

Measuring Social Capital: Towards a standardised approach

Wendy Stone & Jody Hughes
Australian Institute of Family Studies

Wendy Stone
Research Fellow and Project Manager
wendy.stone@aifs.gov.au
03 9214 7820

Paper presented at the 2002 Australasian Evaluation Society International
Conference October/November 2002 – Wollongong Australia. www.aes.asn.au

Abstract

'Social capital' is often equated with notions of strong or prosperous communities and has been heralded as the glue that holds communities together. Yet, it is an empirically elusive concept and still little is known about social capital in practice – particularly as it features in different types of families and communities. As a result the tasks of measuring, evaluating and understanding how social capital might best be facilitated in policy or service provision remain problematic. This paper briefly describes current work being undertaken by the authors that attempts to overcome some of these problems. The paper describes a conceptual framework for social capital measurement and the development of various approaches to analysis useful in different types of evaluation and research settings. This work is used as a departure point for a brief discussion of some key issues raised by this and other work in standardising social capital measurement for evaluation research.

Introduction

Social capital can be understood as networks of social relations characterised by norms of trust and reciprocity, that can facilitate outcomes at varying social scales, from program and practice levels to the level of communities and nation states. The essence of social capital is quality social relations. It is the quality of relationships, understood through the use of the concept 'social capital', which affects the capacity of people to come together to collectively resolve problems they face in common (Stewart-Weeks and Richardson 1998: 2), and achieve outcomes of mutual benefit (Lochner et al 1999). Thus, social capital can be understood as a resource to collective action, which may lead to a broad range of outcomes, of varying social scale.

Currently there is much emphasis within policy and practice upon 'building social capital'. This interest stems primarily from the wide-spread shift that has occurred, away from crisis intervention, towards prevention and early intervention. For example, in Australian public policy, social capital is considered central to reversing the tide of community decline and as an essential component of 'community strengths'.

Additionally, with the same focus upon prevention and early intervention, service providers are increasingly aware of the role they might play in enhancing the social capital of 'clients' and the communities in which they operate, by enhancing the quality of social relationships through changing the way services are delivered. This awareness extends the role of services from a model in which they are service providers only, to one in which organisations make explicit their capacity to facilitate change within the lives of individuals, families and communities.

The policy and practice emphasis upon building, facilitating and promoting social capital as a means of achieving prevention and early intervention brings into sharp relief the need for measures of social capital. Specifically, the general aim of promoting social capital implies a need to first benchmark existing 'stocks' of social capital, evaluate over time the relationship between policy or practice and changes in 'levels' or types of social capital, and monitor changes to social capital within various settings – for example from micro analyses within one program, to a whole of community evaluation. Clearly, to maximise the strength of a developing evidence base around the relationship between policy, practice and social capital, standardised approaches and measures of social capital are essential.

Yet, despite an increasing volume of research being undertaken on conceptualising and measuring social capital, there remains a dearth of information or guidance about how such measures and frameworks can best be used in policy and practice evaluation, or how a standardised approach can be achieved. Indeed, one of the inherent difficulties in reaching a standardised approach is that social capital varies in type and may manifest in different ways in different settings. As well, the multidimensionality of the concept raises questions about the validity of using any single index to measure social capital in any given setting.

This paper summarises recent work¹ undertaken by the authors as part of the *Families, Social Capital & Citizenship* project² being undertaken by the Australian Institute of Family Studies to highlight key issues for measuring social capital in a standardised approach. This work establishes first of all a conceptual framework for measuring social capital that aims to overcome many of the problems evident in previous social capital research, and develops and tests various measures that are useful in different types of settings and for different types of evaluation research. After briefly describing these approaches, this paper describes some of the key issues raised.

A conceptual framework for measuring social capital

The assumption underlining this paper is that there is no use measuring social capital if the measures of social capital that are used are poorly conceptualised or empirically flawed.

In previous work, we have identified key problems which have led to confusion about the meaning, measurement, outcomes and ultimately the relevance of social capital. These are: first, social capital measurement and ‘practice’ is rarely theoretically informed; second, empirical work rarely understands social capital properly as a resource to collective action; third, there is a general failure in empirical work to recognise social capital as a multidimensional concept; and finally, there is a general failure to recognise that social capital will vary by network type and social scale (see Stone 2001; Stone and Hughes 2001).

In response, a conceptual framework for measuring social capital was developed within the *Families, Social Capital and Citizenship* project (for detailed discussion see Stone 2001). The framework begins from the definition of social capital set out above, and conceptualises social capital as a multidimensional concept comprising networks, trust and reciprocity. The framework emphasises both the *quality* and *structure* of social relations. Key measures of social capital include norms and various network characteristics, in different network types. The framework is summarised at Figure 1.

Network types and the norms that govern them

The framework distinguishes between social capital within different sorts of networks which exist at different social scales. Within each of these network types and social scales, norms of trust and reciprocity are identified as key elements of social capital. We expect three types of norms. First are norms within ‘informal networks’ among familiars, such as family and friendship networks. Second are norms that exist among ‘generalised relations’, concerning the extent to which trust and reciprocity are extended to strangers or other members of civic groups, often on the basis of expectations of behaviour or a sense of shared values. Third are the norms governing people’s confidence (trust) in institutions, concerning fairness of rules and official procedures, in what we call ‘institutional relations’.

The structure of social relations: network characteristics

In the centre of the diagram is a column which summarises measures of the structure of the social relations in which norms operate, termed ‘network characteristics’. These characteristics include the scope or extent of social networks (see, for example, Paxton 1999), the density of social ties (Coleman 1988; Krishna and Uphoff 1999), and the diversity of social relations (Krishna and Uphoff 1999).

We expect that different combinations of network characteristics will affect the overall capability of social capital. For example, various combinations of these network characteristics reflect in some ways the recent distinctions made in social capital theory and research between ‘bonding’, ‘bridging’ and ‘linking’ social capital (for discussion see Putnam 1998; Narayan 1999; Woolcock 2000). Bonding social capital refers to trust and reciprocity in dense, closed and/or homogenous networks and helps the process of ‘getting by’ in life on a daily

¹ In particular, this paper draws heavily upon Stone 2001; Stone and Hughes 2000; and Stone and Hughes 2002. Each is available in full text on the Institute’s web site (www.aifs.gov.au) or by contacting the authors.

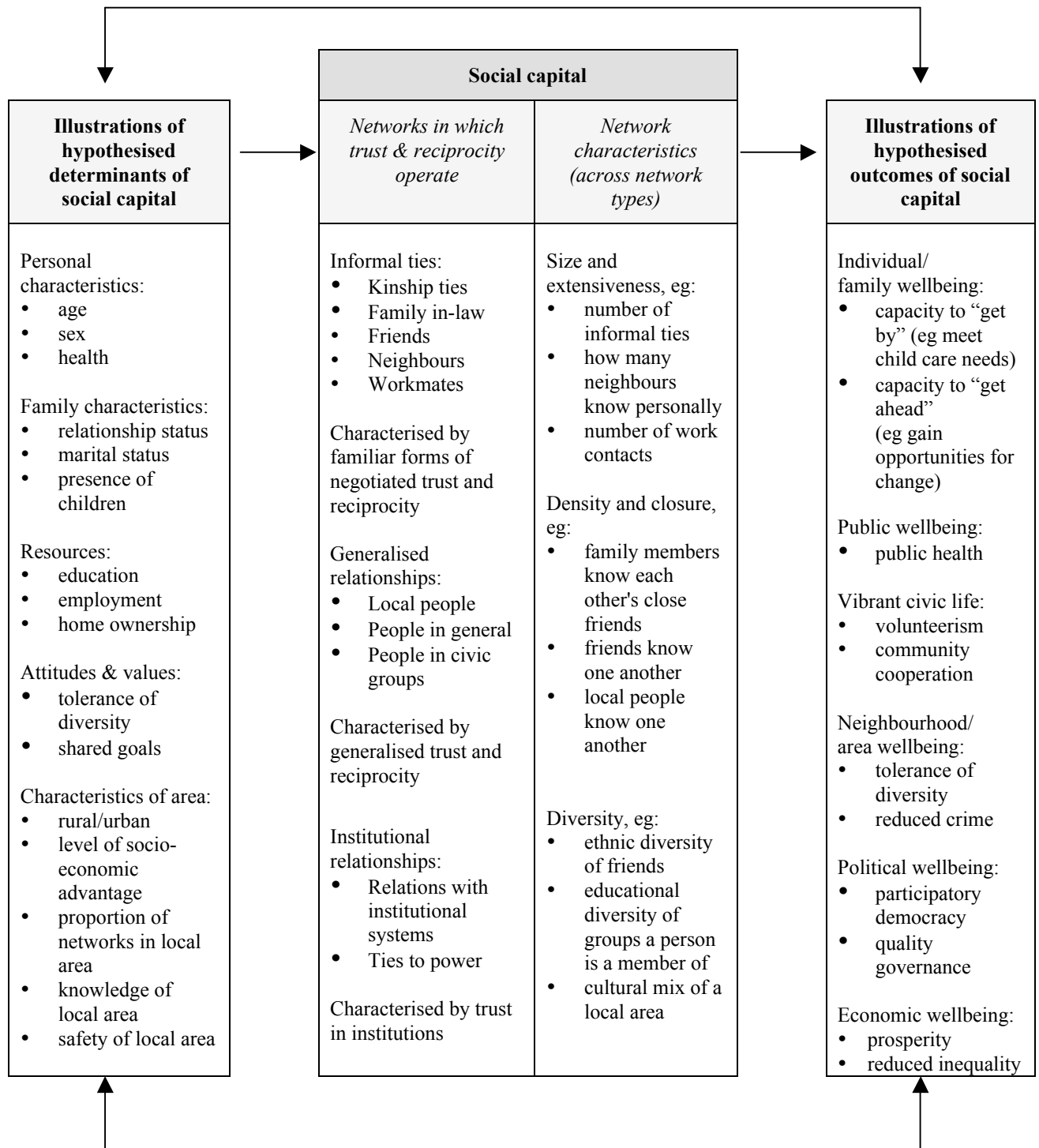
² For a project summary, see: <http://www.aifs.gov.au/institute/research/progC.html#capital>

basis. In contrast, 'getting ahead' tends to be facilitated through bridging social capital involving overlapping networks which may make accessible the resources and opportunities which exist in one network to a member of another. Heterogeneity or diversity of network members (in informal or formal groups) is argued to enhance the bridging capabilities of social capital. Finally, linking social capital involves social relations with those in authority, which might be used to garner resources or power.

Social capital, its determinants and outcomes

As well as core measures of social capital, Figure 1 presents examples of hypothesised determinants and outcomes of social capital (in the far left and far right columns of the diagram), many of which reflect key concerns of researchers and policy makers. Some of the determinants listed in the far left column of the figure also feature as outcomes in the far right column. This is because social capital, like other 'capitals', is argued to be both facilitated by certain factors, and in turn produce various outcomes. These outcomes may serve to further facilitate social capital. In the example of local area safety, a sense of safety in an area might facilitate residents becoming acquainted, which in turn might enable them to act together, and further facilitate reduced crime (either directly, through working on a joint project about crime reduction, or indirectly, by informally looking out for one another's property, and the like). This is an example of a cumulative causal cycle, something which is pervasive in the social sciences but is seldom discussed because of the analytical complexities it poses.

Figure 1. Summary of core measures of social capital, and illustrative examples of its determinants and outcomes



Source: Stone and Hughes 2002.

Analytic approaches to measuring social capital

Using this framework, a survey was conducted by the Australian Institute of Family Studies in 2000–2001, involving a national random sample of 1506 households (with at least one person aged 18 years or older).³ The survey measured each of the core components of social capital – trust, reciprocity, size, density and diversity – within different types of networks and social arenas, reflecting the conceptual framework presented above.

Two approaches to measuring social capital useful in different types of settings and for different types of research and evaluation were developed and validated, described here in turn.

A network based approach to social capital analysis

The first approach was to construct measures of the core elements of social capital – measures of norms, networks and network characteristics – within each of informal, generalised and institutional realms separately. The rationales for this approach were twofold. First, as discussed above, we expect norms and network characteristics to vary in different types of relationships and social realms. The second was that some for research questions the focus will be on particular social realms, such as informal networks, neighbourhoods, nation-states, or institutions. In these cases additional information about social capital in other realms is unnecessary.

As described fully in Stone and Hughes (2002), following a series of reliability and validity tests, several key measures were constructed of social capital within informal, generalised and institutional realms. These are summarised at Table 1 and include measures of network size, density, diversity (where reliable) and quality (in terms of the extent to which networks are characterised by norms of trust and reciprocity). We conclude that these measures are most useful where an evaluation or research question is concerned with one realm only, for example at the level of families or of local communities, rather than for those questions in which social capital measures at each social realm may be important.

They are also useful when the focus of interest is a particular determinant or outcome of social capital that does not have a consistent relationship with social capital across all network types or social scales. For example, living in an urban or rural area is positively related to trust and reciprocity in informal networks and negatively related to confidence in institutions. In such cases (for example, where one is interested in urban and rural differences) it is not appropriate to rely on a single measure of trust and reciprocity that collapses differences between informal, general and institutional realms. Because as the relationships counteract each other, there would appear to be no urban/rural differences in social capital (See Stone and Hughes 2002:38).

Table 1. Measures of core dimensions of social capital within informal, generalised and institutional realms.

<i>Informal realm</i>	<i>Generalised realm</i>	<i>Institutional realm</i>
Informal norms (trust and reciprocity among familiaris)	Generalised norms (trust and reciprocity among people in local area and people in general)	Institutional confidence (confidence in 10 institutions)
Network size (total number of informal ties)	Group memberships	Ties to institutions (number of types of institutional ties)
Network density	Diversity (values in local area)	
Network diversity (education & ethnicity)		

A single measure approach to social capital analysis

The second approach examines whether all the different elements of social capital can be summarised adequately in one scale or measure. Two methods aimed at grouping all social capital measures together to provide an

³ Interviews were conducted via the telephone using the Institute’s Computer Assisted Telephone Interviewing system (CATI), and were 32 minutes duration on average. For more information on survey methodology and fieldwork outcomes see the *Families Social Capital and Citizenship Fieldwork Report* (Hughes and Stone 2002) available at <http://www.aifs.org.au>.

‘overall’ social capital measure were developed and tested (also described fully in Stone and Hughes 2002). The rationale for constructing a single measure of social capital is the need for practical, simple measures which allow us to talk about the ‘total’ stock of social capital available to an individual or community.

(i) A single index approach

The first method was variable based. It examined how all the various elements of social capital within different network types operate together, and whether they can form a reliable and meaningful overall index of social capital. Following a series of factor analyses and reliability tests, we concluded that rather than forming a single index of social capital, the underlying structure of the data was such that (in general) factors of particular dimensions were found that cross-cut social realms. That is, items about trust and reciprocity cohered together in one factor, although these items referred to trust in informal, generalised and institutional arenas. Similarly, items measuring network size grouped together to form an overall scale of network size or level of connectedness. The exception to this rule was that our measures of diversity did not cohere together in one factor that crossed social realms, but this is likely to be because we asked about different aspects of diversity in different realms (ethnic and socio-economic diversity in informal networks and diversity of values at the neighbourhood level) (we only asked about density in the informal realm).

Most importantly, we do not find support for the idea that we can readily measure social capital using one index. But we can think about composite measures of particular dimensions of social capital that cross-cut the manly spheres of informal, general and institutional life. While these measures may be useful in and of themselves, given they each measured only dimension of social capital (for example trust or networks), we investigated alternate methods for grouping together various social capital measures within a single measure that reflected social capital’s multidimensionality.

Table 2. Dimensions of social capital that cross social realms

<i>Scales and scale items</i>	Alpha	Mean scale score
Norms of trust and reciprocity	.52	6.78
<i>Informal social capital</i>		
<i>Generalised social capital</i>		
<i>Institutional social capital</i>		
Network size or level of connectedness	.11	
<i>Number informal ties</i>		
<i>Number group memberships</i>		
<i>Number institutional ties</i>		

Source: *Families, Social Capital & Citizenship* survey 2001

(ii) A typology approach

An alternative approach was to use cluster analysis, which groups cases, or respondents, rather than variables. The method attempts to identify particular sub-groups of respondents in the sample with a distinctive social capital profile. The advantage of this approach is that we can produce a single measure of social capital but one that also highlights the multidimensional nature of the concept. This approach is driven by the expectation that we will find clusters of people with different network characteristics and whose levels of trust and reciprocity will vary by network type. Using this technique we were able to identify several key social capital ‘types’, summarised at Table 2 (and discussed fully in Stone and Hughes 2002).

Table 2. Social capital typology, based on individual measures of social capital within informal, generalised and institutional realms.

<i>A four cluster social capital typology</i>	
Cluster 1	Strong norms, civic connections
Cluster 2	Social capital rich
Cluster 3	Informal only, or social capital limited
Cluster 4	Social capital poor

Validity testing of this approach confirmed that while some may have extensive connections and high levels of trust and reciprocity across the board (the ‘social capital rich’) and some may have few connections and low levels of trust and reciprocity across the board (‘social capital poor’), others have high quality relationships in one sphere of life and weaker relationships in another. For example, about 20 per cent of respondents in our survey had extensive informal networks and high levels of trust and reciprocity in these networks, but few ties to

community groups, organisations or institutions, and low levels of generalised trust and reciprocity (Stone and Hughes 2002:25).

It is this complex interaction of variables that is able to be captured within the typology approach. The typology approach to analysis is therefore most useful for those types of research and evaluation questions in which all of the various dimensions of social capital across different social realms are important to take into account – but where it is likely the distribution of those characteristics will vary for particular groups.

Key issues in measuring social capital in evaluation research

In the previous sections we described a conceptual framework for measuring social capital and summarised the development and testing of various social capital measures, useful in different types of research and evaluation settings. This framework enables a theorised system for measuring social capital.

However, determining which measures of social capital are most useful in any given setting – and how to best use these measures in any given evaluation or research context highlights other issues such as data availability, scale of analysis, and type of methodology. To conclude, the paper briefly identifies some of the key issues to be addressed in measuring social capital in an evaluation context.

A theorised approach to social capital measurement

First is the need for a theorised approach, that recognises social capital as a multidimensional concept, that can operate within a range of social realms. Conceptualising social capital in this way enables proper development of measures of social capital that can be separated from its outcomes and determinants – as outlined at Figure 1. By doing so, the relative impact of any program or intervention within an evaluation context is able to be monitored in relation to social capital, without the possibility that any given determinant or outcome of social capital will be confused for social capital itself (a common tautological trap)(see Stone 2001 for discussion). With respect to social capital at a community level specifically, this approach enables the social aspects of sustainable communities, for example, to be understood and disentangled in a research and practical sense from other factors, such as economic resources or infrastructure.

Choosing the right approach: context specific versus a single measure

Within social capital research and evaluation there is likely to be a tension between the multi-dimensional nature of social capital and the policy and practice need for simple, cost-effective, social capital indicators. On the one hand, social capital theory suggests we can expect different types of relationships and norms to operate among different network types. This implies the need for a relatively wide range of social capital measures. On the other hand, some types of policy or research question call for a single measure or at least a more simple framework for measuring social capital at micro and/or macro levels.

As described above, different types of analytic techniques are appropriate for different types of research questions. Choosing the most relevant and efficient measurement approach will depend on the research and evaluation setting. At a minimum, or where data and/or resources are limited, adhering to the principles of a common framework such as the framework set out at Figure 1, above, enables a standard approach, applicable to any setting.

Aggregation and unit of analysis

Although social capital by definition is not the *property* of an individual, social capital can nonetheless be thought of as a resource available to either individuals or groups. Hence an individual's 'stock' of social capital (the social relations which that individual can draw upon) can be measured via questionnaire/survey instruments asking about individual circumstances (as was done in the *Families, Social Capital and Citizenship* project).

Individual level data can also be aggregated to provide a picture of the wealth of social capital in a particular community or communities. However, the aggregation of individual level data to the community level raises two complex issues for social capital measurement. The first of these is the need to define the 'community' to which data is being aggregated, and its boundaries. This raises the second measurement issue in relation to the aggregation of social capital data, which is that any aggregation of data (or presentation of those data) must enable analysis of the *distribution* of social capital within any group or community, as well as an overall assessment of the 'level' of social capital for that group or community. It is important to understand the extent to which residents within a community (of any type) might, for example, be 'excluded' from that community and its collective resources.

The survey as a vehicle for social capital research

The approaches to social capital measurement outlined in this paper are survey based. The use of the survey as a vehicle for measuring social capital in family and community life, such as in the *Families, Social Capital & Citizenship* survey, means that data is collected at the level of an individual. Key advantages of the approach are that we are able to gather detailed maps of individual networks, as well as judgements about the quality of each of these network based relationships. This approach provides an indication of the level and distribution of social capital within an area, as well as a detailed picture of social capital in the lives of individuals and families.

The individual-oriented approach does have limitations, however. The main one is that the information gathered via this method is restricted to respondents' own perceptions and experience – it does not include 'objectively' measured data or information from other perspectives, which might provide a means for filling in some of the 'gaps' in the table above. In particular, existing community data may also be useful for informing upon social capital questions in future research, as a compliment to these measures. At a minimum, such information could be used to help interpret relationships found between core social capital measures (such as those from the survey data, above, on trust and reciprocity), and various other outcomes (such as public health within an area). This approach is often taken in community-centred methodologies – another method sometimes used for social capital research (see, for example, Kreuter et al. 1999; Onyx and Bullen 2000).

Links to existing data and national/local indicators

This leads to the final point that is where possible, understandings of how social capital relates to a host of other factors, such as key predictors or outcomes, will be enhanced by linking survey data to existing data at either an individual, local or national level. This includes national statistics and large scale surveys. As well, in evaluation research this may include links to existing program or practice level data that is already collected.

Linking exploratory data with standardised data in this way will ultimately enable the greatest understanding of social capital in relation to other factors, as well as providing a strong evidence base for establishing the extent to which other types of measures can be used as indicators of social capital in some settings, where survey data is not available or possible. This point reinforces the need for an ongoing critical, reflexive relationship between social capital measures and other factors, to ascertain the best practice use of measures, and the ways and contexts in which such measures are most effective for evaluation research.

References

- Coleman, J. (1988) 'Social capital in the creation of human capital', *American Journal of Sociology* 94:S95-120.
- Hughes, J. and Stone, W. (2002) 'Families, Social Capital & Citizenship Project: Fieldwork Report', Australian Institute of Family Studies, Melbourne (web only). <http://www.aifs.gov.au/institute/pubs/fm2000/fm56.html>
- Kreuter, M. W., Young, L. A. and Lezin, N. A. (1999) *Measuring Social Capital in Small Communities*, Study conducted by Health 2000 Inc., Atlanta GA in cooperation with St. Louis School of Public Health, Atlanta, Georgia.
- of collective action for conserving and developing watersheds in Rajasthan, India*, Social Capital Initiative Working Paper 13, World Bank, Washington DC.
- Lochner, K., Kawachi, I. and Kennedy, B. P. (1999) 'Social capital: a guide to its measurement', *Health and Place*, No. 5, pp. 259-270.
- Narayan, D. (1999) *Bonds and Bridges: Social capital and poverty*, World Bank, Washington DC.
- Onyx, J. and Bullen, P. (2000) 'Sources of social capital', in I. Winter (ed.) *Social Capital and Public Policy in Australia*, Australian Institute of Family Studies, Melbourne, pp. 105-134.
- Paxton, P. (1999) 'Is social capital declining in the United States? A multiple indicator assessment', *American Journal of Sociology*, Vol. 105, No. 1, pp. 88-127.
- Putnam, R. D. (1998) 'Foreword', *Housing Policy Debate*, Vol. 9, No. 1, pp. V-viii.
- Stewart-Weeks, M. and C. Richardson (eds.) (1998) *Social Capital Stories: How 12 Australian households live their lives*, Policy Monograph 42, The Centre for Independent Studies, Sydney.
- Stone, W. (2001) *Measuring Social Capital: Towards a theoretically informed measurement framework for researching social capital in family and community life*, Research Paper No. 24, Australian Institute of Family Studies, Melbourne. <http://www.aifs.gov.au/institute/pubs/stone.html>
- Stone, W. & Hughes, J. (2000) 'What role for social capital in family policy?', *Family Matters*, no. 56, pp. 20-27. <http://www.aifs.gov.au/institute/pubs/fm2000/fm56.html>
- Stone, W. & Hughes, J. (2002) *Social Capital: Empirical meaning and measurement validity*, Research Paper 27, Australian Institute of Family Studies, Melbourne. <http://www.aifs.gov.au/institute/pubs/stone2.html>
- Woolcock, M. (2000) 'Why should we care about social capital?', *Canberra Bulletin of Public Administration*, No. 98, pp. 17-19.