.09	0.05	0.08
Never home alone after dark+	0.01	0.01	0.01	0.01	0.02	0.01	0.01
Population	0.57	0.27	0.16	0.72	0.28	0.32	0.68

Note: Those categories marked with a * are used as the measures of low social capital in Section 6. Those marked with a + are excluded from the remainder of the analysis. Standard errors are presented in Appendix C.

Table 4.2(a) reports on the incidence of a further three sets of social capital variables; again, first for the total population, and then by sex and age group. The first set of variables measures whether a person feels able to have a say on important issues, both with family and friends, and within the community. The second set of variables measures the frequency of contact with ex-household family and friends. Individuals are asked about three types of contact: face-to-face contact; other contact (telephone, e-mail and SMS); and Internet or SMS contact (which is a subset of other contact). The final set of variables shows the proportion of a person's friends who are of a similar age, of the same ethnic background, or of roughly the same level of education.

Similar to tables 4.1(a) and 4.1(b), the categories marked with a * in the following table are those that are used as the indicator of low social capital and those marked with a + are excluded from the analysis. It should be noted that for the final set of social capital variables showing the proportion of a person's friends with similar characteristics, the categories used to capture low social capital are the more extreme values; that is, those with a very high proportion of friends with similar characteristics as themselves ('All'), and those where few or none do ('Few', 'None').

The first column in table 4.2(a) shows that the vast majority of the total Australian population feels that they are able to have a say with family and friends on important issues 'All or most of the time'. This figure is reasonably constant across males and females and across age groups. A much lower proportion, however, feel that they are able to have a say within the community 'All or most of the time'. This figure increases significantly beyond the second age group.

The proportion of the population who have infrequent contact ('Monthly or every three months' and 'No recent contact') with ex-household family and friends is reasonably low (0.21) for face-to-face contact, and lower still for other forms of contact (around 0.07). For both types of contact, males are significantly less likely to have had daily or weekly contact, as are those in the older age groups. Over one-third of the population have had no recent Internet or SMS contact, concentrated amongst those in the older age groups.

The final set of social capital variables in table 4.2(a) are for a person's network type, or the proportion of their friends who have similar characteristics to themselves. For all three types of characteristics, the majority of the population has 'Most or about half' of their friends with the same characteristics as themselves. The size of this majority is highest for the proportion of friends of a similar age and lowest for the proportion of friends of the same ethnic background.

There are few substantial differences in these network type proportions between males and females, with the one exception being that more females have 'All' of their friends with the same ethnic background. There are, however, a number of differences across the age groups. There is a non-linear distribution by age in the

proportion of the population with 'All' of their friends being of the same age. That is, those aged '18 to 29' have a significantly higher proportion than those aged '30 to 44', whereas those aged '60 plus' also have a significantly higher proportion than those aged '45 to 59'. A similar non-linear pattern is found for the proportion of a person's friends of a similar level of education. However, for the other network type variable, the proportion of people who say 'All' their friends are of the same ethnic background increases reasonably consistently across the age groups, with the '18 to 29' group having the lowest proportion.

Table 4.2(b) reports the incidence of the same three sets of social capital variables across a person's time in their current dwelling, country of birth and whether they live in a regional area or major city.

Those born overseas were less likely to feel that they were able to have a say, both with family and friends and within the community 'All or most of the time'. For the community variable, this was mainly because more people born overseas felt they were able to have a say 'None of the time', as opposed to 'Some or a little of the time'. There were no significant differences in these two social capital measures by length of time in a dwelling or remoteness.

Those who were born overseas were less likely to have 'Daily or weekly contact' with ex-household family and friends than those who were born in Australia; whereas it is only when it comes to Internet or SMS contact that there are substantial differences by time in dwelling and remoteness.

There are some differences in a person's reported network type (proportion of friends with similar characteristics) across the length of time in their current dwelling. For example, those who have lived in the same dwelling for '5 or more' years are more likely to report that 'All' their friends are of a similar age to themselves, compared to those who have moved recently. However, there are larger and more significant differences by country of birth and remoteness. Those who were born overseas are much less likely to report that 'All' their friends are of the same ethnic background as themselves, and less likely to report that 'Few or none' are. In addition, those who live in a 'Regional/Remote' area are more likely to report 'All' their friends are of the same ethnic background as themselves.

4.2(a) Incidence of sense of efficacy, frequency of contact and network type – Proportion of the Total population; the proportion of people within sex and age groups

		Sex		Age			
	Total	Male	Female	18 to 29	30 to 44	45 to 59	60 plus
Feels able to have a say with family and friends on important issues							
All or most of the time	0.84	0.83	0.84	0.85	0.85	0.83	0.81
Some or a little of the time*	0.15	0.15	0.15	0.14	0.14	0.15	0.17
None of the time*	0.02	0.02	0.01	0.01	0.01	0.02	0.02
Feels able to have a say within the community on important issues							
All or most of the time	0.29	0.30	0.28	0.26	0.27	0.32	0.31
Some or a little of the time*	0.48	0.47	0.50	0.52	0.52	0.47	0.41
None of the time*	0.23	0.24	0.22	0.22	0.20	0.21	0.29
Frequency of face-to-face contact with ex-household family and friends							
Daily or weekly	0.80	0.77	0.82	0.84	0.80	0.76	0.79
Monthly or every three months*	0.20	0.22	0.18	0.16	0.19	0.23	0.19
No recent contact*	0.01	0.01	0.01	0.00	0.01	0.01	0.01
Frequency of other forms of contact with ex-household family and friends							
Daily or weekly	0.93	0.91	0.95	0.97	0.94	0.91	0.91
Monthly or every three months*	0.05	0.07	0.04	0.02	0.05	0.07	0.07
No recent contact*	0.02	0.02	0.01	0.01	0.01	0.02	0.02
Frequency of Internet or SMS contact with family and friends							
Daily or weekly	0.55	0.53	0.57	0.85	0.65	0.48	0.21
Monthly or every three months*	0.09	0.09	0.08	0.05	0.10	0.12	0.06
No recent contact*	0.36	0.38	0.35	0.11	0.25	0.39	0.73
Proportion of friends of similar age							
All*	0.13	0.12	0.14	0.15	0.09	0.10	0.18
Most or about half	0.71	0.72	0.71	0.72	0.75	0.73	0.64
Few*	0.12	0.12	0.12	0.11	0.12	0.12	0.12
None*	0.02	0.02	0.02	0.01	0.03	0.02	0.03
Don't know or has no friends+	0.02	0.02	0.02	0.01	0.01	0.02	0.03
Proportion of friends of same ethnic background							
All*	0.29	0.27	0.31	0.23	0.24	0.30	0.42
Most or about half	0.53	0.54	0.53	0.57	0.58	0.53	0.42
Few*	0.10	0.11	0.09	0.13	0.11	0.09	0.08
None*	0.06	0.06	0.05	0.06	0.06	0.06	0.04
Don't know or has no friends+	0.02	0.02	0.01	0.01	0.01	0.02	0.03
Proportion of friends with roughly the same level of education							
All*	0.14	0.13	0.15	0.17	0.10	0.12	0.19
Most or about half	0.60	0.60	0.60	0.66	0.66	0.60	0.49
Few*	0.14	0.14	0.13	0.13	0.15	0.15	0.11
None*	0.03	0.03	0.03	0.02	0.03	0.04	0.03
Don't know or has no friends+	0.09	0.09	0.09	0.02	0.06	0.09	0.18

Note: Those categories marked with a * are used as the measures of low social capital in Section 6. Those marked with a + are excluded from the remainder of the analysis. Standard errors are presented in Appendix C.

4.2(b) Incidence of sense of efficacy, frequency of contact and network type – Proportion of people by time in dwelling, country of birth and remoteness

	Time in dwelling (years)			Country of birth		Remoteness	
	5 or more	1 to 4	1 or less	Australia	Overseas	Regional/ Remote	Major city
Feels able to have a say with family and friends on important issues							
All or most of the time	0.83	0.85	0.82	0.85	0.80	0.85	0.83
Some or a little of the time*	0.15	0.14	0.16	0.14	0.18	0.14	0.15
None of the time*	0.02	0.01	0.02	0.02	0.02	0.01	0.02
Feels able to have a say within the community on important issues							
All or most of the time	0.31	0.29	0.24	0.30	0.27	0.30	0.28
Some or a little of the time*	0.46	0.50	0.52	0.49	0.46	0.48	0.48
None of the time*	0.23	0.21	0.24	0.21	0.27	0.21	0.23
Frequency of face-to-face contact with ex-household family and friends							
Daily or weekly	0.80	0.80	0.79	0.81	0.76	0.78	0.80
Monthly or every three months*	0.20	0.20	0.19	0.19	0.22	0.21	0.19
No recent contact*	0.01	0.01	0.02	0.01	0.02	0.01	0.01
Frequency of other forms of contact with ex-household family and friends							
Daily or weekly	0.92	0.95	0.94	0.94	0.91	0.92	0.94
Monthly or every three months*	0.06	0.04	0.05	0.05	0.07	0.07	0.05
No recent contact*	0.02	0.01	0.01	0.01	0.02	0.02	0.02
Frequency of Internet or SMS contact with family and friends							
Daily or weekly	0.46	0.63	0.72	0.57	0.50	0.51	0.57
Monthly or every three months*	0.09	0.10	0.08	0.09	0.09	0.10	0.08
No recent contact*	0.45	0.27	0.20	0.34	0.42	0.39	0.35
Proportion of friends of similar age							
All*	0.14	0.11	0.11	0.12	0.13	0.11	0.13
Most or about half	0.71	0.73	0.72	0.73	0.67	0.72	0.71
Few*	0.11	0.12	0.14	0.11	0.14	0.13	0.11
None*	0.02	0.03	0.02	0.02	0.03	0.02	0.02
Don't know or has no friends+	0.02	0.01	0.01	0.01	0.03	0.01	0.02
Proportion of friends of same ethnic background							
All*	0.31	0.29	0.25	0.33	0.20	0.40	0.24
Most or about half	0.52	0.54	0.56	0.54	0.49	0.48	0.55
Few*	0.10	0.10	0.12	0.07	0.17	0.06	0.12
None*	0.06	0.06	0.06	0.04	0.11	0.04	0.07
Don't know or has no friends+	0.02	0.01	0.01	0.01	0.03	0.01	0.02
Proportion of friends with roughly the same level of education							
All*	0.15	0.13	0.11	0.15	0.13	0.15	0.14
Most or about half	0.58	0.62	0.66	0.62	0.56	0.60	0.60
Few*	0.13	0.15	0.13	0.13	0.16	0.13	0.14
None*	0.03	0.03	0.04	0.03	0.04	0.03	0.03
Don't know or has no friends+	0.11	0.07	0.06	0.08	0.11	0.09	0.09

Note: Those categories marked with a * are used as the measures of low social capital in Section 6. Those marked with a + are excluded from the remainder of the analysis. Standard errors are presented in Appendix C.

The final set of social capital variables analysed in this section are the binary variables measuring aspects of low social capital. Table 4.3(a) presents the incidence of these measures of low social capital for the total population and then by sex and age group.

The first issue to note from table 4.3(a) is that there is a large amount of variation in the incidence for the total population across the binary measures of low social capital. Very few people report that they are 'Unable to ask for small favours', have 'no support in a time of crisis' or had 'No informal social activity in the last 3 months'. On the other hand, three quarters or more of the total population 'Did not provide care to a family member or others', had 'No involvement in governance or citizenship groups', or had 'not been active in a project in the local area'.

There was a statistically significant difference in the incidence of a number of the binary measures of low social capital by sex. Males were more likely to report many of the low social capital variables that relate to providing assistance to others. For example, they were more likely to say that they 'Did not provide work or support to ex-household persons', 'Did not do unpaid voluntary work', 'Did not personally donate money', and 'Did not provide care to family members or others'. The exception to this is that males were slightly less likely (but still significantly different) to say that they have 'not been active in a project in the local area'. Males were also more likely to say that they did not have an ex-household family member or friend that they are close to or can confide in.

There were also a number of differences across the age groups in reporting the binary measures of low social capital. For some of these, the differences were consistent across the age groups. For example, the older age groups were more likely to report that they 'Did not attend a community or sporting event' or that they do 'not have a friend who they are close to or can confide in'. Older age groups were also less likely to say they 'Could not raise $2000 within a week'.

For a number of the binary measures of low social capital, the relationship across the age groups is somewhat non-linear. Compared to the middle two age groups, the oldest and youngest age groups are more likely to report that they 'Did not provide work or support for ex-household family members', 'Did not do unpaid voluntary work', do 'not know someone in an organisation they can ask for information or advice', and had 'No involvement in governance or citizenship groups' or in civic activities. These results have important implications for researchers using age as an explanatory variable in models of a number of social capital variables, in that a linear age effect is unlikely to be appropriate.

Table 4.3(b) in this section reports the incidence of these binary measures of social capital by length of time in a person's current dwelling, their country of birth and whether they live in a regional area or a major city.

Where there are statistically significant differences, those who have only lived in their current dwelling for '1 or less' years are more likely to report these binary measures of low social capital than those who have been in their dwelling for a longer period of time. This was not the case, however, when comparing those who have lived in the area for '1 to 4' years as opposed to '5 or more' years. Those in the former category were more likely to say that they 'Could not raise $2000 within a week', 'Did not provide care to a family member or others' and had 'No involvement with a social or support group in the last 12 months'. For the other measures of low social capital where there was a significant difference, however, those who had been in the area for '1 to 4' years had a lower incidence than those who had been there for '5 or more' years.

For the majority of the binary low social capital variables, there was a statistically significant difference between those who were born in 'Australia' compared to those born 'Overseas', and/or between those who live in 'Regional/Rural' areas compared to 'Major cities'. Furthermore, the direction of the differences are very consistent. For all the variables where there is a significant difference, those who were born 'Overseas' have a higher reported incidence than those born in 'Australia', and those in 'Major cities' have a higher reported incidence than those who live in a 'Regional/Rural' area.

4.3(a) Binary measures of low social capital – Proportion of the Total population; the proportion of people within sex and age groups

		Sex		Age			
	Total	Male	Female	18 to 29	30 to 44	45 to 59	60 plus
Unable to ask for small favours	0.07	0.07	0.07	0.06	0.06	0.08	0.08
Has no support in a time of crisis	0.07	0.08	0.06	0.04	0.05	0.08	0.09
Could not raise $2000 within a week	0.13	0.12	0.15	0.18	0.13	0.12	0.10
Did not provide work or support for ex-household persons in the last 4 weeks	0.51	0.56	0.46	0.53	0.48	0.47	0.57
Did not do unpaid voluntary work in the last 12 months	0.64	0.67	0.62	0.69	0.59	0.62	0.71
Did not personally donate any money in the last 12 months	0.23	0.27	0.19	0.34	0.21	0.18	0.21
Did not provide care to family member or others in the last 4 weeks	0.80	0.83	0.77	0.89	0.84	0.70	0.77
Does not know someone in an organisation for information and advice	0.28	0.28	0.29	0.32	0.26	0.25	0.32
No informal social activities in the last 3 months	0.04	0.04	0.04	0.02	0.03	0.04	0.07
No involvement in social or support group in the last 12 months	0.37	0.38	0.37	0.38	0.37	0.37	0.38
Did not attend a community event in the past 6 months	0.36	0.39	0.33	0.32	0.30	0.35	0.46
Did not attend a sporting event in the last 12 months	0.48	0.40	0.55	0.32	0.42	0.48	0.70
No involvement in governance or citizenship group in the last 12 months	0.81	0.80	0.83	0.86	0.81	0.76	0.84
No involvement in civic activity in the last 12 months	0.55	0.58	0.52	0.62	0.53	0.48	0.60
Has not been active in project in the local area	0.76	0.74	0.77	0.83	0.77	0.70	0.74
Does not have an ex-household family member they are close to and can confide in	0.12	0.14	0.09	0.12	0.12	0.14	0.09
Does not have a friend who they are close to and can confide in	0.13	0.16	0.11	0.08	0.11	0.14	0.21

Note: Standard errors are presented in Appendix C.

4.3(b) Binary measures of low social capital – Proportion of people by time in dwelling, country of birth and remoteness

	Time in dwelling (years)			Country of birth		Remoteness	
	5 or more	1 to 4	1 or less	Australia	Overseas	Regional/ Remote	Major city
Unable to ask for small favours	0.07	0.06	0.09	0.06	0.10	0.07	0.07
Has no support in a time of crisis	0.07	0.05	0.08	0.05	0.11	0.06	0.07
Could not raise $2000 within a week	0.11	0.14	0.20	0.12	0.16	0.12	0.14
Did not provide work or support for ex-household persons in the last 4 weeks	0.52	0.49	0.50	0.49	0.56	0.49	0.52
Did not do unpaid voluntary work in the last 12 months	0.63	0.65	0.67	0.62	0.70	0.60	0.67
Did not personally donate any money in the last 12 months	0.22	0.23	0.27	0.23	0.24	0.24	0.23
Did not provide care to family member or others in the last 4 weeks	0.77	0.82	0.86	0.79	0.82	0.79	0.80
Does not know someone in an organisation for information and advice	0.28	0.28	0.30	0.26	0.34	0.26	0.30
No informal social activities in the last 3 months	0.05	0.03	0.04	0.03	0.06	0.03	0.04
No involvement in social or support group in the last 12 months	0.36	0.39	0.40	0.37	0.39	0.37	0.37
Did not attend a community event in the past 6 months	0.38	0.31	0.35	0.34	0.39	0.32	0.38
Did not attend a sporting event in the last 12 months	0.51	0.44	0.42	0.43	0.62	0.46	0.49
No involvement in governance or citizenship group in the last 12 months	0.83	0.78	0.82	0.80	0.84	0.81	0.82
No involvement in civic activity in the last 12 months	0.56	0.53	0.57	0.51	0.66	0.50	0.58
Has not been active in project in the local area	0.74	0.76	0.79	0.73	0.82	0.67	0.79
Does not have an ex-household family member they are close to and can confide in	0.12	0.09	0.13	0.10	0.16	0.10	0.12
Does not have a friend who they are close to and can confide in	0.15	0.10	0.12	0.11	0.19	0.11	0.14

Note: Standard errors are presented in Appendix C.

4.2 Association between measures of social capital

The previous part of Section 4 looked at the incidence of a number of GSS social capital variables at the population level, as well as by certain population subgroups. While all of these variables are likely to capture unique aspects of social capital, a number of them are also likely to be associated with each other. For example, those who report low levels of generalised trust may also report low levels of trust in specific institutions. To understand measures of social capital in the GSS, it is important to know which variables are associated with each other and how strong the associations are.

In the remainder of Section 4, the associations between the social capital data items are measured through their bivariate correlations. One of the potential issues with looking at the relationships between social capital data items in such a way is that they are, for the most part, collected as binary or categorical variables. With such variables, standard correlation matrices are not appropriate as Pearson's ρ will be biased towards zero (Rigdon and Ferguson, Jr., 1991). Because of this, correlations are estimated using polychoric or tetrachoric correlations. [3]

The full correlation matrix is given in table B.1 in Appendix B. It is beyond the scope of this paper to discuss the correlation matrix in full as there are 528 non-unitary elements and the factor analysis presented in the next section summarises the relationships. However, there are a number of variables that have been used as proxies of social capital by other authors and/or were discussed in ABS (2006) based on the 2002 GSS or other collections. It is worth considering the correlations between these variables and other social capital variables in the 2006 GSS in order to see how previous conclusions may have varied with the wider range of information available in the 2006 GSS. The following table focuses on eleven of these variables marked: 1, 6, 12, 21, 22, 27, 28, 30, 31, 32 and 33 in the first column.

The 'Level of generalised trust' variable was correlated weakly with measures of low social capital except for the institutional trust variables. This is an important finding as other authors (for example, Leigh, 2006) used generalised trust as a proxy for social capital. However, these results suggest that trust does not capture all of the aspects of social capital.

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3   Tetrachoric correlations are a special case of polychoric correlations when two binary variables are being compared giving four (tetra) possible combinations of the two variables as opposed to multiple possible combinations. For more details see Appendix B.

4.4 Polychoric / tetrachoric correlations between selected social capital variables

	1	6	12	21	22	27	28	30	31	32	33
1 Level of generalised trust		0.133	0.221	0.052	0.027	0.187	0.195	0.022	0.100	0.104	0.022
2 Level of trust in institutions – doctor	0.362	0.035	0.092	0.055	0.025	0.156	0.148	0.024	0.046	0.113	0.058
3 Level of trust in institutions – hospitals	0.357	0.090	0.071	0.033	0.004	0.091	0.097	−0.071	0.002	0.006	−0.049
4 Level of trust in institutions – police in local area	0.360	0.084	0.126	0.020	0.031	0.125	0.154	−0.005	0.092	0.099	0.006
5 Level of trust in institutions – police outside local area	0.366	0.060	0.144	0.023	0.031	0.120	0.137	0.002	0.074	0.069	−0.015
6 Feelings of safety walking alone in local area after dark	0.133		0.101	0.003	−0.028	0.060	0.042	−0.041	0.045	−0.028	−0.046
7 Feelings of safety at home alone during day	0.178	0.618	0.255	0.029	0.052	0.206	0.175	0.055	0.130	0.085	0.004
8 Feelings of safety at home alone after dark	0.158	0.726	0.216	0.023	0.005	0.166	0.131	−0.001	0.081	0.031	−0.001
9 Feels able to have a say with family and friends on important issues	0.102	0.094	0.244	0.137	0.167	0.199	0.252	0.042	0.074	0.108	−0.025
10 Feels able to have a say within community on important issues	0.151	0.154	0.262	0.097	0.124	0.177	0.211	0.067	0.188	0.138	0.054
11 Does not know someone in an organisation for information and advice	0.157	0.087	0.408	0.119	0.139	0.287	0.373	0.265	0.400	0.320	0.174
12 No social activities in the last 3 months	0.221	0.101		0.332	0.386	0.463	0.438	0.303	0.399	0.287	0.038
13 No involvement in social or support group in the last 12 months	0.137	0.034	0.420	0.118	0.148	0.220	0.254	0.279	0.549	0.300	0.135
14 Did not attend a community event in the past 6 months	0.151	0.088	0.434	0.172	0.173	0.259	0.275	0.291	0.478	0.280	0.088
15 Did not attend a sporting event in the last 12 months	0.050	0.156	0.424	0.135	0.148	0.249	0.274	0.156	0.177	0.107	−0.024
16 No involvement in governance or citizenship group in the last 12 months	0.092	0.104	0.271	0.025	0.075	0.147	0.195	0.288	0.310	0.295	0.178
17 No involvement in civic activity in the last 12 months	0.077	−0.017	0.328	0.075	0.078	0.171	0.200	0.326	0.362	0.360	0.224
18 Has not been active in a project in the local area	0.089	0.110	0.276	0.078	0.039	0.152	0.182	0.255	0.454	0.264	0.216
19 Does not have an ex-household family member they are close to or can confide in	0.189	−0.030	0.343	0.210	0.228	0.428	0.518	0.190	0.157	0.201	0.030
20 Does not have a friend they are close to or can confide in	0.227	0.091	0.626	0.253	0.302	0.455	0.501	0.212	0.312	0.189	0.009
21 Frequency of face-to-face contact with ex-household family and friends	0.052	0.003	0.332		0.365	0.272	0.282	0.198	0.126	0.086	0.040
22 Frequency of other forms of contact with ex-household family and friends	0.027	−0.028	0.386	0.365		0.218	0.276	0.186	0.096	0.105	0.035
23 Frequency of Internet or SMS contact with ex-household family and friends	0.022	0.024	0.449	0.203	0.655	0.222	0.259	0.148	0.150	0.060	−0.078
24 Proportion of friends of similar age	0.103	0.022	0.315	0.047	0.102	0.139	0.167	−0.039	0.012	−0.001	−0.046
25 Proportion of friends of same ethnic background	0.056	0.033	−0.077	−0.011	−0.047	−0.006	0.002	−0.057	−0.039	−0.058	−0.015
26 Proportion of friends with roughly the same level of education	0.068	0.027	−0.010	0.026	0.020	0.067	0.076	−0.056	−0.036	−0.052	−0.045
27 Unable to ask for small favours	0.187	0.060	0.463	0.272	0.218		0.723	0.300	0.222	0.203	0.062
28 Has no support in a time of crisis	0.195	0.042	0.438	0.282	0.276	0.723		0.259	0.199	0.235	0.047
29 Could not raise $2000 within a week	0.205	0.197	0.355	0.087	0.071	0.346	0.355	0.106	0.167	0.254	0.025
30 Did not provide work or support for ex-household persons in the last 4 weeks	0.022	−0.041	0.303	0.198	0.186	0.300	0.259		0.331	0.261	0.540
31 Did not do unpaid voluntary work in the last 12 months	0.100	0.045	0.399	0.126	0.096	0.222	0.199	0.331		0.270	0.207
32 Did not personally donate money in the last 12 months	0.104	−0.028	0.287	0.086	0.105	0.203	0.235	0.261	0.270		0.170
33 Did not provide care to family member or others in last 4 weeks	0.022	−0.046	0.038	0.040	0.035	0.062	0.047	0.540	0.207	0.170	

Another measure that has been used as a proxy for social capital relate to a person's feelings of safety. The three variables measuring a person's feelings of safety did not have a large correlation with other social capital variables (apart from each other). The two variables measuring safety at home had a only a low level of correlation with 'No social activities in the last 3 months', 'Unable to ask for small favours' and 'Has no support in a time of crisis'.

Compared to the above two variables, reporting 'No social activities in the last 3 months' was found to be correlated with many of the other social capital variables, even though table 4.3(a) showed that the incidence of this variable was reasonably low across the population. This variable was particularly correlated with the variable 'Does not have a friend they are close to or can confide in', and were also correlated with variables that indicated that they did not know someone in an organisation for information or advice, had no involvement in community events, sporting events, civic activity, social or support groups, did no unpaid voluntary work, were unable to ask for small favours, had no support in times of crisis, had no access to emergency funds, had no ex-household family they were close to, and had a relatively low frequency of face-to-face or other contact with family and friends.

Two other variables that have been used as proxies for social capital are 'Unable to ask for small favours' and 'Has no support in a time of crisis'. These variables (alongside 'Could not raise $2000 within a week' for an emergency, which also incorporates access to economic resources), measure how well people feel they are able to draw on small or large support. These variables display a similar correlation structure; they correlated highly with each other, and also with 'No social activities in the last 3 months', and the variables indicating no close confidants.

The following variables can be considered aspects of altruistic behaviour: (not) providing work or support for ex-household persons, (not) providing care, (not) undertaking voluntary work and (not) donating money. However, they displayed limited correlations with each other, and the strongest correlation was between not providing work or support and not providing care. Furthermore, these four variables displayed limited correlations with the other social capital variables, if at all. The strongest correlations were for 'Did not do unpaid voluntary work' (particularly with 'No involvement with social or support groups', 'Did not attend a community event' or 'Has not been active in a project in the local area'); with the two variables 'Did not provide work or support for ex-household persons' and 'Did not personally donate money' typically exhibiting smaller correlations. The variable 'Did not provide care for family members or others' exhibited very little correlation with any variables (except 'Did not provide work or support for ex-household persons').

5. THE DIMENSIONS OF SOCIAL CAPITAL: FACTORS THAT EXPLAIN THE VARIATION

Section 4 showed that although a number of the social capital variables had reasonably large positive correlations with each other, a high proportion of the bivariate correlations were either low or occasionally negative. Such a correlation structure would tend to suggest that, rather than there being one underlying concept of social capital, there may be a set of dimensions of social capital that the measures fall into. Those variables within a particular dimension are likely to have strong positive correlations with each other, but lower correlations with variables in different dimensions.

The analysis presented in this section attempts to identify the dimensions of social capital by estimating whether there is a set of unobserved factors that explain the variation across the social capital items. In Section 5.1, the methods used to estimate the unobserved factors is presented with the results from the analysis presented in Section 5.2. The binary responses marked with an * in table 4.1 and table 4.2 are used in this section. Table D.1 in Appendix D presents an alternative factor analysis using the full set of categories where applicable (i.e. the range of categorical responses from the GSS).

5.1 Method – Common factor analysis

To examine the dimensions of social capital, common factor analysis is used. Unlike a regression style analysis which is used to look at the relationship between one variable of interest (the dependent variable) and a set of observed explanatory variables (the independent variable), factor analysis is used to study the patterns of relationships among many dependent variables (Darlington, 1997). This is done with the aim of identifying the underlying variables that directly affect them, even though these variables are unobserved or not measurable directly. These variables are called factors and the relationship between the observed variables and the underlying factor is given by the factor loadings. Eigenvalues give an indication of the amount of variance explained by that factor. There are three main steps involved in common factor analysis, as summarised in the next section. [4]

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4   There are a number of alternative ways to identify the dimensions of social capital including principal components analysis (PCA), factor analysis, latent class analysis or cluster analysis. While PCA and factor analysis use similar input information, their aims are somewhat different. The focus of PCA is to summarise variation, whereas with factor analysis, the aim is to identify underlying latent or unobserved variables. Conceptually, there is a greater emphasis in cluster analysis on grouping variables, with the primary difference being the way underlying groupings are formed. Typically, PCA and factor analysis use a correlation matrix to derive the groupings, whereas cluster analysis uses a variety of distance measures (degree of difference between one variable and another). The major benefit of PCA or factor analysis over cluster analysis of variables is that in the former, those variables with negative correlations have the potential to be included in the same dimension whereas with cluster analysis they will not (Darlington, 1997). Latent class analysis has the benefit of being specifically designed to deal with categorical variables. However, it is used more as a validation tool and is less well suited to the exploratory nature of this paper.

5.1.1 Creating the correlation matrix

The first step in undertaking any type of factor analysis is to create a correlation matrix of those variables that might potentially be influenced by the underlying factors that the researcher is trying to identify. This correlation matrix forms the basis for the factor analysis with those variables that are highly correlated with each other assumed to be influenced by a common factor.

For the factor analyses presented in this section, the correlation matrix presented in table B.2 is used. However, as Internet / SMS contact is a subset of 'other' contact, only 'other' contact is used in the analysis. In addition, as mentioned at the start of this paper, creating binary measures of low social capital for categorical variables is often problematic. For some categorical variables, the main difficulty is in deciding how the neutral category should be classed. Given much of the research literature and policy focus is on the relationship between social capital and poor outcomes (low health, being unemployed, etc.), for this paper binary variables are constructed to measure low social capital. Hence the neutral category is grouped with the high social capital categories.

For other variables, there is a further difficulty in that there is a non-linear pattern across the categories and the first and last categories measuring the potential for different types of low social capital. This is the case for the three variables for the proportion of a person's friends who are of a similar age, ethnic background or education level. These variables are discussed in more detail in the following section.

5.1.2 Selecting number of factors

Based on these correlation matrices, the next stage of the factor analysis produces a set of eigenvalues for all possible factors. These eigenvalues represent the weighted sum of the squared correlations for each factor with the observed variables. In other words, they represent the amount of variance that each of the unobserved factors or latent variables explains.

To keep the results presentable, informative and parsimonious, it is necessary to restrict the number of retained factors (the maximum number of factors is equal to the number of variables in the correlation matrix). In this paper, to select the number of factors we use a combination of Kaiser's eigenvalue rule (restricting the number of factors to all those with an eigenvalue greater than one), Cattell's scree test (taking into account the difference in the eigenvalues between successive factors), the proportion of unexplained variance, and reference to social capital theory.

5.1.3 Rotating the matrix and interpreting the results

The matrix of factor loadings represent the correlation between the variables and the retained factors. After selecting the number of factors to retain, the next step is to rotate the matrix of factor loadings. Rotation has the benefit of maintaining the proportion of the variance explained by the retained factors whilst allowing for a simpler presentation of the factor loadings. In this instance, simplicity refers to having more zero and near-zero factor loadings with individual variables loading heavily on a single factor only. In effect, the original factors are replaced with a set of linear functions of these factors. We use varimax, orthogonal rotation which keeps the factors uncorrelated with each other.[5]

To interpret the rotated results, all the variables that have a factor loading of 0.4 or higher for a particular factor are assumed to be influenced by that unobserved factor. In other words, they fall into a dimension with all other variables with similarly large factor loadings. Those variables that do not have a factor loading after rotation of 0.4 or higher for any of the retained factors are assumed to have too large an amount of unexplained variance to fit into any of the dimensions. While this is in some ways an arbitrary cut-off, it is one that is often used in the literature (Darlington, 1997). Those variables that are close to, but slightly below this cut-off are discussed in the text.

5.2 Results – Common factor analysis

The results from the factor analysis of the 32 binary measures of low social capital variables are presented in the table 5.1. The variables are ordered by their factor loadings, beginning with those that have a loading of 0.4 or higher for the first factor, then those that have a loading of 0.4 or greater for the second factor and so on. Those variables that are not estimated to be strongly influenced by any of the factors are presented at the bottom of the table. The final column gives the variables' communality. Normally, this would measure the proportion of the variance in that variable that is explained by the common factors (Darlington, 1997), however as this paper uses tetrachoric correlations, it is more accurately described as the proportion of the variance of the latent continuous variable. The final line of the table gives the eigenvalues for each of the factors.

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5   It is beyond the scope of this paper to discuss rotation further; please refer to a Factor Analysis text, such as the references in Darlington (1997).

5.1 Factor loadings and eigenvalues for factor analysis of binary social capital data items

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Comm-unality
Has no support in a time of crisis	**0.70**	0.14	0.12	0.14	0.08	0.55
Does not have a friend they are close to or can confide in	**0.68**	0.18	0.11	0.11	0.24	0.58
Unable to ask for small favours	**0.65**	0.12	0.10	0.15	0.09	0.48
Does not have an ex-household family member they are close to or can confide in	**0.63**	0.06	0.16	0.06	0.04	0.43
No social activities in the last 3 months	**0.61**	0.35	0.10	0.22	0.28	0.63
Frequency of other forms of contact with ex-household family and friends monthly or less	**0.60**	0.14	0.04	–0.03	–0.16	0.41
Frequency of face-to-face contact with ex-household family and friends monthly or less	**0.49**	0.08	0.04	–0.03	0.00	0.25
Does not feel able to have a say with family and friends on important issues	**0.45**	0.10	0.12	0.17	0.04	0.26
Did not do unpaid voluntary work in the last 12 months	0.14	**0.65**	0.08	0.08	0.14	0.47
No involvement in civic activity in the last 12 months	0.16	**0.61**	–0.02	–0.01	0.07	0.40
Has not been active in a project in the local area	0.10	**0.58**	–0.03	0.10	0.09	0.37
No involvement in governance or citizenship group in the last 12 months	0.13	**0.57**	–0.01	0.10	0.05	0.36
Did not provide work or support for ex-household persons in the last 4 weeks	0.25	**0.55**	–0.04	–0.08	–0.05	0.37
No involvement in social or support group in the last 12 months	0.22	**0.54**	0.08	0.10	0.15	0.38
Did not attend a community event in the past 6 months	0.27	**0.50**	0.08	0.09	0.20	0.38
Did not provide care to family member or others in last 4 weeks	–0.03	**0.48**	0.01	–0.09	–0.15	0.26
Does not know someone in an organisation for information and advice	0.32	**0.47**	0.09	0.14	0.08	0.36
Did not personally donate money in the last 12 months	0.19	**0.46**	0.11	0.05	0.00	0.26
Low trust in institutions – police in local area	0.06	0.05	**0.91**	0.10	0.00	0.85
Low trust in institutions – police outside local area	0.07	0.04	**0.90**	0.07	–0.01	0.83
Low trust in institutions – hospitals	0.09	–0.11	**0.63**	0.20	0.08	0.47
Low trust in institutions – doctor	0.17	–0.03	**0.58**	0.09	0.06	0.39
Low generalised trust	0.09	0.06	**0.57**	0.20	0.15	0.40
Feels unsafe or very unsafe at home alone during day	0.08	0.03	0.10	**0.94**	0.03	0.91
Feels unsafe or very unsafe walking alone in local area after dark	0.16	0.03	0.13	**0.94**	0.03	0.94
Feels unsafe or very unsafe at home alone after dark	–0.07	0.04	0.05	**0.80**	0.05	0.65
Low or high proportion of friends with roughly the same level of education	0.14	0.09	0.05	0.05	**0.61**	0.40
Low or high proportion of friends of same ethnic background	0.10	0.08	0.02	0.06	**0.60**	0.38
Low or high proportion of friends of similar age	0.25	0.18	0.08	0.12	**0.57**	0.44
Did not attend a sporting event in the last 12 months	0.33	0.19	–0.04	0.19	0.15	0.20
Could not raise $2000 within a week	0.30	0.19	0.17	0.27	0.19	0.26
Does not feel able to have a say within community on important issues	0.21	0.13	0.08	0.20	–0.03	0.11
Eigenvalue	6.79	2.99	2.02	1.55	1.09	

Source: Customised calculations from the 2006 General Social Survey.

Table 5.1 shows that five factors have been selected in this analysis. Looking first at the eigenvalues (that is the bottom line of the table), whether or not there is one or more than one dimension of social capital depends on the criteria used. If using the scree test, an argument could be made that there is only one factor that underlies the 32 social capital measures in the 2006 GSS. However, if a cut-off of one for the eigenvalues was used, then it would appear that there are five underlying latent variables or factors. This is supported by the eigenvalue of the sixth factor (not shown, 0.78) which, as well as being less than 1, was substantially less than the estimated eigenvalue for the fifth factor.

Given that social capital theory suggests that there is more than one dimension of social capital, we assume a five factor solution as discussed below. A multi-factor solution was also found (using a different set of questions and hence indicator variables) in Onyx and Bullen (1997 and 2000), Kritsotakis, *et al.* (2008), Sabatini (forthcoming). In the next section of the paper, we discuss the implications of assuming a one-factor as opposed to a many-factor solution. All those variables with a factor loading that has an absolute value of greater than 0.40 are assumed to be influenced strongly by that factor.

After rotation, the first factor was estimated to have a relatively large influence on eight of the social capital variables. Given the variables that it is estimated to influence, this theoretical underlying latent variable most likely measures the potential for a person to ask others for help or support. Although the factor loadings for the frequency of contact variables are relatively small for this factor, it nonetheless appears to also be related in part to how often a person has contact with others (face-to-face or otherwise). The loadings on the first factor for two of the variables at the bottom of the table ('Did not attend a sporting event in the last 12 months' and 'Could not raise $2000 within a week' for an emergency) are close to 0.40. However, they appear to be influenced enough by other non-common factors to not meet the threshold.

The second factor had loadings above 0.40 on 10 of the social capital variables analysed in this part of the paper. These variables all appear to be influenced by an underlying latent variable that is related to a person's community involvement. This includes involvement in voluntary work (which had the highest factor loading), civic activities, projects in the local area, social or support groups, governance or citizenship groups, and community events. Interestingly, although the factor loadings are relatively low, the 'Did not provide work or support for ex-household persons in the last 4 weeks' and 'Did not provide care to family member or others in the last 4 weeks' variables were also estimated to be strongly influenced by this factor.

The third underlying factor suggested by the correlations between the variables relates to trust in others. Given that they are strongly correlated with each other as shown in the correlation matrix discussed earlier, it is not surprising that the two variables measuring trust in police have high factor loadings.[6] Interestingly, the measure of generalised trust has the lowest factor loading amongst the five variables. This may be an indication that the underlying latent variable is related mainly to trust in institutions but that trust in others is also influenced by a separate factor not common to the four other variables.

The fourth underlying factor relates to feelings of safety at home or in the local area. This is not surprising given that the correlation matrix discussed earlier shows that they are strongly correlated with each other, and either weakly or not correlated with the other social capital variables. All of these social capital variables loaded highly on this factor, especially 'Feels unsafe or very unsafe at home alone during the day', and 'Feels unsafe or very unsafe walking alone in local area after dark'. However the incidence of feeling unsafe or very unsafe for this first variable was very low, as shown in table 4.1(a).

The fifth factor presented in table 5.1 loaded heavily on the variables measuring whether or not a person has either a low or high proportion of their friends with similar characteristics to themselves (Network type). However, for the alternative factor analysis results presented in Appendix D, table D.1 (which uses the categorical variables where applicable, rather than the created binary variables), this fifth factor was not estimated to have a loading greater than 1. In other words, there were no estimated factors that loaded highly on the categorical network type variables, whereas there was one that loaded highly on the binary network type variables. This is an important finding as it demonstrates that, for some variables, it is extreme values that are strongly correlated with other measures of low social capital.

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6   When the variable measuring the level of trust in police outside the local area is excluded, the factor loadings for remaining four trust variables are closer to one another.

6. EXPLORING COMPOSITE MEASURES OF LOW SOCIAL CAPITAL

The previous section showed that there was potentially a limited set of factors that explained a large amount of the variation across 32 of the social capital data items in the 2006 GSS. These factors can be thought of as unobserved or latent variables that constitute a particular dimension of social capital with the loadings that the individual variables had on the factors being an indication of the relationship between the latent and observed variables. Making this assumption allows us to derive a set of composite variables representing each of the dimensions.

In discussing the results in the previous section, it was identified that either a one-factor or five-factor solution was appropriate for the 32 binary measures of low social capital. In this section, we construct composite items under both assumptions using the regression scoring method (McDonald and Burr, 1967) in STATA Version 10. Based on the factor loadings given in Appendix table D.2, the single composite item is labelled *Comp. A* and is scaled to have a mean of 100 and a standard deviation of 50. Higher values represent lower levels of social capital. The composite items for the five dimensions of low social capital items outlined in table 5.1 are labelled as follows:

- *Support – Comp. 1*;

- *Community involvement – Comp. 2*;

- *Trust – Comp. 3*;

- *Feelings of safety – Comp. 4*; and

- *Network type – Comp. 5*.

The *Network type* composite item – which loads heavily on the three variables for whether or not a person has either a high or low proportion of one's friends with the same characteristics as oneself – can be an indication of the potential for either low bridging or low bonding social capital. In other words, having all of one's friends with the same characteristics as oneself can indicate the potential for low levels of bridging social capital. Alternatively, having few or none of one's friends with similar characteristics to oneself can indicate the potential for low bonding social capital. So, while the low and the high categories are grouped together in the composite item, it should be kept in mind that they measure different aspects of low social capital.

Ultimately, the aim of constructing composite items is to reduce the dimensionality of any analysis using measures of social capital. While the use of composite items inevitably leads to a loss of information, this must be traded off against the simplicity and potential power of analysing a single variable from each of the dimensions.

The following two tables present the mean values for the set of composite items measuring low social capital for the total population, by sex and by age group (table 6.1) as well as by time in current dwelling, country of birth and remoteness (table 6.2). Because of the scaling undertaken, all the composite items in the first column have a mean of 100. Hence, for the remaining columns, a value greater than 100 is an indication that the particular demographic subgroup has *lower* levels of that aspect of social capital, whereas a value less than 100 means that they have *higher* levels. Those values that are significantly different from the national average at the 5% level of significance are marked with a *.

While the mean values for the measures of low social capital are a useful summary of the distribution across the population subgroups, it is often those individuals with very low values of social capital that are of most policy interest. The second section of each of the tables therefore gives the proportion of the particular sub-population who have a value for each of the composite items that puts them in the decile with the lowest level of social capital. Values greater than 10% indicate a greater proportion of the population group with very low levels of social capital than the population average.

6.1 Mean values and per cent of population with very low relative levels of social capital – Total population and by sex and age group

	Total	Sex		Age			
		Male	Female	18 to 29	30 to 44	45 to 59	60 plus
Mean value for composite indicators							
Comp. A – Social capital	100.0	104.1 *	96.0 *	100.6	95.2 *	95.8 *	110.4 *
Comp. 1 – Support	100.0	106.9 *	93.3 *	87.1 *	99.4	105.8 *	106.2 *
Comp. 2 – Community involvement	100.0	101.2	98.9	112.8 *	96.5 *	89.8 *	104.2 *
Comp. 3 – Trust	100.0	106.1 *	94.1 *	103.9 *	101.3	100.3	94.2 *
Comp. 4 – Feelings of safety	100.0	94.1 *	105.8 *	100.4	101.0	97.4 *	101.3
Comp. 5 – Network type	100.0	95.5 *	104.4 *	93.7 *	93.0 *	101.2	113.4 *
Percent of population in decile with lowest social capital							
Comp. A – Social capital	10.0%	11.6%	8.5%	7.7%	8.1%	10.2%	14.2%
Comp. 1 – Support	10.0%	12.5%	7.6%	5.4%	8.7%	12.6%	12.9%
Comp. 2 – Community involvement	10.0%	9.5%	10.4%	14.4%	8.6%	7.0%	11.0%
Comp. 3 – Trust	10.0%	12.5%	7.5%	12.5%	10.2%	10.0%	7.4%
Comp. 4 – Feelings of safety	10.0%	7.9%	12.0%	9.7%	10.5%	8.7%	11.2%
Comp. 5 – Network type	10.0%	8.1%	11.8%	7.2%	8.0%	10.6%	14.4%
Proportion of population	1.00	0.49	0.51	0.22	0.29	0.27	0.23

Note: In the first part of the table indicate, higher values indicate lower levels of social capital with values marked with an * are significantly different from the national average (100) at the 5% level of significance. Standard errors are presented in Appendix C.

Looking at the first line of table 6.1, males were significantly more likely to have low social capital than the national average using the single composite item (*Comp. A*), whereas females were significantly less likely. This was also true for the composite items indicating low support (*Comp. 1*) and low levels of trust (*Comp. 3*). However, the reverse was true for the low feelings of safety (*Comp. 4*) and network type (*Comp. 5*) composite items. These last two composite items highlight the benefit of estimating a separate composite item for each of the dimensions of social capital, as focussing on *Comp. A* only might imply that males had lower levels of all aspects of social capital.

There were two dimensions of social capital that had a reasonably linear relationship across the four age groups. The older a person was, the more likely they were to report that they had low support (*Comp. 1*) or a network type that indicates a low potential for either bonding or bridging social capital (*Comp. 5*). There were, however, other dimensions where there was a non-linear relationship. For the single low social capital composite item (*Comp. A*) as well as the low community involvement composite item (*Comp. 2*), those in the youngest and the oldest age groups are more likely to report low values of social capital than those in the middle two groups.

Interestingly, there are different patterns by age when looking at the proportion of the population in the lowest decile, as opposed to the mean values only. For example, the youngest age group has a mean value for *Comp. A* (100.6) that is very close to the Australian average (100.0). However, only 7.7% of the population in this group reported outcomes that put them in the lowest decile, suggesting that either this age group was over-represented in lower social capital deciles (if not the lowest decile) or that this age group is diverse for *Comp. A* .

Table 6.2 indicates that there are a number of differences in the social capital composite items by the length of time a person has spent in their current dwelling. However, for the most part, the magnitude of these differences is not large. Those who have been in their dwelling for '1 or less' years are more likely to report low levels of social capital using the single composite item (*Comp. A*) and more likely to report low community involvement (*Comp. 2*) or low levels of trust (*Comp. 3*). Compared to this, those who have lived in their dwelling for '5 or more' years are less likely to report low community involvement (*Comp. 2*) and low levels of trust (*Comp. 3*).

6.2 Mean values and per cent of population with very low relative levels of social capital– By time in dwelling, country of birth and remoteness

	Time in dwelling (years)			Country of birth		Remoteness	
	5 or more	1 to 4	1 or less	Australia	Overseas	Regional/ Remote	Major city
Mean value for composite indicators							
Comp. A – Social capital	100.7	96.6 *	103.3 *	95.0 *	112.9 *	95.4 *	102.2 *
Comp. 1 – Support	102.5 *	95.4 *	98.7	97.0 *	107.8 *	100.9	99.6
Comp. 2 – Community involvement	98.7 *	99.6	105.5 *	97.0 *	107.7 *	93.7 *	103.0 *
Comp. 3 – Trust	97.6 *	102.1 *	105.1 *	100.3	99.2	101.6	99.2
Comp. 4 – Feelings of safety	100.7	98.9	99.4	98.6 *	103.5 *	95.3 *	102.2 *
Comp. 5 – Network type	102.0	98.4	95.7 *	98.5	103.8 *	100.9	99.6
Percent of population in decile with lowest social capital							
Comp. A – Social capital	10.0%	10.9%	7.4%	8.0%	15.1%	7.7%	11.1%
Comp. 1 – Support	10.0%	9.9%	9.5%	8.2%	14.6%	9.5%	10.3%
Comp. 2 – Community involvement	10.0%	8.8%	10.7%	9.4%	11.6%	8.6%	10.7%
Comp. 3 – Trust	10.0%	10.3%	9.2%	10.0%	9.9%	11.4%	9.3%
Comp. 4 – Feelings of safety	10.0%	11.1%	8.7%	9.3%	11.7%	8.6%	10.7%
Comp. 5 – Network type	10.0%	10.9%	7.4%	9.5%	11.3%	9.7%	10.2%
Proportion of population	0.57	0.27	0.16	0.72	0.28	0.32	0.68

Note: In the first part of the table indicate, higher values indicate lower levels of social capital with values marked with an * are significantly different from the national average (100) at the 5% level of significance. Standard errors are presented in Appendix C.

The differences in the composite items by country of birth are reasonably large. Apart from the *Trust* item (where the differences are negligible) those born overseas are more likely to report low values for all the dimensions of social capital. Interestingly, the composite item with the biggest difference between those born in 'Australia' and born 'Overseas' is the single measure of social capital (*Comp. A*). This is true whether the focus is on the means, or the percentage in the lowest decile.

The final subgroup comparison made in this section of the paper is between those who live in 'Regional/Remote' areas compared to 'Major cities'. Those in 'Major cities' are in general more likely to report low levels of social capital, with the biggest differences being for low community involvement (*Comp. 2*) and low feelings of safety (*Comp. 4*).

7. SUMMARY

The work of Pierre Bourdieu, Robert Putnam and Eva Cox in Australia and a number of other authors and organisations (including the OECD and the World Bank) has led to a great deal of interest in social capital and the potential impact it might have on individuals, communities and even countries. While the concept of social capital has received a reasonably large amount of attention and policy interest, identifying measures that quantify the levels of social capital has been more difficult. Those who have used social capital in quantitative research have often relied on proxy measures or variables that measure one particular aspect only.

Enumeration of the 2006 General Social Survey (GSS) provides an opportunity to develop more detailed measures of social capital than had been possible in Australia. Based in part on the Social Capital Framework developed by the ABS (2004), the 2006 GSS contained a range of questions that touched on many aspects of social capital at the individual level. This includes the quality, type and structure of a person's networks, as well as a number of transactions that are useful in maintaining them. A number of these questions had not been asked before in such a large scale social survey, whereas others had not been asked alongside other measures of social capital or aspects of well-being.

The aims of the analysis presented in this paper are to use the 2006 GSS to: deepen the understanding of social capital in Australia by exploring a number of measures of low social capital derived from the 2006 GSS; and assist those who will eventually perform their own analysis of social capital using the 2006 GSS or similar surveys. Because social capital is such a difficult concept to capture, the results presented in this paper represent a selection from a number of possible measures of social capital. Other researchers with a different focus, for example on communities rather than individuals, will inevitably come up with other measures of social capital. With this in mind, to explore the measures of social capital from the 2006 GSS, four research questions were considered:

1.   What is the incidence of and associations between the social capital items?

2.   Are there unobserved factors that explain the variance across the social capital data items?

3.   Is it feasible to produce meaningful composite items from the dimensions of social capital?

4.   How do the social capital measures vary across demographic groups?

In answering the first research question, there was a great deal of variation in the incidence of the different measures of social capital. For example, only 4% of the population reported that they had not participated in any informal social activities in the last 3 months whereas 81% reported that they had not had any involvement in governance or citizenship groups in the last 12 months. There was also substantial variation in the social capital items by population subgroup. For example, the proportion of *females* who felt 'Unsafe or very unsafe' walking alone in their local area after dark (0.27) was three times as high as the proportion of *males* (0.09). In general, though, where one population subgroup may have had lower levels of social capital using one measure, they often had higher levels using a different measure; which implies that a high incidence of one measure of low social capital cannot be generalised to all measures for that subgroup.

Addressing the second and third research questions, based on common factor analysis using a correlation matrix of 32 individual measures of social capital, the results presented in this paper confirmed that the concept of social capital can be partitioned into a number of dimensions. This fits well into the ABS (2004) framework of social capital.

Apart from some of the measures of *Network type*, the groupings from the factor analysis were similar when using binary and categorical measures of social capital. For the three network type variables that measure the proportion of a person's friends with similar characteristics to themselves, a categorical representation did not lead to them loading highly on any of the latent factors. Using binary measures that captured whether a person has either a very low or a very high proportion of friends with the same or similar characteristics, however, these variables were found to load highly on a latent factor. This demonstrates that for some concepts of social capital, there is a non-linear relationship across the categories and, in the case of these variables, the highest and lowest categories may measure low levels of different types of social capital.

Given that the common factor analysis showed that the measures of social capital can be partitioned into a number of dimensions, the results were used to estimate the contribution that individual binary measures made to composite low social capital data items. Two types of composite items were created: a single measure of social capital; and a separate composite item for each dimension of social capital. An upcoming paper will test the validity of these composite measures.

While a single measure of social capital (*Comp. A*) pointed to a number of patterns across population subgroups, it misses a number of distinct patterns across dimensions and captures only a relatively small amount of the variation across the individual social capital data items. The factor analysis that kept all factors with an eigenvalue greater than or equal to one, led to five composite social capital data items being constructed. The composite items were labelled as follows: low *Support*; low *Community involvement*; low levels of *Trust*; low *Feelings of safety*; and *Network type* (low potential for bonding or bridging social capital).

Addressing the fourth research question, by estimating a set of composite items rather than one, it was possible to show that individual dimensions of social capital occasionally varied across demographic groups in different ways. For example, males were more likely to report low *Support* and low levels of *Trust* but less likely to report low *Feelings of safety* as well as *Network type* (that indicates a low potential for either bonding or bridging social capital). On the other hand, other demographic groups (those born overseas or those who live in major cities) had consistently low levels of social capital across the dimensions. Whilst somewhat exploratory, what this analysis demonstrates is that in many cases the dimensions of social capital need to be treated separately. Rather than being a single measure, social capital is clearly better thought of as a set of related concepts.

Ultimately more research needs to be carried out on these and other measures of social capital to test their validity for the purposes of research and policy formulation. For example, although it was found that the measures of low social capital varied across demographic groups, it was not shown whether or not they were related to aspects of well-being or whether these associations remain after controlling for demographic characteristics. Nonetheless, the results presented in this paper have shown that the 2006 GSS is useful for measuring variation across a number of measures of social capital at the individual level and relating this variation to other characteristics of the individual.

ACKNOWLEDGEMENTS

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APPENDIXES

A. SOCIAL CAPITAL VARIABLES IN THE 2006 GSS

Network attribute	*Variable name*
Network qualities	
Norms: Trust	Level of generalised trust
	Level of trust in institutions – doctor
	Level of trust in institutions – hospitals
	Level of trust in institutions – police in local area
	Level of trust in institutions – police outside local area
	Feelings of safety walking alone in local area after dark
Norms: Sense of efficacy	Feels able to have a say with family and friends on important issues
	Feels able to have a say within community on important issues
Active involvement in groups	Active involvement in social or support group in the last 12 months by type of organisation
	Active involvement in group in the last 12 months by type of organisation: governance and citizenship
	Active involvement in group in the last 12 months by type of organisation: community support
	Type of civic activity engaged in, in the last 12 months
Friendship	Has ex-household family members feels close to, can confide in
	Number of ex-household family members can confide in
	Has friends feels close to, can confide in
	Number of friends can confide in
Network structure	Frequency of face-to-face contact – ex-household family and friends
	Frequency of other forms of contact – ex-household family and friends
	Other forms of contact used with family and friends
	Frequency of Internet or SMS contact with family and friends
	Type of participation in group activities as child/youth
	Parent(s) did voluntary work
	Person knows of someone in type of organisation would feel comfortable contacting for information/advice
Network transactions	Provision of unpaid work/types of support in past four weeks to ex-household persons
	Provision of unpaid assistance, by recipient
	Whether person spent time in last four weeks providing unpaid care, help or assistance to family members or others because of a disability, a long-term illness or problems related to old age
	Whether attended a community event in past six months
	Whether ever been active in project to organise new service or activity, or preserve existing one in the local area
Network type	Proportion of friends of similar age
	Proportion of friends of same ethnic background
	Proportion of friends with roughly the same level of education
	Number of organisations where personally knows someone

B. CORRELATION MATRICES

Polychoric correlations are used when the two variables that are assumed to be correlated with each other are dichotomous or ordinal but are assumed to reflect underlying continuous variables. As an example, consider the two variables 'Level of generalised trust' and 'Feelings of safety walking alone in local area after dark'. In the 2006 GSS, these variables are measured in categories (for example strongly agree or very safe respectively) however they reflect an underlying variable that is continuous.

If we assume that these two underlying variables are bivariate normally distributed, then for each variable, the number of people who fall within each category is equivalent to the number of people who have values in between two cut-offs for the underlying variables. The cut-offs for each underlying variable and the correlation between them can then be estimated using maximum likelihood estimation based on the observed proportion of the sample who fall within each cell of a two-way frequency table (Olsson, 1979).

The correlations are presented in matrix form in table B.1 below. There is a separate row for each of the social capital variables numbered 1 to 33. The correlations between that variable and the other social capital variables are presented across columns 1 to 12 in table B.1(a) and columns 13 to 33 in table B.1(b). The correlations between the binary measures of low social capital are presented in a similar way in tables B.2(a) and B.2(b).

B.1(a) Polychoric / tetrachoric correlations between categorical and binary social capital variables (variables 1 to 12)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Level of generalised trust	1	0.362	0.357	0.360	0.366	0.133	0.178	0.158	0.102	0.151	0.157	0.221
2 Level of trust in institutions – doctor		1	0.486	0.419	0.375	0.035	0.153	0.127	0.140	0.107	0.132	0.092
3 Level of trust in institutions – hospitals			1	0.481	0.444	0.090	0.116	0.122	0.085	0.116	0.051	0.071
4 Level of trust in institutions – police in local area				1	0.848	0.084	0.162	0.135	0.140	0.148	0.147	0.126
5 Level of trust in institutions – police outside local area					1	0.060	0.140	0.111	0.127	0.156	0.129	0.144
6 Feelings of safety walking alone in local area after dark						1	0.618	0.726	0.094	0.154	0.087	0.101
7 Feelings of safety at home alone during day							1	0.862	0.193	0.150	0.177	0.255
8 Feelings of safety at home alone after dark								1	0.150	0.163	0.141	0.216
9 Feels able to have a say with family and friends on important issues									1	0.378	0.151	0.244
10 Feels able to have a say within community on important issues										1	0.274	0.262
11 Does not know someone in an organisation for information and advice											1	0.408
12 No social activities in the last 3 months												1
13 No involvement in social or support group in the last 12 months												
14 Did not attend a community event in the past 6 months												
15 Did not attend a sporting event in the last 12 months												
16 No involvement in governance or citizenship group in the last 12 months												
17 No involvement in civic activity in the last 12 months												
18 Has not been active in a project in the local area												
19 Does not have an ex-household family member they are close to or can confide in												
20 Does not have a friend they are close to or can confide in												
21 Frequency of face-to-face contact with ex-household family and friends												
22 Frequency of other forms of contact with ex-household family and friends												
23 Frequency of Internet or SMS contact with ex-household family and friends												
24 Proportion of friends of similar age												
25 Proportion of friends of same ethnic background												
26 Proportion of friends with roughly the same level of education												
27 Unable to ask for small favours												
28 Has no support in a time of crisis												
29 Could not raise $2000 within a week												
30 Did not provide work or support for ex-household persons in the last 4 weeks												
31 Did not do unpaid voluntary work in the last 12 months												
32 Did not personally donate money in the last 12 months												
33 Did not provide care to family member or others in last 4 weeks												

B.1(b) Polychoric / tetrachoric correlations between categorical and binary social capital variables (variables 13 to 33)

	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1	0.137	0.151	0.050	0.092	0.077	0.089	0.189	0.227	0.052	0.027	0.022	0.103	0.056	0.068	0.187	0.195	0.205	0.022	0.100	0.104	0.022
2	0.083	0.062	0.016	0.052	0.050	0.060	0.180	0.101	0.055	0.025	–0.064	0.107	0.135	0.103	0.156	0.148	0.120	0.024	0.046	0.113	0.058
3	0.043	0.024	0.013	–0.029	–0.081	–0.039	0.128	0.089	0.033	0.004	–0.044	0.093	0.065	0.070	0.091	0.097	0.096	–0.071	0.002	0.006	–0.049
4	0.063	0.080	0.041	0.032	0.013	0.019	0.147	0.140	0.020	0.031	–0.015	0.087	0.076	0.069	0.125	0.154	0.153	–0.005	0.092	0.099	0.006
5	0.073	0.069	0.073	0.038	0.021	–0.001	0.139	0.138	0.023	0.031	0.014	0.097	0.052	0.077	0.120	0.137	0.131	0.002	0.074	0.069	–0.015
6	0.034	0.088	0.156	0.104	–0.017	0.110	–0.030	0.091	0.003	–0.028	0.024	0.022	0.033	0.027	0.060	0.042	0.197	–0.041	0.045	–0.028	–0.046
7	0.117	0.126	0.182	0.114	0.081	0.090	0.096	0.165	0.029	0.052	0.106	0.073	0.034	0.052	0.206	0.175	0.250	0.055	0.130	0.085	0.004
8	0.065	0.083	0.176	0.109	0.029	0.122	0.034	0.139	0.023	0.005	0.046	0.051	0.041	0.058	0.166	0.131	0.260	–0.001	0.081	0.031	–0.001
9	0.092	0.110	0.134	0.091	0.109	0.059	0.294	0.247	0.137	0.167	0.084	0.139	0.070	0.098	0.199	0.252	0.198	0.042	0.074	0.108	–0.025
10	0.174	0.193	0.122	0.175	0.160	0.174	0.204	0.288	0.097	0.124	0.087	0.090	0.003	0.035	0.177	0.211	0.179	0.067	0.188	0.138	0.054
11	0.379	0.336	0.194	0.349	0.339	0.322	0.222	0.354	0.119	0.139	0.151	0.019	–0.021	0.003	0.287	0.373	0.279	0.265	0.400	0.320	0.174
12	0.420	0.434	0.424	0.271	0.328	0.276	0.343	0.626	0.332	0.386	0.449	0.315	–0.077	–0.010	0.463	0.438	0.355	0.303	0.399	0.287	0.038
13	1	0.443	0.256	0.309	0.287	0.386	0.178	0.295	0.118	0.148	0.178	0.051	–0.026	–0.026	0.220	0.254	0.225	0.279	0.549	0.300	0.135
14		1	0.298	0.288	0.375	0.365	0.167	0.347	0.172	0.173	0.258	0.029	–0.035	–0.007	0.259	0.275	0.222	0.291	0.478	0.280	0.088
15			1	0.215	0.138	0.202	0.162	0.307	0.135	0.148	0.311	0.092	–0.011	0.021	0.249	0.274	0.208	0.156	0.177	0.107	–0.024
16				1	0.493	0.334	0.145	0.211	0.025	0.075	0.155	–0.048	–0.060	–0.044	0.147	0.195	0.193	0.288	0.310	0.295	0.178
17					1	0.403	0.147	0.212	0.075	0.078	0.132	–0.050	–0.034	–0.040	0.171	0.200	0.180	0.326	0.362	0.360	0.224
18						1	0.139	0.211	0.078	0.039	0.046	–0.017	0.022	–0.037	0.152	0.182	0.190	0.255	0.454	0.264	0.216
19							1	0.498	0.210	0.228	0.102	0.124	0.070	0.073	0.428	0.518	0.294	0.190	0.157	0.201	0.030
20								1	0.253	0.302	0.355	0.222	0.041	0.095	0.455	0.501	0.286	0.212	0.312	0.189	0.009
21									1	0.365	0.203	0.047	–0.011	0.026	0.272	0.282	0.087	0.198	0.126	0.086	0.040
22										1	0.655	0.102	–0.047	0.020	0.218	0.276	0.071	0.186	0.096	0.105	0.035
23											1	0.061	–0.128	–0.014	0.222	0.259	0.092	0.148	0.150	0.060	–0.078
24												1	0.204	0.347	0.139	0.167	0.140	–0.039	0.012	–0.001	–0.046
25													1	0.340	–0.006	0.002	0.074	–0.057	–0.039	–0.058	–0.015
26														1	0.067	0.076	0.122	–0.056	–0.036	–0.052	–0.045
27															1	0.723	0.346	0.300	0.222	0.203	0.062
28																1	0.355	0.259	0.199	0.235	0.047
29																	1	0.106	0.167	0.254	0.025
30																		1	0.331	0.261	0.540
31																			1	0.270	0.207
32																				1	0.170
33																					1

B.2(a) Tetrachoric correlations between binary social capital variables (variables 1 to 12)

		1	2	3	4	5	6	7	8	9	10	11	12
1	Low generalised trust	1	0.450	0.431	0.469	0.493	0.162	0.313	0.250	0.111	0.086	0.173	0.240
2	Low trust in institutions – doctor		1	0.584	0.447	0.403	0.093	0.146	0.166	0.191	0.115	0.119	0.159
3	Low trust in institutions – hospitals			1	0.523	0.515	0.172	0.301	0.252	0.102	0.086	0.066	0.142
4	Low trust in institutions – police in local area				1	0.939	0.138	0.220	0.196	0.173	0.106	0.120	0.183
5	Low trust in institutions – police outside local area					1	0.117	0.193	0.171	0.145	0.083	0.114	0.167
6	Feels unsafe or very unsafe walking alone in local area after dark						1	0.723	0.747	0.104	0.160	0.114	0.110
7	Feels unsafe or very unsafe at home alone during day							1	0.922	0.245	0.209	0.206	0.391
8	Feels unsafe or very unsafe at home alone after dark								1	0.154	0.179	0.159	0.283
9	Does not feel able to have a say with family and friends on important issues									1	0.454	0.222	0.300
10	Does not feel able to have a say within community on important issues										1	0.216	0.139
11	Does not know someone in an organisation for information and advice											1	0.408
12	No social activities in the last 3 months												1
13	No involvement in social or support group in the last 12 months												
14	Did not attend a community event in the past 6 months												
15	Did not attend a sporting event in the last 12 months												
16	No involvement in governance or citizenship group in the last 12 months												
17	No involvement in civic activity in the last 12 months												
18	Has not been active in a project in the local area												
19	Does not have an ex-household family member they are close to or can confide in												
20	Does not have a friend they are close to or can confide in												
21	Frequency of face-to-face contact with ex-household family and friends monthly or less												
22	Frequency of other forms of contact with ex-household family and friends monthly or less												
23	Low or high proportion of friends of similar age												
24	Low or high proportion of friends of same ethnic background												
25	Low or high proportion of friends with roughly the same level of education												
26	Unable to ask for small favours												
27	Has no support in a time of crisis												
28	Could not raise $2000 within a week												
29	Did not provide work or support for ex-household persons in the last 4 weeks												
30	Did not do unpaid voluntary work in the last 12 months												
31	Did not personally donate money in the last 12 months												
32	Did not provide care to family member or others in last 4 weeks												

B.2(b) Tetrachoric correlations between binary social capital variables (variables 13 to 32)

	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	28	30	31	32
1	0.145	0.162	0.052	0.057	0.074	0.071	0.198	0.239	0.086	0.027	0.175	0.116	0.120	0.155	0.157	0.197	–0.005	0.106	0.099	0.007
2	0.105	0.118	0.054	–0.017	0.017	0.028	0.174	0.179	0.130	0.112	0.112	0.059	0.089	0.202	0.197	0.188	–0.018	0.047	0.075	0.029
3	0.067	0.081	0.068	–0.010	–0.064	–0.054	0.175	0.142	0.058	0.024	0.126	0.047	0.084	0.168	0.153	0.162	–0.063	0.032	0.010	–0.091
4	0.109	0.118	0.012	0.033	0.013	0.001	0.174	0.161	0.051	0.106	0.131	0.056	0.073	0.144	0.196	0.224	0.015	0.126	0.156	–0.003
5	0.103	0.101	0.033	0.053	–0.007	0.001	0.201	0.169	0.079	0.112	0.101	0.040	0.074	0.142	0.170	0.182	0.003	0.107	0.116	0.002
6	0.078	0.125	0.168	0.112	–0.014	0.125	–0.015	0.101	0.034	–0.023	0.114	0.099	0.085	0.056	0.068	0.252	–0.039	0.051	0.018	–0.034
7	0.174	0.166	0.224	0.063	0.014	0.080	0.201	0.181	0.018	0.081	0.189	0.094	0.094	0.292	0.266	0.284	0.023	0.172	0.141	–0.087
8	0.121	0.089	0.186	0.146	0.035	0.123	0.141	0.204	0.051	0.034	0.198	0.081	0.094	0.211	0.216	0.291	–0.028	0.101	0.078	–0.012
9	0.160	0.197	0.203	0.154	0.160	0.128	0.367	0.327	0.151	0.257	0.192	0.123	0.123	0.302	0.351	0.271	0.093	0.156	0.191	–0.003
10	0.105	0.145	0.073	0.126	0.102	0.130	0.146	0.226	0.059	0.151	0.069	0.050	0.066	0.103	0.125	0.150	0.030	0.138	0.082	0.067
11	0.379	0.336	0.194	0.349	0.339	0.322	0.222	0.354	0.161	0.270	0.215	0.158	0.135	0.287	0.373	0.279	0.265	0.400	0.320	0.174
12	0.420	0.434	0.424	0.271	0.328	0.276	0.343	0.626	0.313	0.479	0.409	0.221	0.293	0.463	0.438	0.355	0.303	0.399	0.287	0.038
13	1	0.443	0.256	0.309	0.287	0.386	0.178	0.295	0.171	0.226	0.227	0.156	0.132	0.220	0.254	0.225	0.279	0.549	0.300	0.135
14		1	0.298	0.288	0.375	0.365	0.167	0.347	0.200	0.246	0.261	0.178	0.183	0.259	0.275	0.222	0.291	0.478	0.280	0.088
15			1	0.215	0.138	0.202	0.162	0.307	0.160	0.228	0.210	0.106	0.143	0.249	0.274	0.208	0.156	0.177	0.107	–0.024
16				1	0.493	0.334	0.145	0.211	0.059	0.205	0.175	0.107	0.113	0.147	0.195	0.193	0.288	0.310	0.295	0.178
17					1	0.403	0.147	0.212	0.098	0.199	0.173	0.121	0.118	0.171	0.200	0.180	0.326	0.362	0.360	0.224
18						1	0.139	0.211	0.105	0.101	0.182	0.094	0.096	0.152	0.182	0.190	0.255	0.454	0.264	0.216
19							1	0.498	0.240	0.400	0.250	0.122	0.132	0.428	0.518	0.294	0.190	0.157	0.201	0.030
20								1	0.273	0.413	0.361	0.208	0.233	0.455	0.501	0.286	0.212	0.312	0.189	0.009
21									1	0.439	0.169	0.082	0.114	0.299	0.318	0.107	0.224	0.140	0.132	0.026
22										1	0.102	–0.047	0.020	0.218	0.276	0.071	0.186	0.096	0.105	0.035
23											1	0.420	0.487	0.233	0.231	0.265	0.147	0.191	0.205	0.048
24												1	0.459	0.155	0.181	0.167	0.093	0.146	–0.058	0.008
25													1	0.170	0.163	0.172	0.094	0.129	0.140	–0.019
26														1	0.723	0.346	0.300	0.222	0.203	0.062
27															1	0.355	0.259	0.199	0.235	0.047
28																1	0.106	0.167	0.254	0.025
29																	1	0.331	0.261	0.540
30																		1	0.270	0.207
31																			1	0.170
32																				1

C. STANDARD ERRORS

C.1(a) Standard errors for proportions given in table 4.1(a)

		Sex		Age (years)			
	Total	*Male*	*Female*	*18 to 29*	*30 to 44*	*45 to 59*	*60 plus*
Generalised trust							
Strongly or somewhat agree	0.007	0.009	0.009	0.012	0.013	0.011	0.013
Neither agree or disagree	0.005	0.008	0.005	0.009	0.009	0.009	0.009
Strongly or somewhat disagree*	0.007	0.009	0.010	0.013	0.010	0.011	0.013
Trust in doctor							
Strongly or somewhat agree	0.004	0.007	0.004	0.012	0.007	0.006	0.007
Neither agree or disagree	0.003	0.004	0.003	0.010	0.004	0.004	0.005
Strongly or somewhat disagree*	0.003	0.004	0.003	0.006	0.004	0.004	0.005
Does not have a doctor+	0.002	0.003	0.002	0.006	0.003	0.003	0.002
Trust in hospital							
Strongly or somewhat agree	0.005	0.009	0.007	0.010	0.010	0.009	0.011
Neither agree or disagree	0.004	0.007	0.005	0.010	0.006	0.007	0.005
Strongly or somewhat disagree*	0.005	0.008	0.005	0.010	0.006	0.009	0.009
Trust in police in local area							
Strongly or somewhat agree	0.006	0.010	0.008	0.015	0.008	0.011	0.011
Neither agree or disagree	0.004	0.007	0.007	0.012	0.007	0.008	0.009
Strongly or somewhat disagree*	0.004	0.006	0.005	0.008	0.006	0.007	0.005
Trust in police outside local area							
Strongly or somewhat agree	0.004	0.008	0.006	0.010	0.007	0.010	0.009
Neither agree or disagree	0.005	0.009	0.006	0.009	0.009	0.011	0.009
Strongly or somewhat disagree*	0.005	0.007	0.005	0.007	0.007	0.008	0.006
Feelings of safety walking alone in local area after dark							
Very safe or safe	0.006	0.009	0.008	0.012	0.010	0.012	0.013
Neither safe or unsafe	0.004	0.005	0.005	0.008	0.007	0.007	0.008
Unsafe or very unsafe*	0.006	0.006	0.009	0.012	0.009	0.009	0.009
Never walk alone after dark+	0.005	0.005	0.010	0.008	0.008	0.008	0.013
Feelings of safety at home alone during the day							
Very safe or safe	0.002	0.004	0.003	0.005	0.005	0.005	0.005
Neither safe or unsafe	0.002	0.003	0.002	0.004	0.003	0.002	0.003
Unsafe or very unsafe*	0.001	0.002	0.003	0.004	0.003	0.003	0.003
Never home alone during the day+	0.001	0.001	0.001	0.002	0.002	0.001	0.003
Feelings of safety at home alone after dark							
Very safe or safe	0.005	0.006	0.007	0.012	0.007	0.010	0.009
Neither safe or unsafe	0.004	0.004	0.005	0.010	0.006	0.005	0.005
Unsafe or very unsafe*	0.002	0.003	0.004	0.008	0.005	0.007	0.006
Never home alone after dark+	0.002	0.002	0.003	0.002	0.002	0.002	0.005
Population	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Note: Those categories marked with a * are used as the measures of low social capital in Section 6. Those marked with a + are excluded from the remainder of the analysis.

C.1(b) Standard errors for proportions given in table 4.1(b)

	Time in dwelling (years)			Country of birth		Remoteness	
	5 or more	1 to 4	1 or less	Australia	Overseas	Regional/ Remote	Major city
Generalised trust							
Strongly or somewhat agree	0.008	0.008	0.019	0.007	0.012	0.012	0.007
Neither agree or disagree	0.006	0.007	0.012	0.005	0.011	0.005	0.007
Strongly or somewhat disagree*	0.008	0.008	0.017	0.007	0.012	0.012	0.008
Trust in doctor							
Strongly or somewhat agree	0.006	0.007	0.010	0.005	0.008	0.007	0.006
Neither agree or disagree	0.004	0.006	0.009	0.004	0.006	0.005	0.004
Strongly or somewhat disagree*	0.003	0.004	0.008	0.003	0.005	0.005	0.004
Does not have a doctor+	0.002	0.003	0.004	0.002	0.004	0.003	0.002
Trust in hospital							
Strongly or somewhat agree	0.006	0.010	0.016	0.006	0.012	0.010	0.006
Neither agree or disagree	0.004	0.010	0.013	0.005	0.008	0.008	0.005
Strongly or somewhat disagree*	0.005	0.009	0.013	0.005	0.009	0.007	0.005
Trust in police in local area							
Strongly or somewhat agree	0.008	0.010	0.010	0.007	0.011	0.008	0.007
Neither agree or disagree	0.007	0.008	0.009	0.005	0.010	0.006	0.005
Strongly or somewhat disagree*	0.005	0.006	0.007	0.004	0.006	0.006	0.005
Trust in police outside local area							
Strongly or somewhat agree	0.006	0.011	0.011	0.005	0.010	0.010	0.007
Neither agree or disagree	0.008	0.009	0.011	0.005	0.010	0.008	0.007
Strongly or somewhat disagree*	0.006	0.007	0.008	0.005	0.007	0.007	0.006
Feelings of safety walking alone in local area after dark							
Very safe or safe	0.009	0.011	0.016	0.008	0.010	0.011	0.007
Neither safe or unsafe	0.004	0.008	0.010	0.004	0.008	0.007	0.004
Unsafe or very unsafe*	0.008	0.010	0.014	0.007	0.010	0.008	0.006
Never walk alone after dark+	0.008	0.009	0.011	0.007	0.009	0.008	0.007
Feelings of safety at home alone during the day							
Very safe or safe	0.003	0.004	0.008	0.003	0.006	0.004	0.003
Neither safe or unsafe	0.002	0.003	0.004	0.002	0.004	0.003	0.003
Unsafe or very unsafe*	0.002	0.002	0.004	0.001	0.004	0.002	0.002
Never home alone during the day+	0.001	0.000	0.005	0.000	0.003	0.001	0.001
Feelings of safety at home alone after dark							
Very safe or safe	0.007	0.007	0.013	0.006	0.009	0.007	0.007
Neither safe or unsafe	0.005	0.006	0.009	0.004	0.006	0.005	0.005
Unsafe or very unsafe*	0.003	0.004	0.007	0.003	0.006	0.003	0.004
Never home alone after dark+	0.002	0.002	0.005	0.001	0.004	0.002	0.002
Population	0.008	0.007	0.005	0.006	0.006	0.008	0.008

Note: Those categories marked with a * are used as the measures of low social capital in Section 6. Those marked with a + are excluded from the remainder of the analysis.

C.2(a) Standard errors for proportions given in table 4.2(a)

	Total	Sex		Age (years)			
		Male	Female	18 to 29	30 to 44	45 to 59	60 plus
Feels able to have a say with family and friends on important issues							
All or most of the time	0.005	0.007	0.005	0.011	0.008	0.008	0.010
Some or a little of the time	0.004	0.006	0.005	0.010	0.008	0.008	0.010
None of the time	0.002	0.002	0.002	0.003	0.002	0.003	0.003
Feels able to have a say within the community on important issues							
All or most of the time	0.006	0.010	0.009	0.014	0.009	0.010	0.010
Some or a little of the time	0.007	0.010	0.009	0.018	0.012	0.013	0.012
None of the time	0.004	0.007	0.007	0.011	0.010	0.011	0.012
Frequency of face-to-face contact with ex-household family and friends							
Daily or weekly	0.006	0.008	0.009	0.009	0.010	0.012	0.012
Monthly or every three months	0.005	0.008	0.008	0.009	0.009	0.010	0.012
No recent contact	0.001	0.002	0.002	0.002	0.003	0.003	0.003
Frequency of other forms of contact with ex-household family and friends							
Daily or weekly	0.003	0.006	0.003	0.006	0.005	0.008	0.007
Monthly or every three months	0.002	0.004	0.003	0.005	0.005	0.006	0.006
No recent contact	0.002	0.003	0.001	0.002	0.003	0.003	0.004
Frequency of Internet or SMS contact with family and friends							
Daily or weekly	0.005	0.007	0.006	0.012	0.010	0.011	0.011
Monthly or every three months	0.003	0.005	0.004	0.006	0.006	0.008	0.005
No recent contact	0.005	0.006	0.006	0.010	0.010	0.012	0.011
Proportion of friends of similar age							
All	0.004	0.006	0.005	0.012	0.006	0.006	0.006
Most or about half	0.007	0.009	0.008	0.016	0.008	0.011	0.011
Few	0.005	0.007	0.006	0.013	0.007	0.009	0.007
None	0.002	0.003	0.003	0.003	0.004	0.002	0.005
Don't know or has no friends	0.002	0.003	0.002	0.002	0.002	0.005	0.004
Proportion of friends of same ethnic background							
All	0.006	0.009	0.008	0.012	0.009	0.010	0.014
Most or about half	0.007	0.010	0.008	0.013	0.009	0.013	0.012
Few	0.004	0.006	0.006	0.011	0.006	0.009	0.008
None	0.003	0.004	0.004	0.008	0.005	0.006	0.004
Don't know or has no friends	0.002	0.003	0.002	0.003	0.002	0.005	0.005
Proportion of friends with roughly the same level of education							
All	0.004	0.006	0.004	0.011	0.008	0.006	0.009
Most or about half	0.006	0.008	0.009	0.014	0.011	0.008	0.011
Few	0.005	0.007	0.008	0.009	0.008	0.008	0.008
None	0.002	0.003	0.002	0.004	0.004	0.004	0.004
Don't know or has no friends	0.003	0.003	0.005	0.004	0.005	0.008	0.010

C.2(b) Standard errors for proportions given in table 4.2(b)

	Time in dwelling (years)			Country of birth		Remoteness	
	5 or more	1 to 4	1 or less	Australia	Overseas	Regional/ Remote	Major city
Feels able to have a say with family and friends on important issues							
All or most of the time	0.006	0.010	0.012	0.005	0.011	0.008	0.007
Some or a little of the time	0.006	0.009	0.012	0.005	0.010	0.008	0.006
None of the time	0.002	0.002	0.004	0.002	0.003	0.002	0.002
Feels able to have a say within the community on important issues							
All or most of the time	0.009	0.009	0.013	0.008	0.009	0.011	0.007
Some or a little of the time	0.008	0.010	0.016	0.008	0.010	0.013	0.007
None of the time	0.006	0.009	0.016	0.005	0.009	0.009	0.006
Frequency of face-to-face contact with ex-household family and friends							
Daily or weekly	0.009	0.007	0.013	0.007	0.010	0.011	0.006
Monthly or every three months	0.008	0.007	0.013	0.007	0.009	0.010	0.005
No recent contact	0.002	0.002	0.006	0.001	0.004	0.002	0.002
Frequency of other forms of contact with ex-household family and friends							
Daily or weekly	0.005	0.004	0.007	0.003	0.007	0.007	0.004
Monthly or every three months	0.003	0.004	0.006	0.003	0.007	0.005	0.003
No recent contact	0.002	0.002	0.003	0.002	0.004	0.003	0.002
Frequency of Internet or SMS contact with family and friends							
Daily or weekly	0.008	0.011	0.013	0.007	0.010	0.011	0.006
Monthly or every three months	0.004	0.007	0.008	0.004	0.007	0.006	0.004
No recent contact	0.007	0.009	0.012	0.007	0.010	0.012	0.007
Proportion of friends of similar age							
All	0.006	0.007	0.009	0.005	0.008	0.009	0.005
Most or about half	0.010	0.009	0.013	0.007	0.011	0.011	0.008
Few	0.006	0.007	0.009	0.005	0.008	0.007	0.005
None	0.003	0.004	0.003	0.003	0.004	0.003	0.003
Don't know or has no friends	0.003	0.002	0.003	0.001	0.005	0.002	0.002
Proportion of friends of same ethnic background							
All	0.008	0.013	0.014	0.007	0.010	0.014	0.008
Most or about half	0.008	0.011	0.015	0.008	0.012	0.013	0.008
Few	0.005	0.007	0.011	0.004	0.010	0.006	0.006
None	0.005	0.005	0.007	0.002	0.007	0.004	0.003
Don't know or has no friends	0.003	0.002	0.004	0.002	0.005	0.003	0.002
Proportion of friends with roughly the same level of education							
All	0.005	0.009	0.009	0.004	0.008	0.008	0.006
Most or about half	0.007	0.012	0.011	0.006	0.010	0.010	0.006
Few	0.006	0.007	0.008	0.005	0.010	0.008	0.006
None	0.002	0.004	0.006	0.002	0.005	0.004	0.002
Don't know or has no friends	0.005	0.005	0.007	0.003	0.007	0.005	0.004

C.3(a) Standard errors for proportions given in table 4.3(a)

	Total	Sex		Age			
		Male	Female	18 to 29	30 to 44	45 to 59	60 plus
Unable to ask for small favours	0.003	0.004	0.003	0.008	0.004	0.006	0.007
Has no support in a time of crisis	0.002	0.005	0.004	0.005	0.004	0.007	0.007
Could not raise $2000 within a week	0.004	0.006	0.004	0.010	0.007	0.007	0.007
Did not provide work or support for ex-household persons in the last 4 weeks	0.006	0.009	0.007	0.017	0.009	0.011	0.012
Did not do unpaid voluntary work in the last 12 months	0.007	0.007	0.010	0.014	0.012	0.012	0.010
Did not personally donate any money in the last 12 months	0.005	0.007	0.005	0.013	0.008	0.010	0.012
Did not provide care to family member or others in last 4 weeks	0.004	0.006	0.006	0.010	0.008	0.011	0.008
Does not know someone in an organisation for information and advice	0.004	0.006	0.006	0.014	0.009	0.008	0.012
No informal social activities in the last 3 months	0.003	0.004	0.003	0.004	0.003	0.005	0.005
No involvement in social or support group in the last 12 months	0.006	0.007	0.007	0.013	0.011	0.008	0.010
Did not attend a community event in the past six months	0.005	0.008	0.007	0.018	0.010	0.009	0.010
Did not attend a sporting event in the last 12 months	0.006	0.009	0.008	0.015	0.011	0.014	0.011
No involvement in governance or citizenship group in the last 12 months	0.004	0.006	0.006	0.009	0.009	0.009	0.007
No involvement in civic activity in the last 12 months	0.006	0.008	0.009	0.012	0.011	0.012	0.010
Has not been active in project in the local area	0.005	0.007	0.007	0.012	0.009	0.010	0.010
Does not have an ex-household family member they are close to and can confide in	0.004	0.006	0.004	0.009	0.008	0.008	0.006
Does not have a friend who they are close to and can confide in	0.004	0.005	0.004	0.007	0.005	0.007	0.011

C.3(b) Standard errors for proportions given in table 4.3(b)

	Time in dwelling (years)			Country of birth		Remoteness	
	5 or more	1 to 4	1 or less	Australia	Overseas	Regional/ Remote	Major city
Unable to ask for small favours	0.004	0.007	0.007	0.004	0.006	0.005	0.003
Has no support in a time of crisis	0.004	0.006	0.007	0.003	0.006	0.004	0.002
Could not raise $2000 within a week	0.005	0.008	0.010	0.006	0.009	0.007	0.005
Did not provide work or support for ex-household persons in the last 4 weeks	0.010	0.011	0.015	0.007	0.010	0.011	0.007
Did not do unpaid voluntary work in the last 12 months	0.008	0.015	0.015	0.009	0.011	0.014	0.008
Did not personally donate any money in the last 12 months	0.007	0.009	0.013	0.007	0.010	0.008	0.007
Did not provide care to family member or others in last 4 weeks	0.006	0.010	0.011	0.005	0.008	0.008	0.005
Does not know someone in an organisation for information and advice	0.006	0.010	0.013	0.005	0.014	0.010	0.006
No informal social activities in the last 3 months	0.004	0.003	0.007	0.002	0.006	0.003	0.003
No involvement in social or support group in the last 12 months	0.006	0.011	0.017	0.007	0.011	0.009	0.008
Did not attend a community event in the past six months	0.008	0.011	0.014	0.007	0.011	0.011	0.007
Did not attend a sporting event in the last 12 months	0.008	0.010	0.018	0.007	0.015	0.009	0.009
No involvement in governance or citizenship group in the last 12 months	0.004	0.010	0.010	0.006	0.007	0.008	0.005
No involvement in civic activity in the last 12 months	0.009	0.011	0.016	0.010	0.011	0.013	0.008
Has not been active in project in the local area	0.006	0.010	0.011	0.006	0.010	0.008	0.007
Does not have an ex-household family member they are close to and can confide in	0.006	0.007	0.010	0.003	0.010	0.006	0.006
Does not have a friend who they are close to and can confide in	0.005	0.006	0.009	0.005	0.009	0.007	0.005

C.4 Standard errors for mean values of composite items given in table 6.1

	Total	Sex		Age			
		Male	Female	18 to 29	30 to 44	45 to 59	60 plus
Social capital (Comp. A)	0.440	0.649	0.616	1.153	1.062	1.111	1.209
Support (Comp. 1)	0.540	0.786	0.750	1.240	0.801	1.326	1.699
Community involvement (Comp. 2)	0.566	0.661	0.795	1.288	1.100	1.219	1.007
Trust (Comp. 3)	0.677	0.948	0.915	1.210	1.025	1.461	0.647
Feelings of safety (Comp. 4)	0.550	0.683	0.841	1.717	0.994	0.923	1.076
Network type (Comp. 5)	0.734	1.153	0.843	1.543	0.977	1.358	1.176

C.5 Standard errors for mean values of composite items given in table 6.2

	Time in dwelling (years)			Country of birth		Remoteness	
	5 or more	1 to 4	1 or less	Australia	Overseas	Regional/ Remote	Major city
Social capital (Comp. A)	0.618	0.868	1.291	0.675	1.398	1.406	0.687
Support (Comp. 1)	0.802	1.008	1.425	0.561	1.572	0.982	0.738
Community involvement (Comp. 2)	0.686	1.196	1.556	0.792	1.258	1.264	0.778
Trust (Comp. 3)	0.798	1.075	1.342	0.717	1.096	1.171	0.805
Feelings of safety (Comp. 4)	0.868	0.776	1.502	0.583	1.216	0.726	0.742
Network type (Comp. 5)	1.053	1.299	1.344	0.788	1.368	1.145	0.845

D. ALTERNATIVE FACTOR ANALYSES

Two alternative factor analyses are shown in this appendix.

Table D.1 replicates the factor analysis presented in Section 5, table 5.1 (that uses binary measures of social capital), using both categorical (where applicable) and binary measures of social capital.

The main difference in the results is that the alternative factor analysis excludes the separate factor for having either a low or high proportion of friends with similar characteristics to oneself (*Network type*). This shows that it is the extreme values that can often best capture individual dimensions of low social capital.

This alternative factor analysis found that the first four factors were estimated to load on the same variables as the binary social capital analysis of Section 5. The single exception is the exclusion of the variable 'Does not feel able to have a say with family and friends on important issues' from the first factor.

Table D.2 presents the alternative one-factor analysis on the binary measures of social capital that were used in the five-factor analysis presented in table 5.1. These factor loadings are used to create the single composite item labelled *Comp. A* in Section 6.

D.1 Factor loadings and eigenvalues for factor analysis of categorical and binary social capital data items

	Factor 1	Factor 2	Factor 3	Factor 4	Comm-unality
Has no support in a time of crisis	**0.73**	0.14	0.10	0.06	0.57
Does not have a friend they are close to or can confide in	**0.68**	0.20	0.09	0.10	0.53
Unable to ask for small favours	**0.68**	0.14	0.08	0.10	0.49
No social activities in the last 3 months	**0.68**	0.35	0.05	0.17	0.61
Does not have an ex-household family member they are close to or can confide in	**0.59**	0.08	0.15	–0.02	0.38
Frequency of other forms of contact with ex-household family and friends	**0.43**	0.06	–0.04	–0.04	0.19
Frequency of face-to-face contact with ex-household family and friends	**0.40**	0.06	–0.02	–0.03	0.17
Did not do unpaid voluntary work in the last 12 months	0.20	**0.63**	0.05	0.06	0.45
No involvement in civic activity in the last 12 months	0.15	**0.61**	–0.01	0.01	0.40
Has not been active in a project in the local area	0.13	**0.57**	0.00	0.11	0.35
No involvement in social or support group in the last 12 months	0.27	**0.55**	0.06	0.06	0.38
No involvement in governance or citizenship group in the last 12 months	0.13	**0.54**	0.01	0.11	0.32
Did not provide work or support for ex-household persons in the last 4 weeks	0.22	**0.53**	–0.05	–0.07	0.34
Did not attend a community event in the past 6 months	0.31	**0.52**	0.04	0.08	0.37
Does not know someone in an organisation for information and advice	0.32	**0.49**	0.12	0.12	0.37
Did not personally donate money in the last 12 months	0.20	**0.45**	0.08	0.00	0.25
Did not provide care to family member or others in last 4 weeks	–0.05	**0.42**	0.00	–0.06	0.19
Level of trust in institutions – police in local area	0.06	0.04	**0.86**	0.08	0.74
Level of trust in institutions – police outside local area	0.06	0.03	**0.83**	0.05	0.70
Level of trust in institutions – hospitals	0.07	–0.08	**0.60**	0.09	0.38
Level of trust in institutions – doctor	0.11	0.03	**0.55**	0.07	0.33
Level of generalised trust	0.18	0.08	**0.46**	0.14	0.27
Feelings of safety at home alone during day	0.06	0.03	0.06	**0.93**	0.87
Feelings of safety walking alone in local area after dark	0.12	0.06	0.09	**0.85**	0.76
Feelings of safety at home alone after dark	–0.01	0.01	0.02	**0.75**	0.57
Could not raise $2000 within a week	0.38	0.17	0.13	0.25	0.19
Does not feel able to have a say with family and friends on important issues	0.36	0.01	0.13	0.15	0.25
Did not attend a sporting event in the last 12 months	0.35	0.20	–0.02	0.18	0.16
Proportion of friends of similar age	0.34	–0.18	0.11	0.05	0.17
Does not feel able to have a say within community on important issues	0.28	0.18	0.15	0.16	0.09
Proportion of friends with roughly the same level of education	0.19	–0.19	0.12	0.06	0.04
Proportion of friends of same ethnic background	0.07	–0.15	0.12	0.05	0.16
Eigenvalue	5.93	2.63	1.93	1.55	

D.2 Factor loading and eigenvalues for factor analysis of binary social capital data items – One component

	Comp. A	Commun.
No social activities in the last 3 months	0.76	0.57
Does not have a friend they are close to or can confide in	0.67	0.45
Has no support in a time of crisis	0.64	0.41
Unable to ask for small favours	0.60	0.36
Does not know someone in an organisation for information and advice	0.55	0.30
Did not attend a community event in the past 6 months	0.55	0.30
Does not have an ex-household family member they are close to or can confide in	0.53	0.28
No involvement in social or support group in the last 12 months	0.53	0.28
Feels unsafe or very unsafe at home alone during day	0.52	0.27
Did not do unpaid voluntary work in the last 12 months	0.52	0.27
Could not raise $2000 within a week	0.50	0.25
Low or high proportion of friends of similar age	0.47	0.22
Feels unsafe or very unsafe at home alone after dark	0.46	0.22
Does not feel able to have a say with family and friends on important issues	0.46	0.21
No involvement in governance or citizenship group in the last 12 months	0.42	0.18
Frequency of other forms of contact with ex-household family and friends monthly or less	0.42	0.18
No involvement in civic activity in the last 12 months	0.42	0.18
Did not personally donate money in the last 12 months	0.42	0.17
Has not been active in a project in the local area	0.42	0.17
Low trust in institutions – police in local area	0.41	0.17
Did not attend a sporting event in the last 12 months	0.41	0.16
Low generalised trust	0.39	0.16
Low trust in institutions – police outside local area	0.39	0.15
Did not provide work or support for ex-household persons in the last 4 weeks	0.39	0.15
Frequency of face-to-face contact with ex-household family and friends monthly or less	0.36	0.13
Low trust in institutions – doctor	0.34	0.12
Low or high proportion of friends with roughly the same level of education	0.33	0.11
Low trust in institutions – hospitals	0.31	0.10
Feels unsafe or very unsafe walking alone in local area after dark	0.31	0.10
Does not feel able to have a say within community on important issues	0.29	0.08
Low or high proportion of friends of same ethnic background	0.29	0.08
Did not provide care to family member or others in last 4 weeks	0.15	0.02
Eigenvalue	6.79	

Source: Customised calculations from the 2006 GSS

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