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# Measuring Social Capital in Five Communities

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This article develops an empirically grounded definition of social capital. Drawing on the work of Coleman and Putnam and others, the article discusses social capital in terms of participation in networks, reciprocity, trust, social norms, the commons, and social agency. Potential items to measure these elements were developed in an empirical study. A questionnaire containing 68 potential items was administered to approximately 1,200 adults in five Australian communities: two rural communities, two outer metropolitan areas, and one inner-city area of Sydney. The responses were subjected to extensive statistical analysis involving a hierarchical factor analysis, which identified a single general underlying factor and eight orthogonal specific factors, accounting for 49% of the variance. Three of the specific factors identified were community participation, agency, and trust. The five communities differed significantly in terms of the general and specific factors.

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This article adds to current attempts to develop an empirically grounded definition of social capital. From the literature, it is possible to identify a number of proposed conceptual component elements that individually and together are believed to constitute social capital. From this analysis, a set of specific items were designed to provide a (partial) empirical test of the theoretical components of social capital. The theoretical implications of the empirical analysis are then explored.

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Social capital is a slippery but nonetheless important concept: slippery because it has been poorly defined, important because it refers to the basic raw material of civil society. The concept has its roots in several theoretical traditions. Putnam, who drew the concept from Coleman, defined social capital as “those features of social organization, such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions” (Putnam, 1993) or as “features of social life—networks, norms and trust—that enable participants to act together more effectively to pursue shared objectives” (Putnam, 1995).

All uses of the concept refer to more or less dense interlocking networks of relationships between individuals and groups (Portes, 1998; Putnam, 1993; Woolcock, 1998). People engage with others through a variety of lateral associations. These associations must be both voluntary and equal. They represent an expression of freely formed mutuality (Latham, 1997). Social capital cannot be generated by individuals acting on their own in isolation. It depends on a proclivity for sociability, but a spontaneous sociability, a capacity to form new associations and to cooperate within the terms of reference they establish (Fukuyama, 1995). Putnam (1993) made a strong distinction between horizontal and vertical relationships. In southern Italy, the role of the Catholic Church, with its heavy emphasis on hierarchy, discouraged lay initiative and undermined the development of social capital. Wherever vertical relationships dominate, “citizens have some of their rights of participation and choice replaced by the exercise of authority and control” (Latham, 1997, p. 6).

A second common theme in the literature on social capital is reciprocity. This is not the immediate and formally accounted exchange of a legal or business contract but a combination of short-term altruism and long-term self-interest (Taylor, 1982), or what de Toqueville called “self interest rightly understood.” The individual provides a service to others, or acts for the benefit of others at a personal cost, but in the general expectation that this kindness will be returned at some undefined time in the future in case of need. In a community where reciprocity is strong, people care for each other’s interests. At the psychological level, this refers to prosocial behavior (Reno, Cialdini, & Kallgren, 1993).

Another common theme refers to trust. Trust entails a willingness to take risks in a social context based on a sense of confidence that others will respond as expected and will act in mutually supportive ways, or at least that others do not intend harm. As Fukuyama (1995) defined it,

Trust is the expectation that arises within a community of regular, honest and cooperative behavior, based on commonly shared norms, on the part of other members of that community. Those norms can be about deep “value” questions like the nature of God or justice, but they also encompass secular norms like professional standards and codes of behavior. (p. 26)

Misztral (1996) defines trust as a belief that the results of somebody’s intended action will be appropriate from one’s own point of view. She identifies three forms of trust to match three forms of social order. Stable order accounts for the predictability, reliability, and legibility of the social reality. “Trust, understood as a specific type of

habitudes, allows us to account for the fact that social agents perceive the social world as stable and . . . operates through the rules of interaction, rules of distancing and rules of remembering” (p. 11). Cohesive order involves trust based on familiarity, bonds of friendship, and common faith and values. Collaborative order involves trust as a device for coping with the freedom of others. Trust allows collaboration to occur in the absence of sanctions and rewards.

Putnam (1993) and Coleman (1988) both refer explicitly to social norms. Social norms provide a form of informal social control that obviates the necessity for more formal, institutionalized legal sanctions. Social norms are generally unwritten but commonly understood formulas both for determining what patterns of behavior are expected in a given social context and for defining what forms of behavior are valued or socially approved. Injunctive social norms in particular can have a powerful effect in increasing prosocial behavior and preventing antisocial behavior (Reno et al., 1993). Both Coleman (1988) and Putnam (1995) argue that in neighborhoods where social capital is high, there is little crime and little need for formal policing. On the other hand, where there is a low level of trust and few social norms, people will cooperate in joint action only under a system of formal rules and regulations, which have to be negotiated, agreed to, litigated, and enforced, sometimes by coercive means, leading to expensive legal costs (Fukuyama, 1995).

Social capital draws much of its philosophical underpinning from a communitarian position (Etzioni, 1988, 1996; Taylor, 1982). Community is essential. As Etzioni (1988) states, “The individual and the community make each other and require each other” (p. 9). The individual is motivated not by utilitarian self-interest in the pursuit of pleasure but by a complex of social and individual goals. Morality is important in understanding individual choices, where morality is socially constructed. The combined effect of trust, networks, norms, and reciprocity creates a strong community, with shared ownership over resources known as the commons. As long as community is strong, it obviates the problem of the opportunist. The commons refers to the creation of a pooled community resource, owned by no one, used by all. The short-term self-interest of each, if unchecked, would render the common resource overused, and in the long term, it would be destroyed. Only where there is a strong ethos of trust, mutuality, and effective informal social sanctions against free riders can the commons be maintained indefinitely and to the mutual advantage of all (Putnam, 1993).

Implicit throughout most discussions of social capital is a sense of personal and collective efficacy. The development of social capital requires the active and willing engagement of citizens within a participative community. This is quite different from the receipt of services, or even of human rights to receive services, although these are unquestionably important. Social capital refers to people as creators, not as victims.

However, there is considerable debate within the literature as to the importance of closure for the generation of social capital (Coleman, 1988; Etzioni, 1996; Nahapiet & Ghoshal, 1998). If, as Coleman and others suggest, social capital is most likely to develop in communities with a strong sense of internal identity and boundary, then it may be expected that socially isolated and rural communities will demonstrate higher levels of social capital. However, these communities are also likely to demonstrate

more conservative attitudes and lack of tolerance of difference, characteristics also believed to be associated with low levels of social capital (Cox, 1995; Putnam, 1995).

Also under debate is the role of government in the production of social capital. Although some argue that government structures and institutions form part of social capital, others wish to limit the concept to local-level interactions (Grootaert, 1998).

This study represents a response to Putnam's call to explore the various dimensions of social capital and the way in which these dimensions are differently distributed across different kinds of communities. Specifically, the study objectives were to

1. identify which items were empirically related to social capital (and which ones were not),
2. identify the elements of social capital (factors),
3. identify a good set of items for future use in measuring social capital in other communities,
4. identify whether social capital was correlated with gender and other demographic variables, and
5. describe five communities in terms of the distribution of social capital.

## THE MEASUREMENT OF SOCIAL CAPITAL

### Development of the Instrument

The study began in October 1995 with exploratory discussions among a small group of academics and practitioners. Potential items were drawn from an extensive review of both the formal literature and the Internet as well as a search of other instruments being developed. A discussion document was presented at a public seminar in Sydney and at the Australian and New Zealand Third Sector Research Conference in New Zealand in 1996. It identified potential component aspects of social capital that should be included in any initial questionnaire.

A draft questionnaire was developed and pilot tested by students at the University of Technology Sydney and workers attending community services training sessions at rural and suburban regions of New South Wales (NSW) in mid-1996.

The final questionnaire included several items to tap each of the dimensions mentioned above, as well as others relating to attitudes (value of self), openness to diversity, relations within the workplace, attitudes to government, and demographic information. All potential social capital items had been identified in the literature and/or had been suggested by participants in the initial discussions. Each of 68 social capital items was provided with a 4-point Likert-type response scale ranging from 1 (*no, not much* or *no, not at all*) to 4 (*yes, definitely* or *yes, frequently*). The full questionnaire used in this project is available on request.

### The Sample

The sample was obtained with the assistance of the Local Community Services Association. A number of centers showed a strong interest in the project. The five

centers ultimately selected to participate included two in rural areas, two in outer metropolitan areas of Sydney, and one in an inner-city area. Each participating center was given detailed instructions and assistance in achieving a local sample that was a broad cross-section of adults in the community. Actual methods varied in each area, but in all cases, a proportion of the sample was obtained from a door-knocking procedure modeled on the census collection procedure. Additional procedures used included setting up stalls in public places such as shopping centers and approaching local community centers such as child care centers, schools, and local workplaces.

The sample comprised 1,211 citizens between the ages of 18 and 65 living in rural and urban areas of NSW. Of the total sample, 58% were female, and the average age was 39, with a standard deviation of 16. Approximately 59% of respondents were employed; those employed worked an average of 37 hours per week. Fourteen percent had salaries of more than \$45,000, whereas 33% had salaries of less than \$15,000. Pensions were the main source of income for 22% of respondents. Twenty-seven percent had university qualifications, 26% had TAFE (trade) qualifications, whereas 32% had less than final high school qualifications or the equivalent. Thirteen percent lived alone, whereas 37% lived with partners and children, 9% in extended or blended families, and 30% with other adults. Although the majority of respondents were English speaking, 5% preferred to speak a language other than English in the home. In short, although the sample cannot be considered representative in the strict sense of the term, it taps a broad cross-section of adults living and working in NSW in 1997.

### Data Analysis

The questionnaires were analyzed independently by both authors using SPSS and STATISTICA. Factor analysis and inter-item reliability analysis were used to identify the elements of social capital and also to determine which questions were related to social capital and which ones were not. A hierarchical factor analysis was carried out using the STATISTICA package. By this means, a set of oblique factors may be identified and correlations between them computed. Then,

that correlation matrix of oblique factors is further factor-analysed to yield a set of orthogonal factors that divide the variability in the items into that due to shared or common variance (secondary factors) and unique variance due to the clusters of similar variables (items) in the analysis (primary factors). (*STATISTICA for Windows*, 1994, Vol. 3, p. 3195).

In other words, the analysis permitted the identification of any general factor that might exist, as well as a set of specific factors that might identify the separate components of social capital.

The data contained no outliers. There were minimal missing data, typically less than 1.5% for each variable. The missing data were excluded from each analysis on a variable-by-variable basis.

## RESULTS

### Exploration of the Data

There were 68 potential social capital items in the original questionnaire. After considerable exploration of the data, the solution finally adopted used 36 of the original 68 items. This exploration proceeded on an iterative basis and adopted the following criteria:

- The factors should be meaningful in terms of the conceptual framework.
- The factors should be relatively stable across different subsamples.
- All items included in the factors should also correlate with the total scale score.
- All items included in the factors should also load on the general, second-order factor (if one could be identified).
- All factors should have eigenvalues greater than 1.
- The factors together should account for a substantial amount of the variance.

Several solutions were derived that met the above criteria. Although specific items shifted in relative value, the underlying factor structure appeared to be quite robust. The final solution involved the elimination of 14 items because they had essentially zero item-total correlation. A further 5 items were excluded either because their correlation with the total score was less than .15 or the loading on the secondary factor was less than .15 (or both). In addition, a further 13 items were excluded because they had generally low loadings on all factors.

The final solution identified eight specific independent factors and one clear General (secondary) factor. The eight factors together accounted for 49.3% of the total variance. The obtained factor structure remained stable across each of the five separate area subsamples of the total sample as well as across several subsequent data sets (not included in the present analysis).

Structural equation modeling was used to test the goodness of fit of the factor structure at several points in the analysis. The sample was randomly divided into two, using a computer-generated random number for each participant. A factor analysis was performed on one half of the sample, and structural equation modeling to test for goodness of fit was performed on the other half. With eight orthogonal factors identified in the model, the fit statistics were as follows: independence model chi-square-to-*df* ratio of 4.6, Steiger-Lind RMSEA Index of .07, Jöreskog Adjusted Goodness of Fit Index (AGFI) of .76, and Bentler-Bonett Non-Normed Fit Index (NNFI) of .65.

For the whole sample, with eight orthogonal factors in the model, the fit statistics are as follows: independent model chi-square ratio of 7.6, RMSEA Index of .08, AGFI of .79, and NNFI of .66. Structural equation modeling also was used to test the goodness of fit of a model with seven correlated factors (excluding the work question) and a General (secondary) factor. The fit statistics are as follows: fit chi-square 1,266 and *df* 384, fit chi-square-to-*df* ratio of 3.3, RMSEA Index of .05, AGFI of .90, and NNFI of .82. This is an improved fit on the models with orthogonal factors. The fit is also adequate for allowing interpretation of the factors.

Items excluded from the final solution showed little relationship to either the general or specific factors. In general, those items fall in one of the following categories:

1. Questions relating to government or to the role of government policy or government institutions (e.g., “Generally do you believe that Australians are well served by their government institutions?” and “Do you think that the government provides too many services and subsidies?”).
2. Questions relating to a contractual arrangement as opposed to a generalized reciprocity. A generic reciprocity is important and is implied in such events as “joined a local action to deal with an emergency” or belief that “by helping others you help yourself in the long run.” On the other hand, the tit-for-tat items like “If you help a neighbor is it important that they repay the favor as soon as possible” bore no relation to any social capital specific or general factor.
3. Questions relating to the individual in isolation from, or in opposition to, the social context (e.g., agree that “we would be better off without taxes” and agree that “compassion takes a back seat to looking after one’s own interests”).

### The Specific Factors

The eight primary factors were first identified with a principal components analysis (varimax normalized). The factor loadings are listed in Table 1.

The meaning of each factor can be inferred from the item content. Factor A was labeled Participation in the Local Community and refers to participation in formal community structures (e.g., “Are you an active member of a local organization or club?”). Factor B was labeled *Social Agency, or Proactivity in a Social Context*, as it appears to refer to a sense of personal and collective efficacy or personal agency within a social context. Agency refers to the capacity of the individual to plan and initiate action (e.g., “If you need information to make a life decision, do you know where to find that information?”). Factor C was labeled *Feelings of Trust and Safety* and is defined by items such as “Do you agree that most people can be trusted.” Factor D was labeled *Neighborhood Connections* and concerns the more informal interaction within the local area (e.g., “Have you visited a neighbor in the past week?”). Factor E was labeled *Family and Friends Connections* and is defined by items such as “In the past week how many phone conversations have you had with friends?” Factor F was labeled *Tolerance of Diversity* and is defined by items such as “Do you think that multiculturalism makes life in your area better?” Factor G was labeled *Value of Life* and is defined by items such as “Do you feel valued by society?” Finally, Factor H was labeled *Work Connections*. These items were only asked of those in paid employment and include items such as “Do you feel part of a team at work?”

The oblique rotation identifies the extent of intercorrelation between separate factors. Some intercorrelation is necessary if a general factor is to emerge. That is, if there is no relationship between the specific factors, there can be no general factor. Table 3 sets out the correlation matrix for the eight specific factors, using scale score estimates derived from a simple addition of scores on those items with strong loadings on each factor (an almost identical pattern was obtained from computer-generated factor

**TABLE 1**  
**Factor Loadings for Eight Independent Factors**

<i>Item</i>	<i>Factor</i>							
	<i>Community</i>	<i>Agency</i>	<i>Trust</i>	<i>Workplace</i>	<i>Neighbor</i>	<i>Tolerance</i>	<i>Friends</i>	<i>Value of Life</i>
Helps local group as volunteer	0.74	0.02	0.07	0.10	0.10	-0.03	-0.12	0.07
On local management committee	0.74	0.04	0.08	0.08	0.01	-0.09	0.01	0.06
Taken part in a community project	0.70	0.14	0.17	-0.01	0.13	0.08	-0.01	-0.01
Helped organize new local service	0.65	0.04	0.07	-0.03	0.00	0.17	0.10	0.05
Joined local emergency action	0.59	0.13	0.00	0.02	0.04	0.12	0.17	-0.15
Active member of local organization	0.59	0.02	0.09	0.04	0.14	-0.22	0.06	0.22
Attended community event	0.52	0.21	0.09	0.08	0.21	-0.01	-0.03	0.17
Took initiative at work	0.06	0.71	-0.03	0.19	0.06	0.05	0.04	-0.13
Helped workmate	0.10	0.58	-0.03	0.11	-0.10	-0.05	0.27	-0.17
Free to speak out	0.06	0.55	0.13	-0.06	0.01	0.07	0.13	0.04
Seeks mediation for dispute	0.05	0.54	0.09	0.13	0.08	0.03	-0.33	0.19
Can find information	0.15	0.52	0.04	0.05	0.03	0.09	0.06	0.19
Goes outside area to visit family	0.03	0.49	0.01	-0.05	0.08	0.11	0.11	0.11
Picked up others' rubbish in public	0.28	0.42	-0.10	0.18	0.22	0.09	-0.20	0.00
Feels safe in street after dark	0.05	0.02	0.76	-0.01	-0.05	0.12	0.11	-0.03
Area reputed safe	0.12	0.04	0.71	0.02	0.03	-0.12	0.04	0.16

Invite stranger in if car breaks down	0.14	0.11	0.56	0.17	0.12	0.13	-0.07	-0.14
Most people can be trusted	0.14	-0.04	0.52	0.09	0.09	0.10	-0.26	0.31
Community feels like home	0.20	0.05	0.46	0.13	0.25	-0.05	0.13	0.33
Part of team at work	0.01	0.18	0.07	0.76	0.04	0.09	0.08	0.05
Workmates are also friends	0.03	-0.00	0.04	0.75	0.12	0.13	0.23	-0.02
Feels part of community at work	0.21	0.08	0.14	0.65	-0.10	-0.14	0.03	0.22
Visited neighbor	0.11	0.03	-0.00	-0.02	0.80	0.03	0.06	-0.03
Favor for sick neighbor	0.36	0.12	-0.10	0.02	0.63	-0.04	0.09	0.01
Asks neighbor to help care for child	0.13	0.03	0.32	0.02	0.59	0.02	-0.07	0.07
Sees friends when shopping	0.27	-0.10	0.26	0.14	0.39	-0.30	0.23	0.17
Gets help when needed	-0.08	0.26	0.14	0.22	0.37	0.08	0.17	0.21
Multiculturalism makes life better	0.04	0.13	-0.04	0.12	-0.04	0.79	-0.01	0.09
Enjoy different lifestyles	0.05	0.14	0.21	0.02	0.04	0.72	0.20	0.09
Dines socially on weekend	0.06	0.18	-0.01	0.07	0.02	0.23	0.57	0.05
Phones friends	0.05	0.03	-0.08	0.24	0.22	0.09	0.55	0.09
Talked to people	0.08	0.27	0.20	0.13	-0.00	-0.16	0.54	0.14
Satisfied with life	0.08	0.17	0.02	0.01	0.06	0.01	0.02	0.75
Valued by society	0.17	-0.05	0.10	0.17	-0.04	0.13	0.14	0.61
Stranger accepted	-0.11	0.12	0.25	0.00	0.19	0.26	0.16	0.31
By helping others you help yourself	0.02	0.15	0.17	0.28	0.22	0.22	-0.18	0.29

weightings). The table suggests that there is indeed some relationship between the separate factors. However the relationship is stronger for some than for other factors. In particular, Factor A (Participation in the Local Community) relates fairly strongly to all other factors except Factor F (Tolerance of Diversity). Similarly, Factor D (Neighborhood Connections) and Factor F (Tolerance of Diversity) bear a negligible relationship to each other. Factor B (Social Agency) and Factor C (Feelings of Trust and Safety) show moderately strong relationships to most other factors (including Tolerance of Diversity). All relationships are positive.

The questions that best contributed to each of the eight elements are listed in the appendix.

### **The General Factor**

The hierarchical factor analysis produced only one clear General (secondary) factor as well as the eight specific independent factors. The General factor loadings for the best 36 items are presented in Table 3 along with the item-total correlations and the percentage of respondents who gave a positive response to the item (i.e., who marked 3 or 4 on a 4-point scale). These data are provided separately for the sample as a whole and for the smaller subsample (717 persons) of employed persons.

The item-total correlations provide an indication of the extent to which each item contributes to the total social capital scale score that would be obtained by adding the scores on the individual items together. The Cronbach's alpha for these 36 items was .84; in general, the item-total correlations are in the range of .25 to .45. These are moderately statistically significant scores. They indicate that each item makes a real contribution to the total score, but none is definitive. These results justify deriving a single total score. The final column indicates a fairly positive response overall; the majority of respondents responded favorably to most items.

### **Difference by Area**

From the questionnaire responses, it is possible to compare the levels of social capital across the five communities. A summary of these findings is provided in Table 4. The factor score estimates are based on total scores for all questions loading on each factor.

For each factor, the differences between the communities' average scores are statistically significant at the .001 level. There are clear differences between local areas with respect to both the pattern of social capital factors and the absolute level of social capital. The two rural sample areas, D and W, have higher levels of social capital overall than do the other three communities. There also are differences in the mix of the eight elements of social capital in the five communities. Both rural areas, D and W, have dramatically higher levels of Feelings of Trust and Safety and higher levels of Participation in the Local Community and Neighborhood Connections. However, the inner-urban area demonstrates higher levels of Social Agency, or Proactivity in a Social Context, and higher levels of Tolerance of Diversity. This finding adds support

*(text continues on p. 36)*

**TABLE 2**  
**Oblique Factor Intercorrelations**

<i>Variable</i>	<i>Community</i>	<i>Agency</i>	<i>Trust</i>	<i>Neighbor</i>	<i>Friends</i>	<i>Tolerance</i>	<i>Value of Life</i>	<i>Workplace</i>
Community		.33	.33	.43	.17	.07	.24	.21
<i>n</i>	1,100	1,101	1,117	1,139	1,110	1,119	675	
<i>p</i>	.00	.00	.00	.00	.02	.00	.00	.00
Agency			.2179	.25	.26	.27	.21	.25
<i>n</i>		1,093	1,108	1,122	1,108	1,108	1,108	668
<i>p</i>		.000	.00	.00	.000	.00	.00	.00
Trust				.35	.15	.14	.29	.25
<i>n</i>			1,113	1,131	1,105	1,107	668	
<i>p</i>			.00	.00	.00	.00	.00	.00
Neighbor					.23	.05	.21	.22
<i>n</i>				1,147	1,115	1,123	680	
<i>p</i>				.00	.09	.00	.00	.00
Friends						.20	.18	.27
<i>n</i>					1,137	1,148	687	
<i>p</i>					.00	.00	.00	.00
Tolerance							.16	.17
<i>n</i>						1,121	682	
<i>p</i>						.00	.00	.00
Value of life								.24
<i>n</i>							682	
<i>p</i>								.00

NOTE: The correlations are between-factor scores (Factor A, Factor B, etc.) arrived at by adding the scores for the best questions for each factor.

**TABLE 3**  
**The General Social Capital Factor and Best 36 Questions**

Question	All Responses			Employees		
	Load	I-T Cor.	%+v	Load	I-T Cor.	%+v
1. Feels valued by society	0.37	0.31	57	0.34	0.30	60
3. Satisfied with your life if you die tomorrow	0.33	0.32	74	0.31	0.26	74
14. Has picked up others' rubbish in public place	0.26	0.33	70	0.31	0.37	69
15. By helping others you help yourself in the long run	0.33	0.33	86	0.36	0.32	87
16. Helps local group as a volunteer	0.31	0.44	30	0.31	0.44	26
17. Feels safe walking down the street after dark	0.29	0.29	49	0.32	0.28	57
18. Most people can be trusted	0.26	0.35	42	0.26	0.27	45
19. Someone's car breaks down—you invite them in to use phone	0.30	0.34	46	0.32	0.34	47
21. Can get help from friends when needed	0.42	0.35	88	0.45	0.36	89
24. Area has a reputation as a safe place	0.32	0.35	62	0.31	0.33	64
26. Would ask a neighbor for help caring for a child	0.36	0.39	54	0.38	0.37	52
28. Has visited neighbor in past week	0.34	0.31	53	0.33	0.31	48
29. Attend community event in the past 6 months	0.39	0.49	53	0.39	0.48	51
31. Active member of local organization	0.32	0.41	41	0.30	0.39	39
33. Local community feels like home	0.48	0.48	66	0.47	0.45	67
34. Phone conversations with friends in week	0.39	0.23	78	0.36	0.24	77
35. Talked to people yesterday	0.41	0.31	88	0.37	0.33	91
36. Over weekend has dinner/lunch with people outside household	0.36	0.22	54	0.35	0.26	61
37. Go outside your local community to visit family	0.26	0.24	68	0.25	0.24	69
39. Run into friends when shopping in your local area	0.39	0.37	69	0.37	0.37	63
41. When need information can find it	0.33	0.33	75	0.33	0.35	77
44. On a local management committee	0.30	0.42	20	0.31	0.44	20
45. Done a favor for a sick neighbor in past 6 months	0.37	0.40	42	0.34	0.39	37
46. Joined local action in an emergency	0.30	0.34	13	0.26	0.35	15
48. Taken part in a community project	0.38	0.51	23	0.35	0.46	22
50. Help organize new service in your area	0.32	0.40	19	0.30	0.40	20
54. Feel free to speak out even when disagreeing with others	0.28	0.27	76	0.28	0.26	78
56. If dispute with neighbors, will seek mediation	0.21	0.28	69	0.22	0.27	72
57. Multiculturalism makes life in your area better	0.25	0.18	50	0.28	0.20	53
59. Enjoy living among people of different lifestyles	0.38	0.31	72	0.35	0.26	76
60. A stranger moving in would be accepted by neighbors	0.35	0.26	73	0.37	0.25	73
61. Feels part of the local community at work	0.34	NA	NA	0.35	0.35	66
62. Workmates are also friends	0.39	NA	NA	0.38	0.32	74
63. Feels part of a team at work	0.39	NA	NA	0.39	0.35	84
65. Takes initiative at work without being told	0.28	NA	NA	0.29	0.33	90
67. Helped a workmate beyond job description	0.22	NA	NA	0.21	0.22	79

NOTE: Load = General factor loadings; I-T Cor. = item-total score correlation; %+v = percentage of respondents who indicate 3 or 4 on a 4-point scale.

**TABLE 4**  
**Social Capital Differences by Area**

<i>Area</i>	<i>Factor Scale Estimates</i>								
	<i>Community</i>	<i>Agency</i>	<i>Trust</i>	<i>Neighbor</i>	<i>Friends</i>	<i>Tolerance</i>	<i>Value Life</i>	<i>Workplace</i>	<i>General</i>
Inner city (U)	11.69 (4.72)	15.85 (3.01)	12.24 (2.82)	11.81 (3.30)	9.72 (1.85)	6.44 (1.63)	5.48 (1.66)	9.04 (2.21)	79.71 (11.70)
Outer metropolitan (N)	12.59 (4.34)	15.82 (2.86)	12.99 (2.81)	14.07 (3.19)	9.38 (1.91)	5.41 (1.63)	5.49 (1.45)	8.99 (2.33)	82.57 (11.21)
Outer metropolitan (G)	10.99 (3.84)	14.87 (2.89)	10.61 (2.99)	13.58 (3.49)	9.03 (2.17)	5.29 (2.00)	5.31 (1.65)	9.35 (2.12)	76.68 (11.81)
Rural 1 (D)	14.34 (5.26)	14.32 (3.55)	13.10 (3.28)	15.02 (3.32)	9.40 (2.20)	5.76 (1.79)	5.81 (1.65)	9.13 (2.53)	84.01 (15.29)
Rural 2 (W)	15.50 (5.10)	14.96 (3.13)	16.11 (3.06)	15.19 (2.96)	9.10 (1.77)	4.81 (1.60)	6.18 (1.34)	10.38 (1.77)	88.23 (11.81)
All areas	12.98 (4.95)	15.15 (3.16)	12.95 (3.47)	13.91 (3.48)	9.33 (2.01)	5.57 (1.82)	5.64 (1.59)	9.33 (2.27)	82.32 (13.13)
<i>F</i>	35.82	10.58	95.75	40.61	4.49	27.14	10.67	8.86	23.14
<i>df</i> (error)	1,114	1,129	1,133	1,152	1,183	1,146	1,162	687	985
<i>p</i>	.00	.00	.00	.00	.00	.00	.00	.00	.000

NOTE: Standard deviations are in parentheses.

to Coleman's (1988) concern that social capital is highest in closed communities (see also Portes, 1998).

The difference is captured in qualitative descriptions by local community workers. Concerning the rural area of W, the community worker has this to say:

I enjoy living in [W] because I can walk down the street and say hello to people. I have a sense of belonging and friendliness, being part of the community. Knowing people. It is a community-minded town. . . . The values are traditional country-town values. These values are held tightly. People are trying to uphold these values. . . . They want to be able to do things they did 20 years ago and are really annoyed that they can no longer do them. . . . Family values are strong.

On the other hand, the inner-city area of U is characterized somewhat differently:

The . . . area is undergoing rapid and profound social and physical transformation, as developers, both private and government, capitalize on the area's prime location to create an inner-city enclave that increasingly is becoming affordable and attractive to the high-income earners. . . . The older more established residents, some who are second and third generation, are wary and somewhat resentful towards the new trend of people moving into the area who, by and large, do not have the same sense of community spirit. There are also elements of racial and cultural rifts occurring as the migrant population, which is mainly Chinese speaking, increases.

### Gender and Other Demographics

Generally speaking, social capital is not correlated with demographic variables such as age, gender, and work or salary or qualification levels. A summary of the effect of each demographic question on each factor is presented in Table 5.

The few significant effects include the following:

- Women are less likely to feel safe in their local communities than are men.
- People with more children are likely to participate more in the local community than are those with fewer children.
- The longer one has lived in a community, the more likely there will be stronger Neighborhood Connections.

Discriminant analysis does not enable one to predict significantly better than chance the age, gender, income levels, or other demographic characteristics of the respondents by using the scores of the eight social capital elements (factors). With the exception of the specific items identified above, social capital is evidenced equally by rich and poor, men and women, all ages, and all educational levels.

## DISCUSSION

The data suggest several conclusions. First, there are several quite distinct elements, or statistical factors, that together appear to define social capital. The first three factors in particular are very strong and explain about 30% of the variance. Factor A refers to participation within local community organizations and events. Factor B refers to agency or proactivity in a social context, whereas Factor C refers to feelings of

**TABLE 5**  
**Social Capital Correlations With Demographic Variables**

<i>Social Capital Factor</i>	<i>Demographic Questions—Correlations With Factor Scores</i>									
	<i>Q70</i>	<i>Q71</i>	<i>Q72</i>	<i>Q73</i>	<i>Q75</i>	<i>Q76</i>	<i>Q79</i>	<i>Q82</i>	<i>Q83</i>	<i>Q85</i>
A. Participation in the Local Community	0.06	0.02	0.00	0.10	0.22	0.05	0.16	0.19	0.04	0.22
B. Social Agency, or Proactivity in a Social Context	-0.16	0.05	0.13	0.16	0.00	0.08	-0.04	0.01	0.04	0.14
C. Feelings of Trust and Safety	0.06	0.13	0.06	0.04	0.13	0.08	0.17	0.10	-0.15	0.11
D. Neighborhood Connections	0.17	-0.18	-0.17	-0.14	0.18	0.03	0.26	0.19	0.04	0.21
E. Family and Friends Connections	-0.06	0.09	0.08	0.13	-0.09	0.03	-0.05	0.00	0.09	-0.22
F. Tolerance of Diversity	-0.09	0.06	0.09	0.17	-0.08	0.00	-0.20	0.03	0.02	-0.16
G. Value of Life	0.08	0.06	0.10	0.07	0.06	0.02	0.15	0.16	0.05	0.10
H. Work Connections	0.18	-0.03	-0.06	0.01	0.11	0.09	0.17	0.13	0.09	0.06
B. Proactivity in a Social Context (employees)	-0.24	0.08	0.13	0.19	-0.07	0.15	-0.18	-0.01	0.09	0.16
Social capital—General	0.01	0.05	0.04	0.12	0.15	0.10	0.16	0.22	0.02	0.17
Social capital—General (employees)	0.05	-0.03	0.00	0.13	0.13	0.13	0.14	0.22	0.08	0.19

NOTE: Q70 = work outside local community; Q71 = employed, hours per week; Q72 = salary; Q73 = qualifications; Q75 = number of children; Q76 = English language at home; Q79 = years in local area; Q82 = church attendance; Q83 = gender; Q85 = age.

trust and safety. Each of these is quite distinct, although there is a moderate relationship between Factors A and B and between Factors A and C. Three of the other factors are concerned with participation and connection within a variety of contexts, within the neighborhood (Factor D), among family and friends (Factor E), and within the workplace (Factor H). The fact that these factors are distinguished from Factor A suggests that people may find their social networks in a variety of contexts and not necessarily in others, that is, that different people are connected in different ways.

Nonetheless, there is a General factor, one that can be said to reflect generic social capital. Most of the items that serve to define one or another specific factor also contribute to the definition of the General factor. Together, these items comprise a scale of 36 items, with a Cronbach's alpha of .84 and with every item contributing to that total scale to a significant, though only moderate, extent. This subset of 36 items (out of the original 68 items) forms a reliable and (partially) validated instrument for the measurement of social capital.

Of particular interest are those items that do not contribute either to the general factor or to any of the specific factors. None of the items relating to government institutions related to any factor. The pattern of correlations suggests that social capital is about more immediate and personal connections between people and events rather than more distant and formal relationships with government institutions and policy (Grootaert, 1998). This is not to say that government policy is unimportant but, rather, that it is not experienced in any immediate way or connected with people's daily lives.

Other items that failed to relate were those dealing with the semi-legal contract implied in direct and immediate reciprocity and those that emphasized individual

self-reliance as opposed to social connectedness. Putnam (1994) argues that watching television is the main negative factor in the decline in social capital in the United States in recent decades. We asked a similar question ("Do you spend most evenings at home watching television for at least 2 hours?"), and 59% agreed. Although this item correlated significantly, and in the expected negative direction with most items, few correlations were higher than .16. In other words, the more people watched television, the less safe they felt, the less they trusted others, and the less they participated in local community activities. There was no relationship whatsoever between television watching and any of the personal empowerment items. Among those relationships that were significant, none were very high. Watching television did not show a high loading on any specific or general social capital factor.

Analyses of our data suggest that there are very strong differences in the levels and pattern of responses to social capital across different communities. The findings of this study will need to be confirmed in other samples from other areas. However, it appears that social capital in general is higher in rural compared with urban areas, particularly in relation to Factor A (Participation in the Local Community), Factor C (Feelings of Trust and Safety), and Factor D (Neighborhood Connections). On the other hand, metropolitan areas, and in particular the inner city, scored higher on Factor B (Social Agency, or Proactivity in a Social Context) and Factor F (Tolerance of Diversity). This pattern seems to suggest that rural communities generate considerable *bonding social capital*, characterized by strong mutual support within the local level and high levels of participation in community life. However, such support is likely to be limited to insiders and may not be extended to minority groups within the local area or those outside the area. On the other hand, urban areas may be characterized by greater tolerance and individual initiative within the social setting, suggesting weaker ties, or *bridging social capital*.

Particularly contentious is the low relationship between community connections (Factors A, D, and E) and tolerance of diversity. One might argue, as Cox (1995) does, that a truly civil society requires both of these elements. Nonetheless, some of the communities we studied demonstrate high levels of one but relatively low levels of the other. Indeed, Coleman (1988), Etzioni (1996), and Portes (1998) all have argued that social capital is most likely to be formed in a closed community where informal norms and sanctions are particularly strong. This would suggest a negative relationship between the two sets of factors. The current study found a small but positive relationship between the two sets of factors, a finding Putnam finds somewhat comforting (R. Putnam, personal communication, 1998). This would suggest that it is at least possible to hold high levels of both community connectedness and tolerance of diversity. We cannot, however, expect it to follow. This raises difficult questions. Can a rural community that shows little tolerance of other people and lifestyles, but that has high levels of neighborliness and community participation, be said to have a good stock of social capital? These results point to a distinction between bonding social capital and bridging social capital.

Also of interest is the extent to which social capital, like other forms of capital, is more readily accessible to those with high levels of resources. For example, Verba,

Schlozman, and Brady (1995) argue that although those with high levels of education and employment are more likely to develop political skills, people without these resources also may develop high levels of political skills through participation in voluntary associations and particularly through participation in Protestant churches. Such a view is supported by the low relationship in the present study between any of the demographic variables and social capital measures. In particular, neither salary nor qualifications are related to levels of social capital. This suggests that social capital is a form of "people power" equally accessible to everyone.

For de Toqueville, voluntary associations were the primary means for maintaining a healthy civil society. It could well be argued that the nonprofit or voluntary sector is the predominant locus for the generation of social capital. That, however, would be a gross oversimplification. Social capital as defined can be produced almost anywhere. The nonprofit sector does not hold a monopoly on its production. Although participation in formal community organizations marks the first and largest specific factor in the present study, perhaps equally important is the informal networking among friends and neighbors in the local community (Factors D and E) in the absence of any formally structured organization. Social capital can be generated within the workplace (Factor H), as the literature on organizational citizenship suggests (Bateman & Organ 1983; Organ, 1990; Schnake, 1991), or through such public institutions as institutes of higher learning (Verba et al., 1995) or local government. Social capital may be generated anywhere when the conditions for its production are satisfied, that is, wherever there are dense, lateral networks involving voluntary engagement, trust, and mutual benefit. It is likely, however, that the nonprofit sector provides the highest probability of obtaining these conditions.

In summary, the results of the empirical analysis strongly confirms the conceptual analysis of social capital. The first three factors all identify central conceptual elements of social capital, as discussed in the literature, namely, participation in networks, trust, and social proactivity. Reciprocity is clearly important in its most general sense (i.e., short-term altruism for long-term self-interest) but not in terms of a short-term contract. Similarly, the application of social norms does not emerge as a specific factor but is implicit in many of the items that load most strongly on the General factor, items relating to helping a neighbor, accepting mediation, working on a community project, and trusting others, to name but a few. Factor A, in particular, has a strong sense of the commons.

Further work needs to be done to identify other correlates of social capital and its component factors. Under what conditions does community participation or perceived safety increase? Does a community development program serve to increase the level of either or of both? What are the consequences of low levels of community participation or perceived safety or low levels of tolerance of diversity? What conditions are required for the simultaneous generation of high levels of connectedness (neighborliness, participation, trust) and high levels of tolerance of difference? As is usual with such research, we have some tantalizing answers but even more tantalizing questions to pursue.

**APPENDIX**  
**Items That Best Define Each Factor**

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A. Participation in the Local Community

1. Do you help out a local group as a volunteer? (.76)
2. Have you attended a local community event in the past 6 months (e.g., church fete, school concert, craft exhibition)? (.65)
3. Are you an active member of a local organization or club (e.g., sport, craft, social club)? (.68)
4. Are you on a management committee or organizing committee for any local group or organization? (.72)
5. In the past 3 years, have you ever joined a local community action to deal with an emergency? (.56)
6. In the past 3 years, have you ever taken part in a local community project or working bee? (.72)
7. Have you ever been part of a project to organize a new service in your area (e.g., youth club, scout hall, child care, recreation for disabled)? (.64)

B. Social Agency or Proactivity in a Social Context

8. Have you ever picked up other people's rubbish in a public place? (.58)
9. Do you go outside your local community to visit your family? (.59)
10. If you need information to make a life decision, do you know where to find that information? (.62)
11. If you disagree with what everyone else agreed on, would you feel free to speak out? (.59)
12. If you have a dispute with your neighbors (e.g., over fences or dogs) are you willing to seek mediation? (.61)
13. At work, do you take the initiative to do what needs to be done even if no one asks you to? (.47) (question asked only of those in paid employment)
14. In the past week at work, have you helped a workmate even though it was not in your job description? (.31) (question asked only of those in paid employment)

C. Feelings of Trust and Safety

15. Do you feel safe walking down your street after dark? (.72)
16. Do you agree that most people can be trusted? (.63)
17. If someone's car breaks down outside your house, do you invite them into your home to use the phone? (.62)
18. Does your area have a reputation for being a safe place? (.70)
19. Does your local community feel like home? (.64)

D. Neighborhood Connections

20. Can you get help from friends when you need it? (.45)
21. If you were caring for a child and needed to go out for a while, would you ask a neighbor for help? (.68)
22. Have you visited a neighbor in the past week? (.75)
23. When you go shopping in your local area are you likely to run into friends and acquaintances? (.62)
24. In the past 6 months, have you done a favor for a sick neighbor? (.68)

## E. Family and Friends Connections

25. In the past week, how many phone conversations have you had with friends? (.71)  
 26. How many people did you talk to yesterday? (.62)  
 27. Over the weekend do you have lunch/dinner with other people outside your household?  
 (.79)

## F. Tolerance of Diversity

28. Do you think that multiculturalism makes life in your area better? (.89)  
 29. Do you enjoy living among people of different lifestyles? (.83)

## G. Value of Life

30. Do you feel valued by society? (.81)  
 31. If you were to die tomorrow, would you be satisfied with what your life has meant? (.82)

## H. Work Connections (These questions were only asked of people in paid employment.)

32. Do you feel part of the local geographic community where you work? (.78)  
 33. Are your workmates also your friends? (.78)  
 34. Do you feel part of a team at work? (.78)

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NOTE: The numbers in parentheses indicate the correlation between the item and the factor.

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