

TRUSTING AND JOINING? An Empirical Test of the Reciprocal Nature of Social Capital

Michele P. Claibourn and Paul S. Martin

This article tests a key hypothesis of the social capital literature: voluntary memberships and generalized trust reproduce one another. Panel data from the Michigan Socialization Studies from 1965 to 1982 are used to test the contemporaneous and lagged effects of interpersonal trust on joining groups and the contemporaneous and lagged effects of joining groups on interpersonal trust. We find no evidence supporting the hypothesis that interpersonal trust encourages group memberships and only limited evidence suggesting that belonging to groups makes individuals more trusting.

Key words: social capital; voluntary associations; interpersonal trust.

INTRODUCTION

In recent years both nonprofit foundations and government agencies have encouraged the proliferation of voluntary associations as a means of generating social capital, thought to provide resources that improve governance and government accountability to citizens (Brehm and Rahn, 1997; Putnam, 1995, 2000). Despite the growing push to build social capital as public policy, and the ever-growing literature, there is still much uncertainty about the mechanisms that foster social capital and the effects of social capital on democracies. This article focuses on further understanding the mechanisms that reproduce social capital, specifically, the extent to which voluntary associations produce interpersonal trust, a form of social capital, and vice versa.

Social capital originated as an ethically neutral resource produced as a by-product of social relationships (Coleman, 1988). Social capital as a resource available to individuals can take multiple forms, including norms, information,

Michele P. Claibourn, University of Wisconsin at Madison; Paul S. Martin, University of Oklahoma, Department of Political Science, 455 W. Lindsey, Room 205, Norman, Oklahoma 73019 (psmartin@ou.edu).

and obligations. Norms both facilitate and constrain individual actions as “the norms that make it possible to walk alone at night also constrain the activities of criminals” (Coleman, 1988, p. s105). And, social relationships reduce the time and energy necessary to gather information. Rather than scour many information sources to keep abreast of events, individuals pick up information incidentally as a result of social interactions. Lastly, social relations help create networks of reciprocity. In Coleman’s conception, people in social relationships issue ‘credit slips’ to one another, representing social obligations and providing some insurance against shirking. If people recognize the value of these by-products of social relations—norms, information, and obligations—then the type of social relationships that provide these resources ought to proliferate.

The importance of social capital to politics was not explicit in its original conception; however, the ideas behind social capital were significantly refined upon their introduction to political science. Coleman’s ethically neutral version of social capital was transformed into an ethically positive force that aids in the resolution of collective action problems, which improves governance and ultimately nurtures democracy and development (Putnam, 1993, 1995). A further revision of this social capital theory posits a connection between the norms of trust produced by civic engagement and positive attitudes toward government (Brehm and Rahn, 1997).¹

The Logic Connecting Trust and Groups

Given the largely positive consequences of social capital, research has turned to the question of how social capital is generated. Some have argued that, in general, trusting and joining reproduce one another (Brehm and Rahn, 1997; Putnam, 1995). We test this argument while acknowledging that there are alternative logics that can plausibly connect interpersonal trust and voluntary associations in less positive ways. The theoretical connection between trusting and joining is neither obviously positive nor generalizable across all groups and individuals.

Putnam’s conception of the relationship between associational memberships and interpersonal trust is straightforward: “The theory of social capital presumes that, generally speaking, the more we connect with other people, the more we trust them, and vice versa” (Putnam, 1995, p. 665). The type of associational membership is unimportant to this general relationship. Putnam notes,

Participation in civic organizations inculcates skills of cooperation as well as a sense of shared responsibility for collective endeavors. Moreover, when individuals belong to ‘cross-cutting’ groups with diverse goals and members, their attitudes will tend to moderate as a result of group interactions and cross pressures. These effects, it is worth noting, do not require that the manifest purpose of the association be political.

Taking part in a choral society or a bird-watching club can teach self-discipline and appreciation for the joys of successful collaboration. (1993, p. 90)

Yet, the logic connecting interpersonal trust and voluntary associations is hard to generalize (e.g., Stolle and Rochon, 1998). Why should membership in horizontal associations foster generalized interpersonal trust? Putnam suggests that cross-pressures could lead to increasing moderation and toleration, but it is equally plausible that people self-select into groups composed of others like them. The trust that may arise within these groups need not translate to trust for those outside of the social network. Coleman (1988) has suggested that closed networks are more likely to facilitate norms and trustworthiness, yet closed networks are precisely those in which the resources of social capital are likely to be enjoyed only internally.

Putnam also theorizes that interpersonal trust encourages the joining of groups. It is conceivable, though, that *distrust* of fellow humans encourages people to join groups. If we trusted one another to behave in ways that produce desired outcomes without our interference there would be no reason to organize groups that facilitate collective action. Joining groups may also represent strategic behavior whereby one joins to ensure accurate representation of large group interest. Individuals might join a group because they disagree with the direction the group is heading and, recognizing the strength of an established group, hope to influence the group from within. In sum, it is not intuitively obvious that interpersonal trust encourages group memberships. Distrust is a potentially important factor.

It is not even clear that current group memberships facilitate joining more groups. Positive experiences resulting from group membership could lead to joining more groups, while negative experiences could lead to withdrawal from group activity. Once people join groups they may learn the benefits of group membership if, for instance, the group reduces defection rates in individual interactions. Axelrod's (1984) tit-for-tat games suggest an example. Groups that cooperate by using the tit-for-tat strategy ultimately benefit over individuals who enter the group and try to outmaneuver their opponents with any alternative strategy. The group members still do better in the long run, despite individual losses to the outside, because of their cooperation. Understanding this could easily lead to a desire to form or join other cooperative groups. On the other hand, the routine internal strife and personality conflicts experienced in one group could discourage individuals from involvement in other groups.

The generalized relationship between interpersonal trust and civic engagement has been overstated. A simple logical exercise suggests a variety of plausible mechanisms that can lead to either a positive or a negative relationship between trusting and joining. There is good reason to believe that the impact of voluntary associations on interpersonal trust would vary substantially across

groups, across levels of group involvement, and across individuals according to the experiences individuals have within those groups.²

Evidence Connecting Interpersonal Trust with Voluntary Associations

While there has been a flurry of critiques of Putnam's aggregate analysis, there are surprisingly few published studies examining the dynamic interaction between voluntary associations and interpersonal trust at the individual level.³ In one of the most thorough treatments of the linkages between trusting and joining, Brehm and Rahn (1997) find an empirical connection between interpersonal trust and group memberships at the individual level. Through a series of covariance structure models they find that individuals who trust others tend to join more groups, and individuals who belong to more groups tend to trust others. The path from group memberships to interpersonal trust is the stronger of the two.

While these authors demonstrate support for the interconnection between group memberships and social trust they are unable to fully test a *causal* mechanism with their data, a series of cross-sections from the General Social Survey. A better causal test would rely on repeated observations of both trust and group membership for the same individuals over time. Panel data would further aid us in disentangling the causal direction through the examination of causally prior measures of the explanatory variables.

The Michigan Socialization Study (1965–1973–1982 panel study) is used to examine the theoretically reciprocal relationship between group memberships and social trust. With this data, both the cross-lagged and simultaneous effects of trust and group membership on one another as well as the lagged effect of trust and group memberships on themselves can be estimated. The hypothesized relationships are illustrated in Figure 1. Again, alternative mechanisms suggest either a positive or negative relationship between these key variables. The strongest evidence of reciprocal causation between interpersonal trust and voluntary associations is in the cross-lagged effects (arrows c and d). If trust and

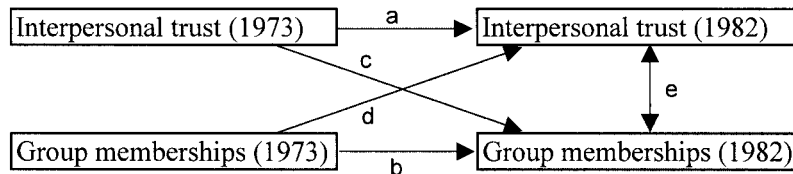


FIG. 1. Hypothesized relationships between interpersonal trust and group memberships.

civic engagement cause one another, these should be positive and statistically significant. A positive and significant simultaneous effect (arrow e) alone indicates a weaker causal relationship.

DATA AND METHOD

A test of this hypothesis requires repeated measures of interpersonal trust and group membership taken in multiple time periods for the same sample. The Michigan Socialization Study collected by Kent Jennings and his colleagues meets these criteria (Jennings, Markus, and Neimi, 1991). The data consist of three waves of a survey administered to high school students and their parents beginning in 1965. The respondents were originally selected in a national probability sample of 97 schools, and between 15 and 21 students (as well as their parents) were selected from each school. Both the students and their parents were reinterviewed eight years later in 1973, and nine years later in 1982.⁴ In each wave, respondents were asked a series of questions gauging interpersonal trust and group involvement.

The data are used to analyze the simultaneous effects of interpersonal trust and voluntary associations in 1982 and the cross-lagged effects from 1973 on one another. Data from 1965 are used to create the instrumental variables necessary for the tests of reciprocal effects (shown in Appendix Table 1). The panel design allows us to test a clearer causal model but has the drawback that the findings from this cohort and this time period may be harder to generalize to the entire population. To attenuate potential cohort effects we test the hypothesis twice—first with the youth sample and second with the parent sample.

The measure of group involvement is straightforward. The Michigan Socialization studies asked both parent and youth samples whether or not they were active in nine types of voluntary associations—religious, neighborhood, informal, professional, fraternal, sport, civic, ethnic, or labor groups. Group membership is measured as an additive index of the number of different types of groups in which a respondent claimed to be involved.⁵ In both the parent and youth samples, less than 3% of respondents claim to belong to more than four groups, so we truncate the upper bound at 4. The measure of interpersonal trust is an additive index of positive responses to three questions tapping beliefs that people are trustworthy, helpful, and fair (see appendix for question wording). A score of 3 indicates positive responses to all three questions and suggests that the respondent is highly trusting of others.

Although the primary tests are the reciprocal effects between group membership and interpersonal trust, several exogenous variables thought to condition trust and group participation are included in the analyses. Group membership is modeled as a function of past membership, current and past levels of interper-

sonal trust, partisanship, political activity, television consumption, number of children,⁶ hours worked,⁷ newspaper readership, marital status, race, gender, income, and education. Partisanship and political activity are themselves forms of civic engagement, although civic engagement is much broader and more continuous than political participation. Inclusion of political activity tests the supposition that one type of engagement predicts another. Media consumption is hypothesized by Putnam to influence negatively both trust and group memberships, albeit for different reasons. The number of hours worked, the number of children, and the amount of television consumption may account for a decrease in group memberships as people could be staying home or working rather than participating in associational memberships (although see Norris, 1996). Newspaper consumption could encourage group involvement by making citizens aware of the activities of groups they might join. Marital status is included based on the idea that it may be easier to join groups if you can bring along a friend, and coupled people automatically have someone that they can bring along. Conversely, coupled people may have less incentive to involve themselves in groups since one reason to join groups is to meet other people. There is some evidence that blacks, when socioeconomic status is taken into consideration, are more likely to be politically active and, thus, more likely to join groups. Gender, income, and education are also included as demographic controls that may facilitate joining groups as being male, wealthy, or educated could reduce the psychological costs of joining.

The model of interpersonal trust includes past trust, current and past levels of group memberships, partisanship, political activity, newspaper consumption, television consumption, life satisfaction, marital status, race, gender, income, and education. Republicans are thought to be less trusting than Democrats since they tend to see others as more likely to disagree with them (Mutz and Martin, 1998). Political activity is hypothesized to encourage interpersonal trust since it may force interaction with dissimilar people, thereby encouraging generalized trust (Rahn, Brehm, and Carlson 1999). Newspaper and television consumption may discourage interpersonal trust (Putnam, 1995) as media coverage tends to focus on the violent and the sensational (Gerbner & Gross, 1976). Brehm and Rahn (1997) find, as have others (Schwartz and Clore, 1983), that life satisfaction is an important indicator of interpersonal trust, theorizing that people are more trusting if they think their life is going well. Race, gender, education, and income are sources of political inequality and people on the negative side of that inequality have more reason to be less trusting of their fellow humans than do people on the positive side of political inequality. Furthermore, tolerance studies have demonstrated consistently that education increases tolerance, making trust more likely (see Altemeyer, 1996; Marcus, Sullivan, Theiss-Morse, and Wood, 1995).

Since the dependent variables—number of group memberships and the

index of interpersonal trust—are discrete ordinal measures, ordered probit would be a more appropriate model if the causal path was unidirectional. As group memberships and interpersonal trust are believed to be reciprocally related, however, a more complex analysis is necessary. Standard ordered probit analysis, like the classical linear regression model, assumes that the independent variables are uncorrelated with the disturbances for the dependent variable. This is not the case here since group memberships and interpersonal trust are hypothesized to influence one another and, hence, have correlated errors. We use both two-stage least squares and two-stage ordered probit models to deal with the problem of correlated errors. Instruments were developed for both group membership and interpersonal trust in 1982 using, respectively, interpersonal trust and group membership in 1965 along with all of the other variables from the second-stage models.⁸ The synchronous effects of interpersonal trust and group memberships on one another are then tested using the predicted values from the first-stage, the concurrent independent variable along with the lagged endogenous and cross-lagged effects from 1973 (see Finkel, 1995, pp. 37–44).

While the parameter estimates of the ordered probit models are consistent (Alvarez and Glasgow, 2000; Amemiya, 1978), the standard errors of the estimates may be incorrect (Nelson and Olsen, 1978).⁹ As a check on the two-stage ordered probit models, two-stage least squares models are used.¹⁰ While the assumption of a linear relationship between the dependent and independent variables is violated in this model, which may bias the parameter estimates, it recovers correct standard errors. The cut-points from the first stage of the ordered probit estimations suggest that the linearity constraint in the two-stage least squares is not unrealistic for the group membership model using the youth sample but is violated in the parent sample. The linearity assumption is violated in the trust model of the youth sample but not in the parent sample.¹¹ Nevertheless, the estimates and standard errors from the 2SLS and the 2SOP models produce very similar results, granting us greater confidence in both models. For simplicity, we present the results of the two-stage least squares models in the body of the text and reserve the two-stage ordered probit models for the appendix (Appendix Tables 2–5).

The model is given by the following (see Finkel, 1995):

$$G_{82} = \beta_0 + \beta_2 G_{73} + \beta_4 T_{82i} + \beta_6 T_{73} + \beta Z + \varepsilon_1 \quad (1)$$

$$T_{82} = \beta_1 + \beta_3 T_{73} + \beta_5 G_{82i} + \beta_7 G_{73} + \beta Z + \varepsilon_2 \quad (2)$$

where G is the number of group memberships, T is the level of interpersonal trust, Z represents a matrix of exogenous variables and the subscript i represents the instrumented variables.

RESULTS

Reciprocal Effects of Trust and Groups: Youth Sample

We examined the influence of trust on group membership and vice versa over two time points from the panel, 1973 and 1982, as described above.¹² Table 1 presents the two-stage least squares model of the influence of interper-

TABLE 1. The Effect of Interpersonal Trust on Group Membership (Youth Sample)

	2SLS
Trust at 1982 (instrument)	.030 (.255)
Trust at 1973	.035 (.098)
Group membership at 1973	.301** (.034)
Partisanship	.027 (.020)
Political activity	.134** (.019)
Marital status	.192 (.109)
Number of children	.035 (.035)
Hours working	-.001 (.004)
Television consumption	.014 (.030)
Newspaper readership	.059* (.027)
Income	.009 (.010)
Education	.044* (.017)
White	-.462** (.162)
Female	-.088 (.105)
Constant	.534* (.254)
Number of cases	874
R^2	.231
Model significance	$p < .0001$

Notes: ** $p < .01$; * $p < .05$.
Standard errors in parentheses.

sonal trust on voluntary association membership in the youth sample.¹³ As previously mentioned, an instrument is used for contemporaneous interpersonal trust. Neither the contemporaneous nor the lagged measure of interpersonal trust is statistically significant. In other words, we find no simultaneous or lagged effect of trust on the level of group memberships. Prior group involvement is positively and significantly related to later group involvement, suggesting some stability of civic engagement over time.

Table 2 examines the influence of group memberships on interpersonal trust.

TABLE 2. The Effect of Group Membership on Interpersonal Trust (Youth Sample)

	2SLS
Group membership at 1982 (instrument)	.096 (.398)
Group membership at 1973	-.054 (.124)
Trust at 1973	.370** (.035)
Partisanship	.022 (.021)
Political activity	-.001 (.054)
Marital status	-.087 (.131)
Television consumption	.017 (.030)
Newspaper readership	-.001 (.037)
Life satisfaction	.092 (.054)
Income	.015 (.010)
Education	.013 (.023)
White	.414 (.225)
Female	.195* (.095)
Constant	.449 (.300)
Number of cases	876
R^2	.189
Model significance	$p < .0001$

Notes: ** $p < .01$; * $p < .05$.
Standard errors in parentheses.

As with the influence of interpersonal trust on voluntary associations, we find no evidence of a simultaneous or lagged effect of group memberships on interpersonal trust. Trust, like civic engagement, exhibits much stability as evident by the positive and significant effect of lagged levels of interpersonal trust.

In short, we find no support for the hypothesis that trust and group memberships are reciprocally causal among the youth sample. Neither trust from 1973 nor from 1982 significantly predicts group memberships in 1982. And group memberships in both 1973 and 1982 fall well short of significantly predicting interpersonal trust in 1982.

Reciprocal Effects of Trust and Groups: Parent Sample

The hypothesis that voluntary associations and interpersonal trust are mutually reinforcing is retested using the parent sample. Briefly, the results from the parent panel are consistent with the youth panel with respect to the influence of interpersonal trust on voluntary association membership but tell a somewhat different story about the influence of voluntary associations on interpersonal trust. Table 3 presents the model of the influence of interpersonal trust on voluntary associations. Neither the contemporaneous nor the lagged measure of interpersonal trust is statistically significant. Prior group membership is positive and a significant factor in determining later group memberships.

Table 4 presents the estimated influence of group memberships on interpersonal trust in the parent sample. The coefficient on the synchronous measure of group membership is positive and statistically significant, while the coefficient on the lagged measure is significant but with the opposite sign. Contemporaneous group memberships positively influence interpersonal trust, but lagged group memberships negatively influence interpersonal trust.

The results from the parent data are consistent with the youth data with respect to the influence of interpersonal trust on group memberships, but the results diverge with respect to the influence of group memberships on interpersonal trust. Neither set, however, provides strong support for a causal relationship between interpersonal trust and group memberships. The best demonstration of causation would come from the cross-lagged variables since they are clearly causally prior. Unless we believe that the appropriate lag for the reciprocal relation between trust and groups is *very* short, our results suggest a tenuous empirical relationship between interpersonal trust and membership in voluntary associations.

Additional Analyses

Our results show that groups and interpersonal trust are not mutually reinforcing with the youth sample, and that the relationship may be one-sided in the

TABLE 3. The Effect of Interpersonal Trust on Group Membership (Parent Sample)

	2SLS
Trust at 1982 (instrument)	.252 (.184)
Trust at 1973	-.101 (.089)
Group membership at 1973	.385** (.034)
Partisanship	-.001 (.016)
Political activity	.092** (.024)
Marital status	-.439** (.109)
Number of children	—
Hours working	—
Television consumption	-.038 (.037)
Newspaper readership	-.019 (.031)
Income	.054** (.007)
Education	.026 (.061)
White	-.133 (.155)
Female	-.120 (.081)
Constant	.459* (.198)
Number of cases	745
R^2	.305
Model significance	$p < .0001$

Notes: ** $p < .01$; * $p < .05$.
Standard errors in parentheses.

parent sample. If the relationship between groups and trust is not exceptionally powerful, what then causes people to trust and join groups? The results from Tables 1–4 provide an illustration of the elusiveness of the antecedents of interpersonal trust and civic engagement. In both samples, the strongest predictors of both interpersonal trust and group involvement is earlier trust and involvement. Both trusting and joining have a relatively high degree of stability over time (see Appendix Table 6).

Because the change-score model used to test the influence of changes in

TABLE 4. The Effect of Group Membership on Interpersonal Trust (Parent Sample)

Group membership at 1982 (instrument)	.545*
	(.236)
Group membership at 1973	-.213*
	(.107)
Trust at 1973	.453**
	(.040)
Partisanship	.014
	(.018)
Political activity	-.044
	(.040)
Marital status	.094
	(.128)
Television consumption	.049
	(.041)
Newspaper readership	.066*
	(.030)
Life satisfaction	.002
	(.067)
Income	-.012
	(.009)
Education	.050
	(.069)
White	.319*
	(.150)
Female	.145
	(.091)
Constant	-.151
	.228
Number of cases	672
R^2	.128
Model significance	$p < .0001$

Notes: ** $p < .01$; * $p < .05$. Standard errors in parentheses.

group membership on changes in interpersonal trust (and vice versa) includes a lagged dependent variable, the explanatory power of other independent variables may be suppressed (Achen, 2000). With this caution in mind, the best predictors of voluntary association memberships are political activity, newspaper readership, and race in the youth sample and political activity, income, and marital status in the parent sample. Not surprisingly, folks who are politically engaged are also more broadly engaged in their communities. Newspaper readership positively predicts group involvement. Two potential explanations are offered. Newspapers may be guides to locating group activity, or newspaper readership may indicate an overall propensity to be active, akin to political

activity. Blacks were more likely than whites in the youth sample to join groups, although we have no explanation for this.

Marital status and income influence group activity in the parent sample. Whereas married or partnered people were expected to be more likely to join groups because of the reduction in anxiety a 'buddy' brings, the reverse happens. It may be that people seek voluntary groups to compensate for the absence of a partner. Consistent with resource models for political activity (Verba, Schlozman, and Brady, 1995), individuals with higher incomes were more likely to join groups than individuals with lower incomes. This likely signals the greater leisure time available to those with higher incomes.

Interpersonal trust is even more elusive. In the youth sample, only life satisfaction and gender predict interpersonal trust. As expected, people who are happier with themselves are more likely to trust others. On the other hand, the greater trust of women as compared to men is unexpected. In the parent sample, newspaper readership and race predict interpersonal trust. Newspaper readers and whites are more trusting. The reasons are not immediately evident. Newspaper readership is hypothesized within the social capital literature to discourage trust because newspapers often portray the world as a violent place. Finding that whites are more trusting is consistent with the hypothesis that individuals with relatively higher degrees of power would be more trusting, but it is in contrast to finding that women are more trusting in the youth sample.

DISCUSSION AND CONCLUSION

The results cast doubt on the existence of a simple causal mechanism between interpersonal trust and group membership in either a positive or negative direction *at the individual level*. In the youth sample, the lagged and simultaneous levels of trust do not influence group memberships, nor do the lagged and simultaneous levels of group memberships influence interpersonal trust. In the parent sample, the lagged and simultaneous levels of trust do not influence group memberships. And while the lagged levels of group memberships do not positively influence interpersonal trust in the parent sample, the simultaneous levels do. Among the contemporaneous and cross-lagged causal paths in the models, in only one instance is there partial evidence that group memberships may encourage interpersonal trust. There is no evidence in this study of the reverse causation.

Two explanations can account for the findings from the youth sample. First, the results may indicate that trust and group memberships are not as mutually reinforcing as others have argued. A second interpretation is that the findings are a methodological artifact. The appropriate causal lag for the influence of group memberships on interpersonal trust (and vice versa) may be a very

long one, suggesting inclusion of the contemporaneous effect is unnecessary. Alternatively, the causal lag may be considerably shorter than the time elapsed between the waves of measurement (9 years), suggesting the contemporaneous effect, which captures the temporal aggregation of a brief causal sequence, is the crucial one.

To check the robustness of this conclusion two alternate specifications were tested on both samples, omitting first the cross-lagged effects and then the contemporaneous effects. When the models were tested with only the cross-lagged effects and then with only the simultaneous effects with the youth sample, we still found no influence of trust on groups or groups on trust. Since neither the cross-lagged nor the contemporaneous effects appeared in either model, we find the first explanation—a lack of mutual reinforcement—most plausible for the youth sample. When the contemporaneous effects were omitted from the model using the parent sample, there was no evidence of cross-lagged effects of trust on groups or groups on trust. When the cross-lagged effects are omitted in the parent sample, the contemporaneous effect of group membership on interpersonal trust remains, but no contemporaneous effect of trust on groups emerges. This suggests that while trust exhibits no influence on the number of groups an individual joins, *the influence of joining groups on trust may be relatively short-lived and limited to particular cohorts or specific age groups.*

Why are there simultaneous effects in the parent sample but not in the youth sample? It may be a methodological problem. The first-stage estimates are weaker in the youth sample than in the parent sample in part because the group activity for the youth sample in high school is a weaker predictor of later activity as compared to their parents. Activity levels in high school are artificially high. Nevertheless, the statistical criteria for using the 1965 measures as instruments for the 1982 measures are met in the youth sample.¹⁴ The difference may result from the difference in age (or life stage) of the samples, from the different periods in which the respondents were socialized, or from a combination of the two. One potentially important difference may be in the kinds of groups that the respondents in the parent and youth samples joined. As Table 5 shows, parents were more likely to be members of fraternal and church groups, whereas their adult children were more likely to belong to professional and sport groups. It is reasonable that groups that are both more attitudinally homogeneous and community-oriented, such as fraternal and church groups, are better at inspiring interpersonal trust than are sport groups or professional groups. Sport groups may develop in-group trust but also serve to bring opposing teams together for competition, which may inhibit in-group trust from being generalized. Professional groups share similar characteristics with the workplace, which is one of the few areas of life that is likely to expose people to individuals unlike themselves (Mutz and Martin, 1998; Mutz and Mondak,

TABLE 5. Kinds of Groups Respondents in the Parent Sample and the Youth Sample Joined (in percent)

	Parent Sample		Youth Sample	
	1973	1982	1973	1982
Civic	8	5	4	7
Fraternal	17	18	10	10
Neighborhood	12	13	7	17
Professional	14	10	19	28
Religious	39	42	18	30
Sport	9	8	19	24
Ethnic	2	2	2	4
Informal	14	14	12	14

Note: Cell entries are the percent of respondents in each group.

1998). Thus, professional groups may have the capacity to generalize trust but not the capacity to generate it. Not only might individuals join different types of groups, what an individual brings to and gets from group involvement changes over one's life cycle.

The divergence in results between the youth and parent samples with respect to the effect of joining groups on interpersonal trust may also be consistent with Putnam's analysis of the 'Long Civic Generation' born between 1910 and 1940 (Putnam, 1995). Those in the parent sample are of the same generation that Putnam argues were at the peak of both civic engagement and interpersonal trust. The decline in both civic engagement and interpersonal trust among subsequent generations may help to explain why we find an effect of voluntary memberships on interpersonal trust in the parent sample but not in the youth sample. Nevertheless, it is important to note that our findings are also consistent with what Michael Schudson (Schudson, 1996) has argued: the long civic generation may have been a fluke driven by the joint experiences of World War II and the Great Depression.

In addition, it appears that the factors influencing both voluntary association memberships and interpersonal trust vary across cohorts. In comparing the other factors influencing group membership, we showed that race and newspaper readership were significant factors in the youth sample but not in the parent sample. Similarly, income and marital status influenced group memberships for parents but not for their children. In comparing the factors influencing interpersonal trust, newspaper readership was positively related to trust in the parent sample but unrelated to trust in the youth sample. These divergent results reinforce our assessment that the relationship between interpersonal trust and memberships in voluntary associations is not one that can be easily generalized.

Because our analyses rely on two particular cohorts, our claims to statistical generalization may be limited. There are some clear theoretical benefits to using these two cohorts, however. First, numerous socialization studies point to the years following high school as the crucial period for crystallization of behavioral patterns and attitudes (e.g., Jennings and Neimi, 1981). If voluntary memberships and interpersonal trust do foster one another, they ought to do so during these critical years between 18 and 35. It is unclear why such an effect would emerge only later in life. Second, the parent sample represents a ‘most-likely’ test case where the theory is most plausible.¹⁵ If any cohort would be expected to exhibit a reciprocal relationship between interpersonal trust and group memberships it would be this parent sample. Yet we find little support for the reciprocal effects between joining and trusting, even in this most plausible case. Finally, analysis of the two cohorts automatically controls for age. The relationship between trusting and joining could vary by age—which our results seem to bear out. Nevertheless, there is nothing in a theory of social capital that suggests that the mechanisms producing these social resources should vary so much. There is no reason to expect, if the theory at the individual level were true, that it should not apply to these generations at these time periods.

How do our results compare with those of Brehm and Rahn (1997)? In one sense, our results are consistent. Like Brehm and Rahn (pp. 1112–1113), we find stronger support for the influence of group involvement on interpersonal trust than the reverse. That being said, our interpretation of Brehm and Rahn’s results suggest that their conclusion of a “tight reciprocal relationship between civic engagement and interpersonal trust” is overstated. While they find statistically significant results showing some link between interpersonal trust and civic engagement, the substantive effects seem relatively small and the sample size is large enough to question mere statistical significance.¹⁶ More importantly, the conclusions we draw from our analyses differ substantially from Brehm and Rahn’s.

Ultimately, for such an important theory, one that is being promoted as public policy, we would expect the relationship between trusting and joining to be clear and robust and not unduly reliant on a particular data set or a particular model specification. The results of these analyses indicate the need to move beyond a generalized expectation of the relationship between voluntary associations and interpersonal trust.

Acknowledgments. The authors thank Charles Franklin, Virginia Sapiro, the members of RSVP at the University of Wisconsin, and the anonymous reviewers for their helpful comments and suggestions. The authors blame one another for all remaining errors.

APPENDIX

Variables in the Models (Youth and Parent Panel Studies 1965, 1973, and 1982)

- Interpersonal Trust is an index of three questions asking general beliefs that others are trustworthy, fair, and helpful (0 = low and 3 = high)
 - “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people.”
 - “Would you say that most of the time people try to be helpful or that they are mostly just looking out for themselves.”
 - “Do you think most people would try to take advantage of you if they got a chance or would they try to be fair.”
- Group memberships is a count of the number of groups that respondents acknowledge belonging to (coded as the actual number up to 4 groups).
 - “Here is a list of some kinds of organizations to which people may belong. Just tell me the letter on the card of any type of organization that you belong to.”
- Partisanship is the traditional seven-point partisanship scale. It is coded 1 for strong Democrats and 7 for strong Republicans.
- Newspaper and television consumption are subjective measures of the respondent’s use of newspapers and television from 0 = don’t use to 5 = use frequently.
- Life satisfaction is a three category ordinal scale of the respondent’s subjective evaluation of how their life is going from –1 as worse than expected to 1 as better than expected.
- Hours worked is a measure of the number of hours the respondent worked in the previous week.
- Political activity is an index of the number of activities respondents report engaging in, from 1 to 9.
- Race is coded as 1 = white and 0 = non white.
- Gender is coded as 1 = female and 0 = male.
- Education is coded as the number of years of post-high school education, with 0 = no post-high school education and 7 = seven years of post-high school education.
- Income is an ordinal scale with 1 = lowest and 12 = highest income.
- Marital status is coded as 1 = married or otherwise coupled and 0 = not married or coupled.

APPENDIX TABLE 1. First Stage Estimates for Two-Stage Least Squares Models

	Youth		Parent	
	Trust 1982 (Table 1)	Groups 1982 (Table 2)	Trust 1982 (Table 3)	Groups 1982 (Table 4)
Trust at 1965	.142** (.036)	—	.229** (.037)	—
Groups at 1965	—	.058* (.024)	—	.153** (.033)
Trust at 1973	.328** (.033)	.041 (.031)	.357** (.035)	.007 (.037)
Groups at 1973	-.013 (.033)	.295** (.034)	.013 (.029)	.360** (.036)
Partisanship	.035* (.018)	.029 (.018)	.007 (.014)	-.007 (.016)
Political activity	.011 (.018)	.122** (.019)	.020 (.020)	.118** (.023)
Marital status	-.046 (.106)	.239* (.089)	.096 (.094)	-.074 (.116)
Number of children	-.027 (.034)	—	—	—
Hours working	.002 (.004)	—	—	—
Television consumption	.025 (.029)	.018 (.029)	.006 (.031)	-.054 (.036)
Newspaper readership	.005 (.027)	.054* (.027)	.081** (.023)	.015 (.027)
Life satisfaction	—	-.040 (.053)	—	.107 (.057)
Income	.015 (.009)	.010 (.009)	-.012* (.006)	.008 (.008)
Education	.019 (.016)	.038* (.017)	.114* (.049)	.097 (.057)
White	.338** (.128)	-.419** (.129)	.251* (.123)	-.005 (.138)
Female	.176 (.092)	-.103 (.094)	.051 (.070)	-.100 (.081)
Constant	.295 (.220)	.391 (.217)	.001 (.172)	.415* (.192)
Number of cases	874	876	745	672
R^2	.188	.232	.353	.376
Model significance	.0001	.0001	.0001	.0001

Notes: ** $p < .01$; * $p < .05$.
Standard errors in parentheses.

APPENDIX TABLE 2. The Effect of Interpersonal Trust on Group Membership (Youth Sample)

	Two-Stage Ordered Probit
Trust at 1982 (instrument)	.033 (.232)
Trust at 1973	.032 (.096)
Group membership at 1973	.286** (.034)
Partisanship	.027 (.020)
Political activity	.132** (.019)
Marital status	.213 (.113)
Number of children	.036 (.035)
Hours working	-.001 (.004)
Television consumption	.022 (.030)
Newspaper readership	.062* (.028)
Income	.010 (.010)
Education	.045* (.017)
White	-.434** (.161)
Female	-.109 (.106)
μ (1)	.198 (.229)
μ (2)	1.10 (.231)
μ (3)	1.93 (.236)
μ (4)	2.67 (.242)
Number of cases	883
Model χ^2	232.64
Initial log likelihood	-1336.11
Final log likelihood	-1219.79
Model significance	$p < .0001$

Notes: ** $p < .01$; * $p < .05$.
Standard errors in parentheses.

APPENDIX TABLE 3. The Effect of Group Membership on Interpersonal Trust (Youth Sample)

	Two-Stage Ordered Probit
Group membership at 1982 (instrument)	.130 (.467)
Group membership at 1973	-.058 (.141)
Trust at 1973	.389** (.038)
Partisanship	.024 (.023)
Political activity	-.002 (.063)
Marital status	-.129 (.158)
Television consumption	.018 (.034)
Newspaper readership	-.006 (.042)
Life satisfaction	.126* (.063)
Income	.016 (.011)
Education	.015 (.027)
White	.445 (.247)
Female	.206 (.107)
μ (1)	.514 (.234)
μ (2)	1.02 (.236)
μ (3)	1.68 (.238)
Number of cases	877
Model χ^2	187.25
Initial log likelihood	-1135.56
Final log likelihood	-1041.93
Model significance	$p < .0001$

Notes: ** $p < .01$; * $p < .05$.
Standard errors in parentheses.

APPENDIX TABLE 4. The Effect of Interpersonal Trust on Group Membership (Parent Sample)

	Two-Stage Ordered Probit
Trust at 1982 (instrument)	.229 (.174)
Trust at 1973	-.104 (.099)
Group membership at 1973	.405** (.038)
Partisanship	-.004 (.018)
Political activity	.095** (.025)
Marital status	-.515** (.123)
Number of children	—
Hours working	—
Television consumption	-.044 (.040)
Newspaper readership	-.026 (.035)
Income	.063** (.008)
Education	.006 (.068)
White	-.173 (.170)
Female	-.117 (.088)
μ (1)	.239 (.217)
μ (2)	1.17 (.221)
μ (3)	2.04 (.228)
μ (4)	2.71 (.237)
Number of cases	756
Model χ^2	305.17
Initial log likelihood	-1092.31
Final log likelihood	-939.72
Model significance	$p < .0001$

Notes: ** $p < .01$; * $p < .05$.
Standard errors in parentheses.

APPENDIX TABLE 5. The Effect of Group Membership on Interpersonal Trust (Parent Sample)

	Two-Stage Ordered Probit
Group membership at 1982 (instrument)	.649** (.235)
Group membership at 1973	-.270* (.117)
Trust at 1973	.522** (.045)
Partisanship	.025 (.020)
Political activity	-.064 (.044)
Marital status	.125 (.143)
Television consumption	.056 (.048)
Newspaper readership	.072* (.034)
Life satisfaction	-.011 (.078)
Income	-.016 (.010)
Education	.062 (.078)
White	.419* (.164)
Female	.183 (.104)
μ (1)	.949 (.241)
μ (2)	1.71 (.246)
μ (3)	2.45 (.252)
Number of cases	672
Model χ^2	267.43
Initial log likelihood	-846.54
Final log likelihood	-712.82
Model significance	$p < .0001$

Notes: ** $p < .01$; * $p < .05$.
Standard errors in parentheses.

APPENDIX TABLE 6. Stability and Change in Dependent Variables

	Youth Sample	Parent Sample
<i>Trust</i>		
More trusting	31%	22%
Stay same	44%	53%
Less trusting	25%	25%
<i>Groups</i>		
+2 or more groups	16%	7%
+1 groups	21%	17%
Stay same	39%	43%
-1 groups	16%	22%
-2 or more groups	8%	10%

Cell entries indicate what percent of respondents in each sample changed or remained the same with respect to their levels of trust and number of group memberships.

NOTES

1. As others have pointed out (Edwards and Foley, 1998), both of these revisions hark back to the democratic theory of the *Civic Culture* that saw support of government as central to political stability (Almond and Verba, 1989).
2. Indeed, others are beginning to find evidence that the relationship between voluntary associations and interpersonal trust depends on the type of association (Stolle and Rochon, 1998).
3. Of course, there has been no shortage of publications on social capital more generally, only on the reciprocal nature of interpersonal trust and voluntary associations.
4. We refer to the sample of respondents who were in high school in 1965 as the “youth sample,” though in the years of the study with which we are concerned, these respondents are, on average, 26 (1973) and 35 (1982) years old.
5. There are two important things to note about this measure. First, while we use the number of group attachments to measure civic engagement, others prefer level of group involvement. The two measures are, in fact, very similar in this data. The correlation between the number of groups joined and the average involvement across these groups is never lower than .85 in any of the waves in either sample. We opt for the number of different types of groups rather than subjective involvement because we believe it to be a more reliable measure of activity. Moreover, in the youth sample, the number of groups in 1965 correlates at a higher level to later group activity than does the level of involvement. Finally, to reemphasize, this measure looks at the number of types of groups rather than the number of groups a person could join. Many of the types of groups asked about, however, would not lend themselves to multiple group memberships (e.g., churches, ethnic, or fraternal groups).
6. Only included for youth analysis.
7. Only included in the youth analysis. The variable was not collected in a large enough section of the parent data to be useful.
8. The inclusion of all other variables from the second stage model is necessary to ensure that the independent variables in the second stage are uncorrelated with the errors from the instrument (Markus, 1979).
9. In fact, they may be too large, providing a more conservative test (Nelson and Olsen, 1978).
10. Rivers and Vuong (1988) have developed a procedure—two-stage conditional maximum likeli-

hood—to recover both consistent estimates and correct standard errors in limited variable models. Their procedure, however, is intended for the case in which the endogenous variable in the first stage is continuous and the dependent variable from the second is limited, whereas we have limited dependent variables in both stages.

11. For the youth sample, with group membership as the dependent variable, the intervals between the thresholds are approximately equal. At $p < .06$, $p < .32$, and $p < .36$, we fail to reject the null of equal intervals. The intervals of the thresholds are not equal for the interpersonal trust model. We reject the null of equal intervals at $p < .001$. For the parent sample, with group membership as the dependent variable, the intervals between thresholds 1 and 2 are equal to the interval between thresholds 2 and 3; however, we reject the null that the intervals between thresholds 3 and 4 are equal to the other two ($p < .02$). We fail to reject the null of equal intervals for the interpersonal trust model ($p < .95$).
12. The zero-order correlations between interpersonal trust and voluntary association memberships range from .242 in 1965 to .115 in 1982 for the parent sample and from $-.002$ in 1965 and .080 in 1982 for the youth sample.
13. The first stages of all four two-stage least squares models are presented in Appendix Table 1.
14. Finkel (1995, 40) advises that in order to use values at time one (X_1) as instruments for time three (X_3), there must be a direct effect of X_1 on X_3 while controlling for X_2 . This condition is satisfied for both groups and trust in both samples.
15. The ‘most-likely’ case is a crucial case that a theory is expected to pass at a minimum. See Eckstein (1975) for a discussion of theoretical inference from crucial-case study selection.
16. Brehm and Rahn refer to the effect of confidence in government on civic engagement, which had a .02 coefficient, as substantively negligible. The coefficient of interpersonal trust on civic engagement in the same model is .08. Though statistically significant, this result is small enough to question substantive significance. Similarly, the coefficient of civic engagement on interpersonal trust is surprisingly close to the margin of statistical significance (especially in comparison to the other coefficients in their models) given that the analysis uses between 9,000 and 30,000 cases.

REFERENCES

- Achen, C. H. (2000, July 20–22). *Why lagged dependent variables can suppress the explanatory power of other independent variables*. Paper presented at the Annual Meeting of the Political Methodology Section of the APSA, Los Angeles.
- Almond, G. A., and Verba, S. (1989). *The Civic Culture: Political Attitudes and Democracy in Five Nations* ([New]. ed.). Newbury Park, CA.: Sage Publications.
- Altemeyer, B. (1996). *The Authoritarian Specter*. Cambridge: Harvard University Press.
- Alvarez, M., and Glasgow, G. (2000). Two-stage estimation of non-recursive choice models. *Political Analysis* 8: 147–166.
- Amemiya, T. (1978). The estimation of a simultaneous equation generalized probit model. *Econometrica*, 46: 1193–1205.
- Axelrod, R. (1984). *The Evolution of Cooperation*. New York: Basic Books.
- Brehm, J., and Rahn, W. (1997). Individual level evidence for the causes and consequences of social capital. *American Journal of Political Science*, 41: 999–1023.
- Coleman, J. S. (1988). Social capital and the creation of human capital. *American Journal of Sociology*, 94: S95–S120.
- Eckstein, H. (1975). Case study and theory in political science. In F. I. Greenstein and N. W. Polsby (eds.), *Handbook of Political Science*, pp. 79–137. Reading, MA: Addison-Wesley.

- Edwards, B., and Foley, M. W. (1998). Civil society and social capital beyond Putnam. *The American Behavioral Scientist*, 42: 124–139.
- Finkel, S. E. (1995). *Causal Analysis with Panel Data*. Thousand Oaks, CA: Sage Publications.
- Gerbner, G., and Gross, L. (1976). Living with television: the violence profile. *Journal of Communication*, 26: 173–201.
- Jennings, M. K., Markus, G. B., and Neimi, R. G. (1991). *Youth-parent socialization panel study, 1965–1982: Three waves combined*. Ann Arbor: University of Michigan, Center for Political Studies/Survey Research Center [producers], 1983. Ann Arbor: Inter-university Consortium for Political and Social Research [distributor].
- Jennings, M. K., and Neimi, R. G. (1981). *Generations and Politics*. Princeton: Princeton University Press.
- Marcus, G., Sullivan, J. L., Theiss-Morse, E., and Wood, S. L. (1995). *With Malice Toward Some: How People Make Civil Liberties Judgments*. New York: Cambridge University Press.
- Markus, G. B. (1979). *Analyzing Panel Data*. Newbury Park, CA: Sage Publications.
- Mutz, D. C., and Martin, P. S. (1998). *Exposure to conflicting views: causes and consequences*. Paper presented at the American Political Science Association, Boston, MA.
- Mutz, D. C., and Mondak, J. J. (1998). *What's so great about league bowling?* Paper presented at the American Political Science Association Annual Meeting, Washington, DC.
- Nelson, F., and Olsen, L. (1978). Specification and estimation of a simultaneous-equation model with limited dependent variables. *International Economic Review*, 19: 695–709.
- Norris, P. (1996). Does television erode social capital? A reply to Putnam. *PS: Political Science and Politics* 29: 474–80.
- Putnam, R. (1993). *Making Democracy Work*. Princeton: Princeton University Press.
- Putnam, R. (1995). Tuning in, tuning out: the strange disappearance of social capital in America. *PS: Politics & Society* 28: 664–683.
- Putnam, R. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Rahn, W., Brehm, J., and Carlson, N. (1999). National elections as institutions for generating social capital. In T. Skocpol & M. Fiorina (eds.), *Civic Engagement in American Democracy*, pp. 111–160. Washington, DC: Brookings Institution Press.
- Rivers, D., and Vuong, Q. H. (1988). Limited information estimators and exogeneity tests for simultaneous probit models. *Journal of Econometrics* 39: 347–366.
- Schudson, M. (1996). What if civic life didn't die? *The American Prospect* 25: 17.
- Schwartz, N., and Clore, G. L. (1983). Mood, misattribution, and judgments of well-being: informative and directive functions of affective states. *Journal of Personality and Social Psychology* 45: 513–23.
- Stolle, D., and Rochon, T. R. (1998). Are all associations alike? *The American Behavioral Scientist* 42: 47–65.
- Verba, S., Schlozman, K. L., and Brady, H. E. (1995). *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge, MA: Harvard University Press.