

The Center on Philanthropy & Public Policy

SOCIAL CAPITAL AND PHILANTHROPY

**Eleanor Brown
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**Research Paper - 20
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SOCIAL CAPITAL AND PHILANTHROPY

I. INTRODUCTION

Philanthropy – private action for the public good – is a critical indicator of the capacity of a community to identify public problems and to develop strategies for addressing them. A community's generosity in providing money donations and volunteer time is critical in shaping its nonprofit organizations for public problem solving. Philanthropy provides the margin for experimentation and innovation in nonprofit organizations that are now an integral part of service delivery systems in urban communities. But more than that, philanthropy is a lynchpin in creating and reinforcing connections within communities that engender trust and commitment among individuals, enhancing the ability of communities to be self-governing by building social capital – the networks and norms that build trust, shared values and reciprocity among individuals.

As designs for governing in the future are considered, recognition of the importance of philanthropy and social capital in the community is critical. Philanthropic behavior is relatively well defined and fairly well understood. Individuals make charitable contributions of money (giving) and time (volunteering) to organizations and individuals in need of such contributions. Selfless or not, these acts involve a degree of compassion and commitment to others. As such, philanthropic behavior is likely to strengthen the bonds between givers and their beneficiaries. Less well understood is the role social capital plays in eliciting philanthropic behavior from individuals in a community. This paper seeks to redress this gap in our knowledge of the connection between social capital and philanthropy.

To address the question, we explore in two critical questions:

- What are the forces that influence the levels of social capital?
- How does social capital influence the levels of giving and volunteering?

While most previous studies of social capital and its impact of desirable social or economic outcomes have been conducted on a community or regional level, our strategy is to take examine the micro-foundations of the link between social capital and philanthropy. It is natural for studies to focus on community or regional level analysis since definitions are based on networks. Yet, individual make choices with regard to the extent to which they involve themselves in those networks. Thus, we believe that there is much to be learned by examining social capital at the micro level.

We examine the factors that lead to accumulation of social capital by individuals and how it influences one particular type of pro-social behavior – philanthropy, based on data from the Social Capital Community Benchmark (SCCB) survey data conducted in 2000. The survey, undertaken by an extensive network of foundations and researchers in 40 communities in the U.S., gathered extensive information on individuals' embeddedness in various dimensions of social capital as well as data on giving and volunteering; and thus provides a unique opportunity to explore the nexus between social capital and philanthropy.

The plan of the paper is as follows. In the next section, we examine the issues involved in measuring social capital and with the use of factor analysis develop two distinct measures of social capital – network-based and norm-based, that are used in the subsequent analysis. In the following section, models are developed and tested that examine the individual attributes that are related to the “stocks” of network-based and norm-based social capital. Then, in the subsequent section, the estimated models of social capital are used to develop instrumental variables for networks and norms in models of giving – both religious and secular – and volunteering.

II. MEASURING SOCIAL CAPITAL

Social capital is the term given to the networks of association and norms of trust and reciprocity that facilitate collective action by "transforming contingent relations" into relationships that imply "durable obligations subjectively felt" (Bourdieu, 1983). The term suggests, like other forms of capital – physical, financial, and human – that it leads to greater productivity. Social capital has garnered considerable attention as a strategic element for building viable and sustainable communities, particularly in light of Putnam's findings on the significant impact of social capital on regional economic performance in Italy (Putnam, 1993) and his subsequent analysis of the decline of social capital in the United States (Putnam, 2000). There is considerable agreement that social capital does exist and that it matters, despite the contention over Putnam's “bowling alone” hypothesis. Yet, a consensus has yet to emerge on a well-developed, measurable concept (Dasgupta, P. and I. Serageldin, 2000). In this section, we explore indicators of social capital that can be derived from a survey, the Social Capital Community Benchmark Survey, designed explicitly to measure the varied dimensions of social capital, in terms of an individual's accumulations of social capital.

The Social Capital Community Benchmark Survey

The Social Community Benchmark Survey (SCCB), conducted in 2000, provides an opportunity to examine meaningful measures of social capital. This survey effort was spearheaded by Robert Putnam of the Kennedy School of Government at Harvard University, in collaboration with over thirty community and private foundations across the United States. The SCCB survey collected and analyzed extensive information on individuals' embeddedness in various dimensions of social capital.

The survey was conducted by phone interview, and includes a representative national sample of 3,003 individuals and a pooled sample of 29,333 individuals from 40 communities around the country. A community's inclusion in the survey was determined largely by the availability of funding by local foundations. Although the pooled SCCB survey is not designed to be representative of the country, but rather representative of the community itself, it covers a wide variety of communities. The pooled sample includes such large cities as Los Angeles and Chicago, smaller cities such as Yakima and Kalamazoo, and rural areas in South Dakota and eastern Tennessee. Interviews were conducted in English or, at the respondent's request, in Spanish (in San Francisco, Mandarin was also an option).

In this paper, the pooled sample of individuals is used in order to exploit the statistical power of a large data set. The analysis was repeated on the smaller, nationally representative sample as a check for what might be anomalous results generated by quirks in the overall sample. In general, the results between the two samples are consistent.

SCCB Indexes of Social Capital

The questionnaire was designed based on Putnam's theoretical views of social capital. The interviews elicited information on a variety of behaviors and activities (e.g., church attendance, voting, and other forms of political participation), and attitudes and perceptions about the local community (e.g., do you trust your elected officials? and do you trust persons of other racial backgrounds?). The survey was specially developed to make possible the creation of several measures of social capital that represent a variety of facets of social capital within a community, based on the responses of individuals in that community.

For example, the answers to six questions about trusting people in various contexts were combined to form a Social Trust index. Preliminary index formulations were then tested against the data to see whether the constituent questions elicited answers that showed high levels of correlation. If the items did not seem to form a cohesive index, the preliminary index was replaced by a reformulation that made theoretical sense and better fit the data.

The Harvard team, in the end, developed ten indexes of social capital: social trust; interracial trust; electoral politics; protest politics; civic leadership; associational involvement; informal socializing; diversity of friendships; faith-based engagement; and charitable behaviors. These indexes are discussed in greater detail in Appendix A. All of the indexes are constructed so that a higher value indicates a higher level of social capital.

These indexes developed by the Putnam-led team usefully quantify various manifestations of social capital. The indexes seem designed, however, to be taken up in turn, as various lenses through which to shed light on the state of a community's social capital. There is no sense in which they are designed to collectively span the phenomenon of social capital in an interlocking, theoretically integrated way.

Our intent is to examine the degree to which these multiple indexes can be used to develop two or three indicators of social capital that can be used in efforts to explain the level of social capital that individuals possess, and its impact on pro-social behaviors, such as charitable giving and volunteering. Our strategy is to employ factor analysis to find commonalities and distinctions among the various indexes, and to extract orthogonal measures of social capital that avoid collinearity problems associated with most measures of social capital (Durlauf, 2002), including the SCCB indexes.

Before turning to this empirical treatment of the data, it is worth thinking critically about the multiplicity of ways in which the indexes relate to the underlying notion of social capital. In sorting through measures of social capital, there are three sets of distinctions worth keeping in mind: unit of analysis, type of data, and stocks and flows of social capital.

First, the unit of analysis may be either the society or the individual. Social capital is often defined as the networks and norms that form connections among members of a society. As such, social capital does not reside in individuals, but rather "inheres in the structure of relations" (Coleman, 1988) between them. Not all social scientists would agree that social capital is well measured by data on individuals, the tack taken by the SCCB survey. In fact, much of the literature focuses on community level measures of social capital to explain community-level outcomes or impacts.

Second, data gathered on individuals used to construct social capital measures can be behavioral or attitudinal. Social scientists vary in the level of confidence they place in attitudinal data. Economists tend to place more faith in data on observed behavior, compared to their colleagues in the other social sciences. The SCCB indexes of social capital include both behavioral and attitudinal measures. Social trust and interracial trust are attitudinal constructs, for example, while group involvement and protest politics measure behaviors. Still others indexes are based on both types of data: the religion-based social capital and the electoral politics indexes contain a mix of behavioral and attitudinal survey items.

Third, since social capital is not directly observable, its presence is inferred in different ways. Measures of social capital capture one or more of the following: its antecedents in the form of behaviors thought to create social capital; its current stock; and behaviors thought to result from the stock of social capital. Charitable giving, for example, is thought to increase as the stock of social capital increases one's regard for the generalized other. It is included as one of the ten indexes of social capital in the SCCB survey even though charitable giving is argued by Putnam (2000) to neither create nor constitute social capital itself.¹ Similarly, participation in electoral politics – "making democracy work" – is often argued to be a *result of* sufficient stocks of social capital, although it can additionally be argued to reflect the norm of civic participation that is *part of* a society's stock of social capital. Measures of trust are proxies for the stock of social capital itself, while measures of involvement in groups capture both the process of building social capital and the extent to which existing networks enmesh the individual.

Factor Analysis

Given these fundamental distinctions in the indexes' approaches to quantifying social capital, how might we expect the indexes to be related to each other? One organizing principle, derived from many of the conceptualizations, is that there are two types of social capital – networks and norms.

Embeddedness in *networks* of social capital would be reflected in the associational measures of social capital. In terms of the social capital indexes constructed in the SCCB survey, associational measures include involvement in formal groups, community leadership, and protest politics. Measures of personal association (as opposed to public association), specifically the extent of one's social life and the diversity of one's friendships, do not necessarily bring an individual into a civic web of social capital. Religion-based association casts a broader net than

¹ One might take exception to this view: regard for the generalized other is certainly a norm that facilitates collective action.

personal friendships, but it remains an empirical issue whether relatively homogeneous groups embracing religious convictions often at odds with secular values will contribute positively to civic life. *Norms* are captured by the indexes of social trust and interracial trust that relate to expectations of generalized reciprocity, and the value of good citizenship reflected in the attitudes and behaviors that are measured in the electoral participation index.

Religion-based social capital, as constructed in the SCCB data, is a hybrid category, reflecting both networks (“have you taken part in any sort of activity with people at your church or place of worship other than attending services?”) and norms (“Religion is very important in my life”). The same is true of personal giving and volunteering: charitable giving reflects norms of regard for others, while volunteering generally involves the individual in associations beyond his or her circle of personal friends.

We put the question of underlying notions of social capital to the test by performing a factor analysis on the indexes of social capital contained in the SCCB data.² The purpose of this analysis is to gauge whether the various indexes created by Putnam and his team can be summarized in a small number of broader, meaningful measures of critical dimensions of social capital.

For this analysis, we work with eight of the ten indices that were created by the Harvard team. We omit the philanthropy index because, as Putnam has argued, philanthropy is not a measure of social capital so much as a result of social capital, and we examine in this paper the influence of social capital on levels of charitable giving and volunteering. In addition, we dropped the faith-based index when preliminary factor analyses failed to find any significant relationship between the faith-based index and the other indexes.³

Looking at the data for the pooled SCCB survey population, the factor analysis of the remaining eight indexes identifies two principal dimensions of the underlying concept of social capital.

² An alternative hypothesis can be constructed around the notion of bridging versus bonding social capital. Activities that bring together persons of substantially different backgrounds “bridge” social divides, whereas activities that “bond” persons who have much in common to begin with add to intra-subgroup social capital. From this perspective, the diversity of one’s friendships captures bridging social capital, as does interracial trust. Bonding social capital might be reflected in the number of formal group involvements, since these are formed around commonalities such as a veteran’s group or a reading group, and involvement with people from one’s own place of worship. Other indexes are not designed to reflect this distinction: political involvement could be on behalf of one’s interest group or on behalf of others, for example, and volunteer work could be done either within one’s circle of self-identification (at church, for example) or in service of the generalized other (e.g. in a hospital). Unfortunately, the questions in the survey do not enable one to discern whether the associations are with similarly situated individuals or not. Thus, we were not able to test this alternative hypothesis.

³ One hypothesis is that this lack of correspondence may be due to the faith-based index’s ability to capture a distinct dimension of social capital (for example, “compassion,” whereas the other norm-sensitive indexes measure trust); if so, it would be expected to emerge as a third factor in the analysis. Factor analysis fails to support this hypothesis. A more likely explanation lies in the construction of the index itself. In particular, it relies on church membership, a notion that is defined inconsistently across different religious traditions. For this reason, we drop the faith-based index from the factor analysis.

These two factors can readily be interpreted as networks and norms.⁴ The correlations between these two factors and the eight social capital indexes are reported in Table 1.

The first factor reflects embeddedness in community and, to a lesser extent, personal networks. Highly correlated with this factor are the three social capital indexes that measure involvement in formal organizations: its correlation with the formal group involvement index is .93, followed by community involvement and leadership with a correlation of .88, and protest politics with a correlation of .73. The other index to achieve a correlation of at least .5 with this factor is the index of diversity in friendships, with a correlation of .51.

The second factor is most closely related to the social and interracial trust indexes and, to a lesser extent, to electoral politics. This dimension can be thought of as “buying into the system,” or having norms of trust and participation that facilitate collective action. The second factor’s correlation with social trust is .91, with interracial trust .88, and with electoral politics .43.

⁴ The factor analysis results in three factors with positive eigenvalues. The largest two eigenvalues are 2.56 and .99; the third is only .19. Keeping the two factors with sizable eigenvalues and allowing orthogonal rotation yields results consistent with the hypothesis that the two fundamental types of social capital, networks and norms, are captured by the two dominant factors.

Table 1. Correlations Among Eight Indices of Social Capital and the Two Principles Factors, "Networks" and Norms"

	Networks	Norms	Racial Trust	Diversity of Friendships	Group Involvement	Informal Socializing	Protest Politics	Electoral Politics	Civic Leadership	Social Trust
Networks	1.0000									
Norms	0.0792	1.0000								
Racial Trust	0.0857	0.8808	1.0000							
Diversity of Friendships	0.5093	0.2382	0.1851	1.0000						
Group Involvement	0.9324	0.0977	0.1225	0.3872	1.0000					
Informal Socializing	0.2700	0.0830	0.0754	0.2604	0.1714	1.0000				
Protest Politics	0.7263	0.0815	0.0917	0.3397	0.5896	0.1225	1.0000			
Electoral Politics	0.4038	0.4339	0.2642	0.2346	0.3272	0.0379	0.3280	1.0000		
Civic Leadership	0.8789	0.1323	0.1403	0.3531	0.7559	0.2239	0.5049	0.3161	1.0000	
Social Trust	0.1159	0.9090	0.6431	0.1801	0.1522	0.0701	0.0944	0.3351	0.1741	1.0000

We note that one of the eight indexes used in the factor analysis, personal socializing, is not highly correlated with either factor. Its correlation with networks is .27, and its correlation with norms just .03. Participation in electoral politics fails to achieve a correlation above .5 with either factor, but it has substantial correlations – .40 and .43 – with both networks and norms, respectively. It may be that socializing contributes to social capital principally through bringing a person into contact with a diverse group of friends, as captured by the diversity index.

The factor analysis was repeated with the SCCB's nationally representative sample. This can be thought of as a test of the hypothesis that the relationships found among the various indexes of social capital is descriptive of a fundamental relationship between the unobservable stock of social capital and its observable proxies, rather than something idiosyncratic in the pooled SCCB sample. The results based on the national sample are strikingly similar to the results obtained from the estimation with the pooled sample.⁵ Given these close similarities, we conclude that the factor analysis performed with the pooled data set provides a good estimate of the relationship between the unobservable social capital stocks of networks and norms and the indexes reported in the SCCB data.

In the subsequent sections, the two orthogonal factors derived from the factor analysis are used as complementary measures of social capital: a network-based measure that captures the individual's wealth of associational ties; and a norm-based measure that indicates the individual's trust and faith in others and civic institutions. In the next section, we examine the attributes that affect the accumulation of social capital by the individual; and then in the following section, examine the impact of social capital on charitable giving and volunteering.

III. EXPLAINING SOCIAL CAPITAL

Who is woven into networks of engagement, and who buys into the norms of trust and democratic participation that facilitate cooperative action and pro-social behaviors? To address these questions, we examine what individual attributes and behaviors explain the stocks of social capital – networks and norms – that individuals possess. While the theories of what contributes to the level of social capital are not fully developed, there is a belief that the opportunities, benefits and costs of enmeshing oneself in the fabric of social capital are of critical importance.

The Model

In an effort to capture the costs and benefits of acquiring social capital, we include a variety of individual attributes that are typically associated with contributing to investments (behaviors)

⁵ Again, there are two factors with sizable eigenvalues (2.56 and .99). As before, the first factor reflects networks of social capital. The second factor reflects norms and behavior that reflect "buying into the system" and that facilitate collective action. The correlations between these two factors and the eight indices are remarkably similar.

that would affect the accumulation of social capital. In this model, we focus on those attributes that are exogenous and that are available in the SCCB survey.⁶

We include a series of socio-demographic and economic variables: education, employment, gender, marital status, number of children, race/ethnicity, and age. We also include variables that reflect the position of the household in the community: citizenship, length of residence, and homeownership. Finally, we include behavioral and attitudinal variables that are hypothesized in the social capital literature to lead to higher stocks of social capital, such as religiosity and expressed trust in community leaders. We consider these explanatory variables in turn.

Education is considered to be a socializing influence as well as an occasion for making contacts. Education lowers the costs of identifying specific avenues of participation and, perhaps through increased efficacy, increases the benefits of engagement. We expect both networks and norms of social capital to rise with education. Given the SCCB data, we measure education as a pair of dummy variables representing pursuing any education beyond high school, and completing at least a four-year college degree.⁷

Employment facilitates networking. Individuals who are employed are more actively enmeshed in networks related to the workplace. These associations extend beyond those defined by personal and family networks. We expect that those employed will have higher levels of social capital, as measured by both factors. The employment variable is a dummy variable, 1: if employed; 0 otherwise.

An individual's religiosity is also hypothesized to have a positive impact on both forms of social capital given the associational involvement that institutions of worship provide, as well as the values of compassion and caring at the heart of the various religious traditions. The measure included here is the response to the question of whether the individual agrees with the statement: "Religion is very important in my life." If they strongly agree, then a dummy variable is created

⁶ Like many surveys, the SCCB survey is richer in demographic data than it is in economic data. Educational attainment is measured in seven categories, from less than a high school diploma or GED to a professional or graduate degree. There are data on marital status, age, and numbers of children and adults in the household. There is no wage information, although the survey asks employment status, and, for those employed, average weekly hours of work. Household income is recorded in six ranges, from "\$20,000 or less" to "\$100,000 or more." There is no information on tax itemization status, although homeownership status, sometimes used as a proxy, is queried.

⁷ The social capital literature provides further support for the hypothesis that an individual's stocks of social capital and human capital (i.e. education) will be positively correlated. Glaeser, Laibson and Sacerdote (2002) develop a rational-choice model of social capital acquisition, and find evidence that people who invest in human capital (education) also invest in social capital. In particular, membership in groups is positively associated with educational attainment, with the exception of a negative relationship between labor union membership and education. Putnam and Helliwell (1999) find that higher average levels of education in a community are associated with higher average levels of social trust. While Putnam and Helliwell argue causality from education to trust ("increases in average education levels improve trust and do not reduce participation levels"), Goldin and Katz (1999) find social capital to be an important explanatory variable in charting the spread of universal secondary schooling in the U.S.

with 1 noting religiosity, and 0 otherwise.⁸ This is a much better measure to capture religion than a measure such as religious attendance since it is exogenous to the behavior that the alternative captures.

The demography of the household also affects its members' stocks of social capital. Having children draws adults into child-centered networks. While raising children is a time-intensive activity, the data set measures areas of involvement more than hours of involvement. Within this data set, then, we expect the respondent to be more embedded in networks of social capital as the number of children in the household increases.

We control for marital status, gender, and for age of the respondent. Some networks are heavily dominated by members of one gender, such as veterans' groups and book clubs. Putnam has argued at length that successive generations have lower stocks of social capital,⁹ quite apart from their other circumstances. We control for age effects by including age and age squared in the regressions. According to Putnam's analysis, we would expect age to be simply positively related to age, though the life cycle model of engagement would suggest that it would increase initially, and at some point begin to decline.

Membership in an ethnic group other than the dominant one might limit access to networks, although it might alternatively give impetus to the formation of ethnicity-centered networks. Minority status is expected to reduce expressed levels of trust if persons have had negative experiences related to their status as minorities. Norms of civic participation might be lower among groups whose members feel their concerns have not been addressed by a government shaped by majority rule. Membership in minority ethnic groups is measured by a series of dummy variables indicating whether a respondent self-classifies as black, Asian-American, or Hispanic.

Citizenship, numbers of years in residence, and homeownership are a series of variables that indicate the extent to which an individual is tied into the community. We would expect that citizenship and homeownership would increase the level of social capital. Also, those who have been in the community longer have an opportunity to develop a greater number of ties to local networks and have a greater understanding and appreciation of local institutions. Thus, the greater the number of years in a local residence, the higher the level of social capital we expect to observe.

Estimation

The equations explaining the two social capital factors are estimated in a seemingly unrelated regressions framework. This method is appropriate when unobserved characteristics affect the levels of the variables to be explained and lead to correlation in the error terms across the two

⁸ In constructing this measure, we chose to limit the religiosity measure simply to those who strongly agreed with the statement rather than to base it on those who strongly or somewhat agree given the relative frequency of the responses, where 60 percent of the sample strongly agreed, and 20 percent somewhat agreed.

⁹ Putnam, R. *Bowling Alone*. 2000.

equations. In the present case, we are concerned that some people, for reasons we have not captured, are both more (less) embedded in networks and more (less) possessed of pro-social norms. This estimation technique provides a statistical test of the extent to which the network-based social capital and norm-based social capital are actually linked.

The model is estimated on the SCCB survey pooled sample, including only individuals who are 25 years of age and older. The large sample enables us to examine the impact of several of the most interesting variables which are less present in the smaller national sample.¹⁰ We restrict the sample used in the estimation to those 25 years or older in order to make the measure of educational attainment more meaningful, since those under 25 may still be in the process of completing their education.¹¹

The results based on the pooled sample are reported in Table 2. The model explains 18 percent of the variation in individuals' stocks of network-based social capital and 25 percent of the variation in norm-based social capital.

¹⁰ In order to control for the community samples, we include a series of dummy variables that reflects each local community included in the pooled sample.

¹¹ There is no unambiguous age at which critical educational investments in human capital is completed. The model was also run with a sample threshold of individuals 30 years of age or older to test for the sensitivity of this sampling decision. The results are not appreciably different, though the variable for college education increases in significance.

**Table 2. Explaining Network-based and Norm-based Social Capital:
Seemingly Unrelated Regressions**

<i>Variable</i>	<i>Network-Based Social Capital</i>		<i>Norm-Based Social Capital</i>	
	<i>Coefficient</i>	<i>P> z </i>	<i>Coefficient</i>	<i>P> z </i>
Some College	0.3870	0.000	0.1973	0.000
College Degree	0.7383	0.000	0.3597	0.000
Employment	0.0996	0.000	0.0249	0.046
Married	0.0092	0.466	0.1174	0.000
Female	-0.5577	0.000	0.0411	0.000
Kids	0.0610	0.000	-0.0200	0.000
Religiosity	0.1613	0.000	0.0947	0.000
Age	0.0240	0.000	0.0099	0.000
Age Squared	-0.0002	0.000	0.0000	0.685
Poor Health	-0.0695	0.000	-0.2725	0.000
Citizen	0.3974	0.000	0.3865	0.000
Years in Residence	0.0048	0.000	0.0007	0.143
Homeowner	0.1146	0.000	0.0864	0.000
Black	0.1904	0.000	-0.5334	0.000
Asian American	-0.2212	0.000	-0.1707	0.000
Hispanic	0.0310	0.202	-0.5016	0.000
# of Observations		20,742		20,742
R²		0.1793		0.2695
χ^2		4531.88		7651.83
Probability		0.0000		0.0000
Test of Independence		-0.0492		
χ^2		50.283		
Probability		0.0000		

As we anticipated, education increases both forms of social capital, consistent with the notion that education exerts a socializing influence by reinforcing forms of interpersonal trust that support civic institutions, and also affects the degree of association via the relative opportunities and net benefits of engagement. The impact of at least a college degree is about one and a half times as great as just some college for both measures of social capital.

Individuals who are employed have higher levels of network-based social capital, and the impact in terms of norm-based social capital is also positive, though it is only weakly significant. Also, individuals who are in poor health have lower levels of social capital. They are disadvantaged in their ability to establish associational ties, but we also find that their trust and faith in others and local institutions is also diminished.

In terms of household demography, females have lower stocks of network-based social capital, but higher levels of norm-based social capital. Those who are married tend to have high levels of norm-based social capital. And the number of kids in the household increases the level of network-based social capital while their presence tends to result in lower levels of norm-based social capital. Social capital, of both types, increases with age, though in the case of the associational measure, at a gradually declining rate.

Individuals who are citizens have higher levels of both types of social capital, suggesting that they have greater engagement, due to greater access to networks and returns to involvement, as well as a greater degree of trust in their institutions and their community and have buy-in to the values of the community. Likewise, homeownership and number of years in the same residence have positive impacts on the level of both measures of social capital.

In terms of race and ethnicity, it is not surprising that being a member of the dominant ethnic group, i.e. whites, raises the stock of norm-based social capital, since this measure is substantially determined by measures of interpersonal trust. Being African American, Hispanic, or Asian-American yields a significant negative impact on the stock of norm-based social capital, all else equal. In contrast, blacks tend to have higher levels of network-based social capital, than whites, Asian Americans have lower levels of network-based social capital, and Hispanics have no statistically significant different levels of network-based social capital.

It is interesting to note that the error terms from the two estimating equations are correlated. However, the correlation is unexpectedly negative, though it is quite small, .049. Persons who have inexplicably high levels of network-based social capital tend to have unexpectedly low levels of norm-based social capital, and vice versa. This is a somewhat surprising result given that the social capital literature implies that involvement and engagement lead to trust and shared values. One explanation is that some associational involvement is “ameliorative,” in that it is sought in order to offset negative conditions that lead to low levels of trust. A classic example of ameliorative networking is the formation of neighborhood watch groups by residents who feel their neighborhoods to be unsafe. Such individuals might be observed to display low levels of trust and high levels of associational involvement.

IV. THE IMPACT OF SOCIAL CAPITAL ON CHARITABLE BEHAVIOR

In this section, we examine the extent to which an individual's stock of social capital – both network-based and norm-based measures – have an impact on charitable giving and volunteering. The literature on philanthropic giving and volunteering is extensive, yet given the paucity of measures on social capital, there is relatively little work that has been done to examine the impact of social capital on philanthropy. In this section, we intend to make an effort to do so.

There are two important reasons for doing so. First, it is important to understand the impact of social capital on philanthropic behavior since the strength of the nonprofit sector is, in part, dependent on gifts of money and time. And, second, it is critical to understand the extent to which the findings in the literature need to be reexamined given the potential problems of omitting social capital in previous work (Brown, 2004).

Social Capital and Philanthropy

The SCCB survey asked respondents two questions about charitable contributions and one question about the frequency of volunteering. Contributions of “money, property or other assets for a wide variety of charitable purposes” in the past twelve months were queried first for religious causes and then for all “non-religious charities, organizations, or causes.” Volunteering was defined as “any unpaid work you’ve done to help people besides your family and friends or people you work with.” The survey asked the respondent how many times in the past twelve months he/she had volunteered. Thus, we estimate regressions for secular and religious giving separately, and for volunteering.

Before discussing the regressions, it is worth noting simple correlations between measures of philanthropy and measures of social capital. The most striking, although certainly not surprising, correlation is between network-based, associational social capital, and the extent of a person's volunteering. At .39, the correlation between volunteering and networks exceeds the correlations between volunteering and charitable giving to religious causes and between volunteering and charitable giving to secular causes. There are two explanations for this strong relationship between volunteering and networks. First, both are suggestive of a gregarious temperament. Second, being asked to give and to volunteer has been found to be a significant determinant of whether an individual does indeed give and volunteer, and more extensive networks present more occasions on which one might be asked to volunteer. Network-based social capital is more highly correlated than is norm-based social capital with the measures of personal philanthropy, as can be seen in Table 3.

Table 3: Correlations Between Social Capital Measures and Giving and Volunteering

	Network-based Social Capital	Norm-Based Social Capital	Religious Giving	Secular Giving	Volunteering
Network-based Social Capital	1.0000				
Norm-based Social Capital	0.0846	1.0000			
Religious Giving	0.2647	0.1742	1.0000		
Secular Giving	0.3117	0.1457	0.3430	1.0000	
Volunteering	0.3903	0.1277	0.2177	0.1822	1.0000

The Model

Having constructed variables to represent social capital and having established that these have some statistical relationship to giving and volunteering, in this section attention is turned to specifying and estimating equations that relate our measures of giving and volunteering to a set of explanatory variables that are derived from the literature of charitable behavior, including social capital.

We posit, based on an extensive empirical literature, the pro-social behaviors of giving and volunteering is the result of social capital, human capital (education), and religion, as well as an array of economic and demographic variables that shape the benefits and costs of philanthropic behavior.

Social capital is hypothesized to have a positive impact on giving and volunteering. Putnam argues that the relationship between social capital and personal philanthropy is a causal one. As he puts it, "Social networks provide the channels through which we recruit one another for good deeds, and social networks foster norms of reciprocity that encourage attention to others' welfare. Thus, ...volunteering and philanthropy and even spontaneous 'helping' are all strongly predicted by civic engagement" (Putnam 2000, p.117). This claim finds support in the 1996 Giving and Volunteering survey conducted by Independent Sector, which included questions on group membership and on voting behavior as well as a battery of questions on giving and volunteering. Each of these social capital variables is highly correlated with the likelihood that a household makes a charitable contribution (Hodgkinson and Weitzman, 1996).

Studies based on survey data suggest that charitable giving increases with education. Controlling for income, education has a positive effect on giving in studies using the Consumer Expenditure Survey (Bradley, Holden, and McClelland, 1999, Brooks, 2002, Reece and Zieschang, 1985), and the Giving and Volunteering data collected by Independent Sector (Andreoni, Brown, and Rischall, 2003).

The effect of religion on giving and volunteering parallels that of education in important ways. First, religion provides a cognitive framework in which to view humankind, pushing the boundaries of thought and identity beyond the personal sphere. Second, religion, like education,

tends to bring people into social networks and to engage them in projects aimed at the collective good. We include a measure of religiosity, i.e., a respondent's strong agreement with the statement that religion is important in their life, to capture the link between religion and charitable behavior.

Demographic variables that are often found to be significant in explaining giving and volunteering are controlled for. Income is measured by a pair of dummy variables indicating that the respondent's is a low-income household (annual income less than \$30,000) or a middle-income one (from \$30,000 to \$75,000). Charitable giving is expected to increase with income. The gender of the respondent is included; we expect that women will volunteer more than men.

Cultural diversity related to ethnic/racial diversity is represented with a series of dummy variables indicating that the respondent self-identifies as Hispanic, African-American, or Asian-American. Marital status, age and age squared, number of children under age 18 living in the household, US citizenship status, and the length of residence in the community are also included.

Estimation

We estimated three separate models of charitable behavior: religious giving, secular giving, and volunteering, on an annual basis. For each of these categories, many respondents report that they did not give or did not volunteer. Thus, in order to accommodate the censoring at zero of the dependent variables, a tobit specification is used. Again, we limit the sample to those 25 years of age or older. In order to address problems of multi-collinearity, we created instruments, i.e., the predicted values for the two social capital measures based on the estimated models in the previous section. We estimate the models of religious giving, secular giving, and volunteering, each with and without social capital measures. The descriptive statistics for the sample used in the Tobit estimations are presented in Table 4; the tobit results are reported in Table 5. We summarized the results below in terms of the significant factors in determining giving and volunteering behavior; the magnitude of the impact of social capital and other important variables; and the relative contributions of social capital, human capital and religiosity.

Table 4: Descriptive Statistics for Tobits

<i>Variable</i>	<i>Pooled Sample</i>		<i>Sample for Tobit</i>	
	<i>Mean</i>	<i>Standard Deviation</i>	<i>Mean</i>	<i>Standard Deviation</i>
Social Capital: Networks	-0.0031	0.3793	0.0044	0.3787
Social Capital: Norms	0.0045	0.4204	-0.0045	0.4147
Some College	0.3139	0.4641	0.3110	0.4629
College Degree	0.3594	0.4798	0.3755	0.4843
Employment	0.6628	0.4728	0.7062	0.4555
Higher Income	0.3475	0.4762	0.2453	0.4303
Middle Income	0.4617	0.4985	0.4762	0.4994
Married	0.5559	0.4969	0.5486	0.4976
Female	0.5921	0.4915	0.5780	0.4939
Kids	0.7618	1.1878	0.8104	1.1860
Religiosity	0.6106	0.4876	0.5835	0.4930
Age	47.633	15.3737	45.8199	14.4905
Age Squared	2505.247	1626.1790	2309.4230	1495.306
Poor Health	0.1286	0.3348	0.1183	0.3230
Citizen	0.9528	0.2120	0.9548	0.2077
Years in Residence	15.8744	11.7761	15.1594	11.6629
Homeowner	0.7246	0.4467	0.7083	0.4545
Black	0.1150	0.3190	0.1264	0.3323
Asian American	0.0205	0.1419	0.0224	0.1481
Hispanic	0.0773	0.2670	0.0859	0.2803
Giving: Religious	935.6838	1424.1100	951.0380	1428.111
Giving: Secular	528.8904	1020.0900	544.7624	1027.758
Volunteering	9.4393	16.5113	9.3108	16.1422
Religious Giving (ln)	5.1079	2.2347	5.1594	2.2213
Secular Giving (ln)	4.7238	1.9326	4.8041	1.9132

**Table 5. Explaining Religious Giving, Secular Giving and Volunteering:
Tobit Estimates**

<i>Variable</i>	<i>Giving: Religious</i>				<i>Giving: Secular</i>				<i>Volunteering</i>			
	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>
Social Capital: Networks	0.5460	0.021			1.5616	0.000			2.7218	0.214		
Social Capital: Norms	0.1897	0.260			0.4133	0.005			11.6344	0.000		
Some College	0.3864	0.000	0.6401	0.000	0.1195	0.165	0.8099	0.000	3.5506	0.000	7.9681	0.000
College Degree	0.4348	0.101	0.8420	0.000	0.1295	0.380	1.4756	0.000	4.8654	0.002	12.5393	0.000
Higher Income	1.4074	0.000	1.5985	0.000	2.0050	0.000	2.1316	0.000	5.0282	0.000	5.3851	0.000
Middle Income	0.9400	0.000	1.0149	0.000	1.0419	0.000	1.1131	0.000	2.9328	0.000	3.1176	0.000
Married	0.6078	0.000	0.5675	0.000	0.0699	0.106	0.1511	0.000	-0.8352	0.068	1.0036	0.009
Female	-0.1357	0.002	-0.2015	0.000	0.0886	0.023	-0.0023	0.944	4.0659	0.000	4.5118	0.000
Kids	0.1530	0.000	0.1523	0.000	-0.0584	0.007	0.0088	0.548	1.5266	0.000	1.6093	0.000
Religiosity	2.6124	0.000	2.7735	0.000	-0.1324	0.004	0.1589	0.000	5.7685	0.000	7.0038	0.000
Age	0.0167	0.110	-0.0058	0.345	0.0135	0.144	0.0481	0.000	-0.0715	0.462	0.1850	0.013
Age Squared	0.0007	0.461	0.0003	0.000	0.0000	0.689	-0.0003	0.000	-0.0003	0.712	-0.0019	0.008
Citizen	0.3173	0.029	0.5758	0.000	-0.2254	0.082	0.7020	0.000	2.7660	0.048	9.0801	0.000
Years in Residence	0.0104	0.000	0.0158	0.000	-0.0048	0.014	0.0053	0.000	0.0924	0.000	0.1330	0.000
Black	0.1695	0.226	0.2418	0.000	-0.6376	0.000	-0.5569	0.000	2.5075	0.056	-4.3559	0.000
Asian American	-0.2841	0.058	-0.3216	0.008	-0.0624	0.632	-0.4264	0.000	-3.8126	0.007	-6.1055	0.000
Hispanic	-0.3767	0.003	-0.3460	0.000	-0.6400	0.000	-0.6657	0.000	2.0390	0.081	-4.2553	0.000
Constant	0.3081	0.481	0.1704	0.298	3.2362	0.000	0.2364	0.112	-10.8624	0.008	-30.9068	0.000
# of Observations	16,859		22,373		17,104		22,731		18,430		22,005	
Pseudo R²	0.092		0.0907		0.0753		0.0709		0.0179		0.0175	
χ^2	6416.67		8311.64		5080.73		6293.07		4043.8		2313.71	
Probability> χ^2	0.00		0.00		0.00		0.00		0.00		0.00	
Log likelihood	-31659.705		-41677.691		-31210.373		-41252.146		-21261.864		-64791.684	

Determinants of Giving and Volunteering

Giving to religious institutions and causes is positively related to network-based social capital, education, income, religiosity, number of kids, length of residence, and being a U.S. citizen, and being male. For blacks, religious giving is not significantly different than whites, while it is lower for Hispanics and Asian-Americans.

Secular giving is positively and significantly related to network-based and norm-based social capital, income, being female, and with age, though the relationship declines over time. At the same time, secular giving is lower the greater the number of kids and, curiously, lower to US citizens, and for those to whom religion is important.

In terms of volunteering, norm-based social capital, education, income, religiosity, the number of kids in the household, and years in current residence have a positive and significant impact on volunteering, while being married decreases the level of volunteering. In addition, females and citizens volunteer more. Also, blacks and Hispanics volunteer to a greater extent than whites, while Asian-Americans volunteer less than whites.

The Impact on the Levels of Giving and Volunteering

How large are the effects of social capital, human capital, and religiosity on levels of religious giving, secular giving, and volunteering? We produce estimates of these effects by re-estimating the giving equations with the dependent variables in levels rather than logs. All effects refer to the subsample predicted in the tobit equation to display positive levels of giving (volunteering) and are evaluated at the sample means for the population of predicted givers. We report only statistically significant effects.

Network-based social capital has an important impact in terms of giving. Moving an individual from the first to the 50th percentile in the network-based social capital distribution increases giving to religious causes by \$429 and giving to secular causes by \$746. The corresponding move in the distribution of stocks of norm-based social capital increases instances of volunteering by 14.2 per year.¹²

Persons with some college (but less than a four-year degree) can be expected to give \$218 more to religious causes, and to have 3.4 more instances of volunteering annually, relative to otherwise similar persons whose education ended with a high school degree or less. Persons with a college degree or more give \$334 more to religious causes and volunteer 4.9 more times per year.

¹² The social capital variables are centered at zero and lack an explicit natural minimum; two approaches to describing social capital's impact on giving and volunteering are considered. First, each social capital variable is translated by adding a constant to each observed value in order to bring the smallest observed value to zero. A drawback to this approach is that it is sensitive to outliers (the minimum observed value) in the data. This is particularly acute in the case of norm-based social capital, in which the minimum value lies more than one standard deviation below the value at the first percentile. As a variant of this approach, therefore, we also report the effect of the mean level of social capital when the distribution has been shifted so that the top of the first percentile corresponds to zero.

Those who believe that religion is very important are more generous than those who do not in terms of religious giving, on average giving \$1550 more a year and volunteering 5.8 more times a year. On the other hand, they are less generous in terms of secular giving, reducing their giving by \$113.

Summary

Social capital, education and religiosity have substantial and varied impacts on the three avenues of generosity studied here. For charitable giving to religious causes, religiosity is by far the most important avenue for generosity. For secular giving, network-based social capital is the biggest contributor. For volunteering, stocks of norm-based social capital are most strongly related to the respondent's level of participation.

The strong relationship between social capital and the formal education component of human capital suggests that studies in which data on social capital are unavailable may have an omitted-variables problem that leads to an overstatement of the impact of education on giving and volunteering. For example, rerunning the volunteering regression with the social capital variables omitted yields the estimate that some college will lead to an additional eight instances of volunteering and that a college degree will lead to an additional 13 instances of volunteering over the course of a year. Controlling for social capital stocks reduces the estimated direct impact of some college from eight to four times a year and the direct impact of a college degree from 13 to 5 times a year, essentially halving the estimated direct impact of human capital.

In looking across the various forms of charitable behavior, it is unmistakable that social capital matters. Individuals with greater stocks of network-based social capital tend to give more to religious causes and to give more to secular causes. And individuals with higher levels of norm-based social capital volunteer more and give more to secular causes. These results underscore the importance of an individual's associations in connecting them to others and to organizations that encourage charitable acts. Interestingly, the importance of norm-based social capital is significant in the two instances that are not religion-specific. This suggests that a belief in the civic life of a community in terms of trusting others is important in encouraging gifts of money for secular causes and volunteering time.

Another important facet of these results is how accounting for social capital affects the impacts of other factors that have been considered important variables in giving and volunteering. For example, consider education. Education has consistently been shown to be an important factor in influencing giving and volunteering behavior, both in terms of the propensity to contribute, and in the amount of money and time contributed. However, these results indicate for the first time that the impact of education works in an important and somewhat dramatic way through its impact on social capital. In effect, education's impact on charitable behavior is linked to the networks that an individual is enmeshed in and in the case of volunteering and secular giving through the individual's faith in the system. In the case of religious giving, education has an impact indirectly through social capital as well as a direct impact.

Age is another individual characteristic often linked to giving and volunteering. In this model, we hypothesized that the relationship would be an inverted U shape: increasing in the early part of the

life cycle, before declining. Recall that such a relationship is found in the social capital equations. But, once we account for social capital, age has no independent impact on giving or volunteering.

The results are also interesting in terms of the estimated impact of race and ethnicity on charitable behavior. Controlling for social capital, Blacks and Hispanics are more likely than whites to volunteer. However, if social capital is not included than they are less likely, as are Asian-Americans. The contrast in the results indicates that the observed negative relationship between race/ethnicity and volunteering is driven by the lower stocks of social capital, which is evident from the estimated impact of race in the norm-based social capital equation.

V. CONCLUSION

This analysis has important implications for our understanding of social capital and its impact on the philanthropic behavior of individuals.

First, analysis of survey data from the Social Community Benchmark data indicate that there is a strong empirical basis for the notion that social capital emanates from the networks that individuals are embedded in and the extent to which individuals exhibit norms that facilitate civic engagement. On the other hand, this analysis fails to support the idea that the two dimensions necessarily reinforce each other, as most theoretical arguments advance. Rather the notion of networks and norms seem to be largely independent of each other. This suggests the need for further theoretical and empirical development of the concept of social capital.

Second, the stocks of network-based and norm-based social capital that individuals possess are consistent, in general, with an investment model. In effect, individual attributes that relate to the opportunities, benefits, and costs of engaging in network and the impact on trust in the community and its institutions are significant determinants of the stock of social capital.

Third, we generate a more nuanced understanding of the relationship between social capital and philanthropy. Social capital has important impacts on giving and volunteering. Network-based social capital has important impacts on both religious and secular giving, and norm-based social capital has important effects on both secular giving and volunteering. Moreover, this analysis suggests that the impact of education on charitable giving works to a substantial extent through education's effect on stocks of social capital.

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APPENDIX A: SOCIAL CAPITAL COMMUNITY BENCHMARK SURVEY INDEXES OF SOCIAL CAPITAL

Social Trust. Six questions are included in the social trust index. One is the question on general trust, “Would you say that most people can be trusted, or that you can’t be too careful in dealing with people?” The other five are about trusting people encountered in specific community-based contexts. Respondents were asked whether they trust “a lot, some, only a little, or not at all” the “people in your neighborhood;” “people you work with;” “people at your place of worship;” “people who work in the stores where you shop;” and “the police in your local community.” The questions were weighted equally and scores were standardized by subtracting the mean and then dividing by the standard deviation of the national sample for each question.

Racial Trust. Respondents are asked whether they trust “a lot, some, only a little, or not at all” people in each of four racial/ethnic categories, and the responses to categories other than the respondent’s are equally weighted in computing an index of racial trust.

Diversity of Friendships. This index counts how many of eleven types of friends the respondent says are represented in the set of people that includes “everyone that you would count as a PERSONAL FRIEND, not just your closest friends.” The eleven categories cover people who: own their own business; are manual workers; have been on welfare; own a vacation home; have a different religious orientation (not Protestant, Catholic, Jewish, depending on the respondent’s affiliation, or who is very religious, if the respondent gave “no religion” as an affiliation); are white; are Latino or Hispanic; are Asian; are black /African American; are gay or lesbian; and those who can be described as community leaders.

Formal Group Involvement. This index counts the number of types of groups the respondent has been involved with in the 12 months prior to the interview. Two versions of this index are calculated, varying in whether they include an item asking about taking part in “any sort of activity with people at your church or place of worship other than attending services.” The 18 questions included in both versions of the index cover the following kinds of groups: an organization affiliated with religion other than a place of worship; an adult sports or outdoor activity, club or league; youth organizations such as scouts or youth sports leagues; a parents organization or other school support group; a veteran’s group; a neighborhood association; organizations for seniors; a service-providing charity organization; a labor union; a professional or trade association; service clubs or fraternal (sorrowful) associations; ethnic, nationality, or civil rights groups; a literary or fine arts group; other hobby or pastime (e.g. investing, gardening) societies; support groups and self-help groups for persons with specific problems; groups that meet only over the Internet; and other clubs or organizations. To avoid duplication of items incorporated into the faith-based social capital index, we use the Formal Group Involvement index that excludes the question on activities with people from the respondent’s place of worship.

Faith-Based Social Capital. Four items are used for the construction of this index. They are: whether or not the respondent is a member of a local religious community; frequency of attendance at religious services, measured in five ranges from at least every week to less than a

few times per year; whether or not the respondent had participated in an activity other than services with people from his or her local religious community in the past twelve months; and whether the respondent was involved with a religious group other than his or her congregation.¹ An alternative index is available that also includes charitable contributions to religious causes, standardized by the national mean and standard deviation; and number of times a respondent volunteered, also standardized by the national sample's mean and standard deviation.

Organizational Activism. This index builds on four items. The first of these is the version of the Formal Group Involvement index (described above) that does not include church-based activities. Also included is the number of times in the past twelve months the respondent attended a club meeting, and the number of times he or she attended any meeting at which school or town affairs were discussed. The fourth item asks whether the respondent has served as an officer or served on a committee of any local club or organization. The index value is described in the codebook as consisting of “the factor score resulting from a principal components analysis” of these four variables.

Informal Social Interactions. This index is based on the answers to five questions about socializing over the past twelve months. Respondents are asked how many times they played cards or board games with others, visited with relatives, entertained friends at home, socialized with friends in public places, and socialized with co-workers outside of work. Their scores on each question are standardized by the national mean and standard deviation. The index is the mean value of the standardized scores.

Giving and Volunteering. Respondents were asked two questions about charitable contributions and a longer series of questions about volunteer activities. Contributions of “money, property or other assets for a wide variety of charitable purposes” in the past twelve months were queried first for religious causes and then for all “non-religious charities, organizations, or causes.” Responses were coded into six ranges, from “none” to “more than \$5,000.” Volunteering was defined as “any unpaid work you’ve done to help people besides your family and friends or people you work with.” The first question asked how many times in the past month the respondent had volunteered. If the respondent indicated a positive amount of volunteering, a series of six questions asked if any of the volunteering was for a specific cause. The six areas of volunteer activity queried are: for one’s place of worship; for health care or fighting particular diseases; for school or other youth-centered programs; to help the poor or the elderly; for the arts or other cultural organizations; for any neighborhood or civic group. The number of volunteer activities is converted to a monthly measure, and the index is computed as the average of the scores on the two contributions questions, number of times volunteered monthly, and, for each of the activity areas, dummy variables indicating whether the individual volunteered.

¹ For this analysis we adopted the measure of faith-based engagement that does not contain information on religion-focused giving and volunteering. In a research context that demands the most comprehensive measure of faith-based social capital, the broad index is a natural choice. However, for a study that focuses explicitly on philanthropy and the links to social capital, it is appropriate to use the narrower faith-based social capital index so as to avoid having the same questions included in both the social capital index and the giving variable.

Electoral Politics. This index is based on five questions relating to interest in and involvement in electoral politics. Two yes-or-no questions ask whether the respondent is registered to vote and whether he or she voted in the most recent (1996) presidential election. One question asks how many days last week the respondent read a newspaper; this is divided by seven to produce an answer that can range from zero to one. The respondent is asked to name the two senators from her state; partial credit is given for getting close to a correct name, and again the scores are standardized so that getting both correct confers one point and neither, even approximately correct, confers zero points. The fifth question asks whether the respondent is “not at all interested,” “only slightly interested,” “somewhat interested,” or “very interested” in politics and national affairs. The answers are scaled to range from zero to one. The index is then the average of these five scores.

Activist (or “Protest”) Politics. This measures issue-related involvement in politics beyond general electoral participation, with all questions referring to the previous twelve-month period. Respondents are asked whether they have signed a petition; attended a political meeting or rally; and/or have participated in demonstrations, boycotts, or marches. Three further questions ask about involvement with politically active groups such as labor unions; ethnic, nationality or civil rights groups; and other public interest or political action groups or party committees. A seventh question asked whether any group in which the respondent was involved had taken any local action for social or political reform. The index is calculated as the mean of the answers to these questions.