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Source: *American Journal of Political Science*, Vol. 41, No. 3 (Jul., 1997), pp. 999-1023
Published by: Midwest Political Science Association
Stable URL: http://www.jstor.org/stable/2111684
Accessed: 21-09-2017 05:38 UTC

*Individual-Level Evidence for the Causes and Consequences of Social Capital**

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Theory: Social capital is the web of cooperative relationships between citizens that facilitates resolution of collection action problems (Coleman 1990; Putnam 1993). Although normally conceived as a property of communities, the reciprocal relationship between community involvement and trust in others is a demonstration of social capital in individual behavior and attitudes.
Hypotheses: Variation in social capital can be explained by citizens' psychological involvement with their communities, cognitive abilities, economic resources, and general life satisfaction. This variation affects citizens' confidence in national institutions, beyond specific controls for measures of actual performance.
Methods: We analyze the pooled General Social Surveys from 1972 to 1994 in a latent variables framework incorporating aggregate contextual data.
Results: Civic engagement and interpersonal trust are in a tight reciprocal relationship, where the connection is stronger from participation to interpersonal trust, rather than the reverse.

All human communities confront collective action problems.[1] Collectively, societies are better off when their members cooperate with one another to achieve common goals. Individuals, however, face incentives to behave selfishly, seeking the benefits of cooperation without paying the costs. Well-known solutions to the "inescapable conflict between the interests and desires of individuals and the requirements of society" (Wrong 1994, 36) include Hobbes' Leviathan, Marx's ruling class, Weber's Protestant ethic, Parson's normative consensus, and Freud's superego (Elster 1989; Wrong 1994). Recently, scholars in sociology, economics, and political science have converged on the concept of "social capital" as a comprehensive explanation for why some communities are able to resolve collec-

*Thanks to Dan Lipinski for research assistance. Rahn acknowledges the support of Duke University and NSF grant GER 9450110. We thank John Aldrich, Sam Popkin, Robert Putnam, George Rabinowitz, Tom Smith, and Eric Uslaner for helpful comments, and Jim Stimson for access to his data.

[1]The individual data for this paper were drawn from the 1972–94 General Social Survey Cumulative File, available through the Roper Institute, University of Connecticut, Storrs, Connecticut. Additional aggregate data used in this paper will be available through the ICPSR's Publication-Related Archive, including appropriate SAS code to merge with the extract from the GSS data, the recodes, and the PROC CALIS code used to estimate the structural model.

American Journal of Political Science, Vol. 41, No. 3, July 1997, Pp. 999–1023

tive problems cooperatively while others are unable to bring people together for common purposes (Coleman 1990; Fukuyama 1995; Putnam 1993).

Social capital is an aggregate concept that has its basis in individual behavior, attitudes, and predispositions. Multiple institutions nurture the habits and values that give rise to social capital, including community and other voluntary associations, families, church organizations, and cultural patterns. Scholarly interest in the development of social capital is motivated primarily by the linkage between levels of social capital and collective outcomes; high levels of social capital appear to be crucial for such measures of collective well-being as economic development, effective political institutions, low crime rates, and lower incidences of other social problems such as teen pregnancy and delinquency (Fukuyama 1995; Hagan, Merkens, and Boehnke 1995; Putnam 1995a).[2]

Recently, scholars have mounted several important challenges to the social capital argument. Jackman and Miller (1996a, 1996b) contend that the resurgence of political culture arguments (of which social capital is one of the important contributors) make several empirically unsustainable assertions: that the culture is coherent and durable, found only in the aggregate, and drives other outcomes (specifically, economic conditions). Although not dismissive of the social capital idea, Levi (1996) asks for better specification of the mechanism by which social capital forms, and challenges the idea that the components of social capital are exogenous with respect to political institutions.

Our paper responds to several of these challenges. First, we offer a mechanism for the sustenance of social capital by specifying, at the individual level, social capital as the reciprocal relationship between civic participation and interpersonal trust. Further, we identify specific causes for the

[2]The question of the linkage between aspects of political culture and economic performance has been the subject of a lively and recent debate in the *American Journal of Political Science* (August 1996). Granato, Inglehart, and Leblang (1996a) revise the Weberian Protestant Ethic hypothesis by contending that it is "achievement motivation" and not the deferral of worldly gain that leads to sustained economic growth. The former is present in both Protestantism and Confucianism, while the latter is a predominant feature of Protestantism alone. Swank (1996) argues that the Granato, Inglehart, and Leblang analysis confounds communitarian values with achievement: political culture makes a difference, although the mechanism remains obscure. Jackman and Miller (1996b) further contend that case selection and coding preclude a conclusion that culture leads growth, and that the measure of achievement motivation confounds multiple dimensions of work, thrift, and determination. Granato, Inglehart, and Leblang (1996b) respond that the absence of statistically significant effects in the Jackman and Miller (1996a) reanalysis arises from inflated standard errors due to heteroskedasticity.

variability of this reciprocal relationship across individuals, and to represent social capital as endogenously related to confidence in institutions. Previous work on this question has been directed at explaining why social capital is declining in the United States; it therefore has focused on factors that have changed significantly over time at the aggregate level (Putnam 1995a). At the individual level, we should also gain insight into the dynamics that affect the key components of social capital at an aggregate level. We believe that accounting for production of social capital is as equally important an undertaking as understanding over-time changes in levels. As a consequence, we cast our causal net wider than it would be if we were only looking for time serial effects.

In order to assess evidence for the consequences of social capital, we examine confidence in democratic institutions. The dominant scholarship on confidence in institutions emphasizes the importance of the performance of those institutions (Lipset and Schneider 1987), whether perceived at the level of an individual's pocketbook (Kramer 1971, 1983) or at the level of national assessments (Kinder and Kiewiet 1981) or both (Markus 1988). We demonstrate that in addition to these standard explanations, confidence in institutions is an output of social capital processes.

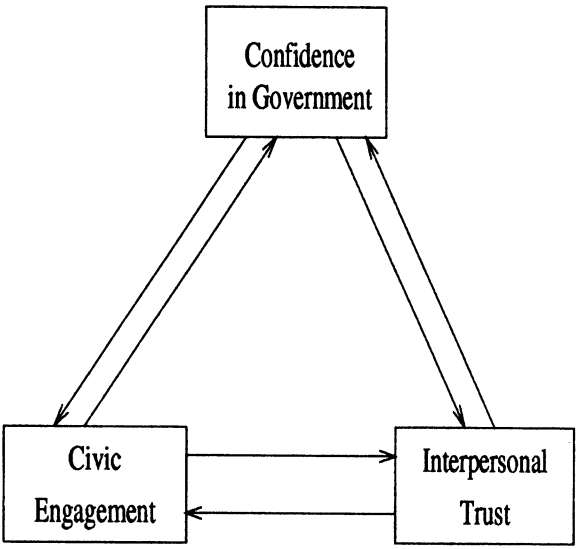
Our paper follows in four principal sections. We first elaborate upon our conceptions for the components of social capital and related variables, specifying a structural model that relates them theoretically. In a second section, we describe our data, and develop measurement models for our endogenous variables and for some of our exogenous variables. In the third section, we appraise the structural relationships among our key concepts and their determinants. In our fourth section, we consider the implications of our results, and draw inferences from our data to the problem of overtime decline in civic participation and interpersonal trust.

1. A Structural Model of Social Capital

The model we develop in this article pivots around our argument that the phenomenon of social capital manifests itself in individuals as a tight reciprocal relationship between levels of civic engagement and interpersonal trust. (A schematic representation of our model appears in Figure 1. Note that in order to achieve identification of this model, as well as to explore determinants of the latent variables we explore here, we will specify further exogenous effects in subsequent sections.)

Our specific operationalization of the social capital mechanism represents the concept as a tight reciprocal relationship between civic engagement and interpersonal trust. The more that citizens participate in their communities, the more that they learn to trust others; the greater trust that

Figure 1. Schematic Representation of a Structural Model of Social Capital, Causes, and Consequences



citizens hold for others, the more likely they are to participate. Although we are agnostic about which side of the reciprocal relationship is likely to be stronger, we expect the signs of both to be positive and significant.

The mechanism which connects interpersonal trust, repeated interaction with others, and sustained cooperation has roots in research on the prisoner's dilemma. In single-shot PD games, trusting individuals cooperate more readily (Wrightsman 1992). In iterated PD games, successful strategies are "nice" ones where the player is never the first to defect (Axelrod 1984), an instantiation of some initial level of trust. After the first play, successful strategies simply echo the behavior of the other behavior, reciprocating cooperation for cooperation or defection for defection. If cooperators expect other people to cooperate—and experimental research suggests they do (Orbell and Dawes 1991)—they are more likely to engage in cooperative endeavors, setting in motion a "virtuous circle" in which trust promotes cooperation and cooperation promotes trust (Putnam 1993).

Although Putnam (1993) and Coleman (1990) intend the concept of social capital to refer to a property of aggregate communities such that frequent participation by a community leads to a tight web of social interactions and greater trust in one another, we argue that the same effects should also be observable in individuals in those communities. It is not, after all,

a ''community'' that participates or builds trust, but the people who comprise that community who belong to civic organizations and acquire positive feelings towards others. The central engine of our model can be found in the reciprocal relationship between ''Civic Engagement'' and ''Interpersonal Trust'' in the lower portion of Figure 1.

We believe civic engagement and generalized trust, and the dynamic that sustains them, have important consequences for the polity, specifically, citizens' confidence in political institutions. The level of confidence in the major institutions of American public life has been the subject of considerable scholarly attention (Craig 1993; Hibbing and Theiss-Morse 1995; Lipset and Schneider 1987). In our structural model, we posit that people who trust others have greater confidence in political institutions. Because misanthropes doubt that others have benign intentions, they may believe that everyone is a potential cheater. People with a high degree of trust, on the other hand, do not fear that they will be taken advantage of by following the rules because they expect that others will follow them too. Therefore, people who expect that others will comply with authorities find it easier to accept the decisions of authorities. The empirical evidence for the relationship between compliance expectations of others and confidence in authorities is ample, e.g., in taxpayer compliance (Levi 1988; Scholz and Pinney 1995), support for criminal justice (Tyler 1990), and willingness to comply with government sponsored water bans (Tyler and Degoey 1995). Such compliance is of fundamental importance for the state, because it means that political authorities have less need to rely upon heavy-handed enforcement and politically expensive coercion to control citizens' behavior. Again, the evidence is ample that compliance is inefficient when it is based on fear of authorities rather than internalized norms, because citizens use politicians to protect them from the lawlessness of others rather than to achieve collective purposes (e.g., Gamson 1968; Putnam 1993; Uslaner 1994).

We allow the flow of causality between trust and confidence to be bidirectional for a number of theoretical reasons. Trust in government officials may be a ''specific instance of trust in mankind'' (Lane 1959, 164). Hence, confidence in government could be a generalization of interpersonal trust, or an extension of trust in authority figures personally closer to oneself (Moore, Lare, and Wagner 1985). The reverse connection (from confidence in government to interpersonal trust) is possible as well: Levi (1996) proposes that confidence in governmental institutions has the potential to restore (or to undermine) levels of interpersonal trust.

Finally, the last structural linkage in our model involves the reciprocal relationship between participation and confidence in national governmental institutions. Tocqueville (1969) favorably regarded the ''art of association''

as an important remedy in combating the centralizing tendencies of equality. People who learned the virtues of "self interest rightly understood" through associating with others were less likely to look to the state for their needs and were more likely to resist the temptations of centralization: "An association, be it political, industrial, commercial, or even literary or scientific, is an educated and powerful body of citizens which cannot be twisted to any man's will or quietly trodden down, and by defending its private interests against the encroachments of power, it saves common liberties" (1969, 697). Tocqueville's hypothesis thus leads us to expect a negative relationship between membership in civic associations and confidence in national institutions.

We also leave open the possibility for a relationship between confidence and participation. Many studies of voting turnout and political participation find a positive relationship between beliefs about the responsiveness of political authorities, or external efficacy, and participation (Rosenstone and Hansen 1993; Brady, Verba, and Schlozman 1995). It is not clear, however, that participation is enhanced by feelings of trust in government, a concept closer to our conceptualization of confidence. Rosenstone and Hansen (1993) and Teixeira (1992), for example, find no linkage between trust and vote turnout.

2. Data

We estimate the model discussed in the previous section in a pooled cross-sectional analysis combining latent variables for the key concepts and exogenous variables measured at an individual level using the General Social Survey (GSS) cumulative file for 1972–94, with aggregate yearly data from diverse sources. In the subsections to follow, we discuss the particular measures for the endogenous variables (Civic Engagement, Interpersonal Trust, and Confidence in Government), and what we argue to be exogenous causes of levels of these latent variables. The GSS survey is an excellent instrument for pursuit of the model outlined in the previous section in that it yields multiple measures for the key concepts via batteries of identical questions over the many years of the study. The GSS data routinely achieves high rates of response to its surveys (between 72 and 79%), where each cross-section elicits interviews from 1,000–2,400 respondents.[3]

[3]Because we estimate our model using the correlation matrix as input, and because the package deletes missing data in a pair-wise rather than list-wise fashion, the actual N in the tables varies from as low as 9,118 to as high as 32,380. The number of cases used to compute fit statistics is the smaller of the two. An *advantage* of covariance structure analysis is that it does not require complete data on every observation, although it is possible to force such models to do so. The disadvantages of forcing CALIS to list-wise delete missing data are not just that the sample size declines precipitously, but also that it induces potential biases: given the number of questions employed in our study, list-wise deletion restricts the analysis

Because the data are time-serial, we applied two distinct approaches in our analysis. Our first approach simply employed dummy terms for each year of the study. While this approach may be the most effective means to counter problems of autocorrelation between the cross-sections, it precluded our use of the aggregate yearly contextual data. Our second approach omitted the dummy terms in favor of the contextual data, and is the approach we report here. We note that the estimates of the effects of the latent variables and the exogenous variables drawn from the GSS are virtually identical across the two approaches. Because of the analytical gains acquired by the contextual data, we report the results of the second approach in this paper.

We estimate measurement models for each of the three endogenous variables discussed in the next three subsections (Civic Engagement, Interpersonal Trust, and Confidence). We also estimate measurement models for one exogenous variable (Life Satisfaction). Full details about the coding of the exogenous measures may be found in the Appendix.[4]

2.1. Civic Engagement

Putnam (1993) regards networks of civic engagement to be at the very core of his concept of "social capital." Strong networks enable communities to solve collective action problems by breeding cooperation and easing coordination. Secondary associations such as church groups, labor unions, school groups, and fraternal organizations are especially important manifestations of community interaction. The PTA, for one, invests social capital directly in education.

The GSS cumulative series includes an extensive set of indicators for membership in civic and political organizations. Some of the groups are frankly political; many of the groups serve only an entertainment function. All indicators are dummy variables (yes = 1), in response to the question:

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solely to those individuals who were able to offer answers to every single question, prejudicing the analysis in favor of the most involved, best informed respondents (Brehm 1993). A replication of the model which restricts the number of cases to the smaller figure yields substantially the same results, although many of the estimates decline in statistical significance.

[4]We compute our estimates using PROC CALIS, in SAS, although similar computations could be produced with LISREL or EQS. Our preference for interpretation of the substantive significance of coefficients is to examine the unstandardized rather than the standardized coefficients. Although standardized coefficients present the illusion of comparability across variables, the common unit is in terms of standard deviations of the variables. This means that the standardized coefficients are excruciatingly sensitive to the particular sample. The meaning of a one unit change in the standardized variable—a one standard deviation change—is especially opaque when the variable in question is latent, and not observed. See Bollen (1989, 125) and Hayduk (1987, 179–84) for elaboration.

"Now we would like to know something about the groups or organizations to which individuals belong. Here is a list of various organizations. Could you tell me whether or not you are a member of each type?" Factor loadings for the endogenous variables may be found in Table 1.

The pattern of factor loadings for these multiple indicators suggests that membership in these organizations reflects a single, strong, latent variable: most of the factor loadings are quite high, and only union membership stands out as conspicuously small. The separate dimensionality of union membership is surely, in part, due to compulsory membership in labor unions for workers in particular jobs in many of the states.

The literature on political participation provides us with a wealth of exogenous variables to use as instruments, and presents opportunities to assess the causes of one component of the social capital dynamic. We consider three broad classes of measures: psychological engagement, resources, and sociological conditions. We employ partisanship as a measure of psychological engagement (e.g., Milbrath and Goel 1977). We consider resources (Brady, Verba, and Schlozman 1995) measured as both positive contributions (education, real family income), and opportunity costs (number of preschool children, number of hours watching television). Education, in particular, figures prominently in the literature on participation (e.g., Lane 1959; Rosenstone and Hansen 1993; Verba and Nie 1972; Wolfinger and Rosenstone 1980). We also include a measure of newspaper exposure as an influence on participation. Tocqueville (1969) regarded newspapers as essential to the formation of voluntary associations. Newspapers informed people about what others were thinking; without newspapers, an individual was "lost in the crowd," lacking a way to find others who might have similar ideas or common problems. Finally, we also consider three measures of sociological correlates of lower participation: whether the respondent lived in the same city since age 16, the size of the respondent's city, and whether the respondent lives in the South. Of these measures, only education and real family income appear in the equations for interpersonal trust or confidence in government.

2.2. Interpersonal Trust

In comparative studies, generalized trust of other people emerges as an important correlate of stable democratic government. For example, in the original civic culture surveys (Almond and Verba 1963), the mass publics of the United States and Great Britain (the two countries with the longest experience with democratic arrangements) displayed much higher levels of faith in people's good nature than citizens in West Germany, Italy, and Mexico. More recent comparative evidence compiled by Inglehart

Table 1. Measurement Models, 1975–94 General Social Survey

Variable	Loading	Std Loading
Civic Participation		
Fraternal groups	1.00	0.29
Service clubs	1.54	0.45
Veterans' groups	0.40	0.11
Political clubs	1.08	0.31
Labor unions	0.14	0.04
Sports groups	1.27	0.37
Youth groups	1.34	0.39
School service groups	1.46	0.42
Hobby or garden clubs	1.05	0.30
School fraternities or sororities	1.32	0.38
Nationality groups	0.81	0.23
Farm organizations	0.51	0.15
Literary, art, discussion or study groups	1.54	0.45
Professional or academic societies	1.87	0.54
Church-affiliated groups	1.07	0.31
Any other groups	0.53	0.15
Interpersonal Trust		
Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?	1.00	0.66
Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?	0.90	0.59
Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?	0.94	0.62
Confidence in Government		
Executive branch of the federal government	1.00	0.62
Congress	1.09	0.68
U.S. Supreme Court	0.91	0.57
Life Satisfaction		
Happy	1.00	0.77
Satisfied with city	0.54	0.52
Satisfied with hobby	0.65	0.62
Satisfied with family	0.67	0.63
Satisfied with friends	0.71	0.67
Satisfied with health	0.58	0.55
Life	0.58	0.56

Cell entries are factor loadings from a confirmatory factor analysis. All factor loadings are statistically significant at $p < .01$.

(1990) and Muller and Seligson (1994) replicates the original correlation: trust in other people and democratic institutions go together.[5]

The assurance that facilitates cooperation in those settings in which one can be fairly certain about other actors' incentives can help a community as a whole develop more trusting attitudes by reinforcing norms of reciprocity as a by-product of self-interested cooperation (Putnam 1993). These norms, then, become part of a community's social capital, allowing people to make inferences about the intentions of others even when direct knowledge about them is unavailable. Generalized trust allows people to move out of familiar relationships in which trust is based on knowledge accumulated from long experience with particular people. If outcomes in a democracy are inherently uncertain (Przeworski 1991), such global trust may be necessary in order for people to support democratic arrangements. It may also be necessary for economic transactions between strangers (Fukuyama 1995; Yamagishi and Yamagishi 1994).

The GSS surveys contain three questions that ask respondents for their beliefs about what most people are like. Respondents who agreed with the positive answer to each question (try to be fair, try to be helpful, can be trusted) were coded 1; those who agreed with the negative answer to each question (take advantage, looking out for themselves, can't be too careful) were coded 0. Respondents who volunteered "other" or "depends" were coded .5.

We assume in our measurement model that all three of these reflect a general trust in others, and as shown in Table 1, this assumption is supported. We fix the scale for the measurement model with the "fairness" question. The remaining two questions have loadings which are quite high: "helpfulness" loads at .88, and "trust" loads at .92. As a general measure of beliefs about the trustworthiness of human nature, this relatively simple measurement model succeeds.

In addition to the crucial structural linkage between civic engagement and interpersonal trust, we specify several exogenous influences on people's expectations of others' trustworthiness. Some of these influences are based on the crucial role a child's early environment plays in the development of trusting attitudes (Kagan 1994; Wrightsman 1992). We posit that

[5]The causal status of this correlation is the subject of some dispute. Does stable democracy require that individuals have a high degree of trust in others, does it create such attitudes, or is the correlation spurious, resulting from the joint dependence of democracy and interpersonal trust on such structural factors as the level of economic development or the extent of income inequality? (For a comparison of the explanations, see Inglehart 1990 and Muller and Seligson 1994.) According to Putnam's analysis, economic development emerges from a reciprocal relationship between democratic participation and trust rather than being a necessary condition for democracy.

both living in a less well-off household and experiencing parents' divorce will have negative consequences for an individual's development of trust in others. Later life experiences may also contribute to more distrusting views, including being a victim of a crime (Ferraro 1995) and being divorced. Being a member of a minority increases one's chances of being a victim of prejudice or discrimination, may lead to heightened self-consciousness (Mullen 1991), which may contribute to a suspiciousness of one's surroundings and the motives of others (Kramer 1994). Education, on the other hand, increases exposure to cosmopolitan culture, resulting in individuals who are more tolerant and less suspicious of difference (McClosky 1967; Sullivan, Piereson, and Marcus 1982).

Collective experiences also affect levels of trust. We posit two broad classes. For reasons which are not clearly understood, large cohort differences appear in levels of interpersonal trust. Several researchers (Easterlin and Crimmins 1991; Putnam 1995b; Rahn 1995; Wrightsman 1992) identify increasing misanthropy and mistrust among younger cohorts. Whatever sustained the benevolent perceptions of older generations—collective experiences such as the world wars or the great depression, for example—is no longer being reproduced in American culture. We further hypothesize that income inequality and levels of unemployment should diminish individual levels of interpersonal trust. Scarcity increases the risks of misplaced trust, so hard economic times may lead people to be less generous in their views of others, who may instead be viewed as competitors. When society's rewards become more inequitably distributed, people may begin to feel exploited by others, thus diminishing their faith in their fellow citizens.

We initially considered the impact of two kinds of media exposure on interpersonal trust. Some researchers (Gerbner et al. 1980) have argued that exposure to television, particularly its violent content, results in a view of the world as a mean and scary place. Amount of television viewing was never statistically significantly related to interpersonal trust in any of our models, however. We therefore do not include it as an exogenous influence on interpersonal trust. Newspapers, on the other hand, by informing people about what is going on in their particular community, may be a force that breaks down isolation by giving voice to common concerns. For regular readers, "most people" may mean "most people in my community" rather than some undifferentiated mass in which one shares little in common. Therefore, we expect newspaper reading to be associated with more trust in others.

General affective predispositions influence interpersonal trust. Chronic individual differences in life satisfaction appear to rest on not only the actual frequency of positive and negative events in one's life, but even more so on fundamental differences in internal affective state, or mood, which

affects how events are interpreted (Seidlitz and Diener 1993). People attribute feelings that are due to mood to other judgment targets, including those which are somewhat related to mood (such as overall life satisfaction, see Schwartz and Clore 1983), and those which are more remote (such as judgments of risk, see Johnson and Tversky 1983). Negative moods heighten people's sense of danger and threat (Marcus et al. 1995).

2.3. Confidence in Government

The loss of confidence in the major institutions of American life has been the subject of much scholarly attention. After their comprehensive examination of these trends, Lipset and Schneider (1987) concluded that a combination of leadership failures and economic downturns could account for much of the decline in the public's evaluations of governmental and other institutions. A growing economy and a popular president helped restore Americans' confidence in the mid-1980s (Citrin and Green 1986; Lipset and Schneider 1987; Miller and Borrelli 1991), but trust in government began to decline after 1984, and by 1994, had reached a new nadir: in the National Election Studies trust in government series, only about 20% of the public said that the government in Washington could be trusted "just about always" or "most of the time" (authors' analysis, not shown).

We measure people's confidence in government by using the three institutions in the GSS confidence series that are most obviously political. All indicators are responses to the question: "I am going to name some institutions in this country. As far as the people running these institutions are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them?" Variables are coded from 0 (hardly any confidence) to 1 (a great deal of confidence).

As seen in Table 1, respondents' confidence in the Executive branch, Congress, and the Supreme Court tap this underlying factor equally well. Both of the freed loadings (on confidence in the Congress and in the Supreme Court) are approximately equal in magnitude to the fixed factor loading (on confidence in the executive branch). Assisted by the enormous pooled sample size, all coefficients are statistically significant beyond $p < .01$.

Each of the three major branches of the federal government is unique in both its level of support and the correlates of that support (Hibbing and Theiss-Morse 1995). Nonetheless, some of the movement in confidence in the three branches of government over time is shared (Lipset and Schneider 1987), and it is this shared sense of confidence in "government" that we seek to explain.

For exogenous variables on confidence, we turn to multiple classes of measures including personal and collective measures of economic performance, and predispositions and ideology. Prior research (Lipset and Schnei-

der 1987) establishes that current economic conditions, particularly inflation, affects confidence in institutions; we include inflation, aggregate unemployment, and economic expectations as measures of economic performance at a collective level, and change in finances and satisfaction with finances as measures of performance at an individual level. Hibbing and Theiss-Morse (1995) find that income is consistently and negatively related to confidence in Congress, the institution they believe is most central to people's trust in government (see also Feldman 1983); we include real family income as a further exogenous influence on confidence.

We include several different levels of measurement of personal predispositions and ideology. People's confidence in the major federal institutions is also influenced by their confidence in the current president (Citrin and Green 1986), independently of the real and perceived economic conditions. We include a measure of presidential popularity, taken from the Gallup poll conducted in March of each of our survey years. We hypothesize that ideology, specifically conservatism, leads to less confidence in institutions. Perceived responsiveness of governmental authorities is also related to confidence in institutions (Craig 1993; Feldman 1983; Hibbing and Theiss-Morse 1995), and we include a measure of external political efficacy in our equation for confidence in governmental institutions. Relatedly, exposure to negative media coverage about the government could undermine confidence; we employ a yearly time-series of *Newsweek* coverage of the federal government as a further exogenous measure.

General affective predispositions may influence confidence in government. Satisfaction with one's own life exerts a rosy glow over other judgment targets (Feist et al. 1995). Life satisfaction has been linked with support for democratic political arrangements (Clarke, Dutt, and Kornberg 1993; Inglehart 1990). Rahn and Clore (1994) find that personal mood is strongly related to emotional reactions to the country, suggesting that personal mood biases judgments that have a collective as well as individual focus.

The model outlined in this section leads toward the possibility of a statistical test involving a latent variables framework employing not only individual-level data, but also aggregate contextual measures. The next section explicates the results of our analysis of the structural model incorporating these diverse data.

3. Results of the Structural Model

We produce our computations of the unstandardized and standardized coefficients for the full structural model in Table 2. The overall fit for the full model (measurement plus structural components) is excellent, with a Goodness of Fit Index of .95. The fit for the three structural equations is substantially less impressive: the estimated R^2 for the interpersonal trust

Table 2. Structural Model, 1975–94 General Social Survey

Variable	Coeff	Std Coeff
Civic Engagement		
Interpersonal Trust	.08	.19
	(.009)	
Confidence	.02	.05
	(.002)	
Education	.11	.38
	(.004)	
Partisanship	.02	.07
	(.002)	
Days Read News	.02	.07
	(.003)	
Real Income	.03	.10
	(.003)	
TV Hours	−.03	−.10
	(.003)	
Number of Preschool children	−.01	−.03
	(.002)	
Lived in same city since 16	−.0002	−.0005
	(.002)	
Size of city	−.005	−.02
	(.002)	
South	.002	.005
	(.002)	
Interpersonal Trust		
Civic Engagement	.34	.15
	(.14)	
Confidence	.63	.60
	(.03)	
Life Satisfaction	.12	.18
	(.007)	
Education	.10	.15
	(.02)	
Real Income	.03	.04
	(.009)	
Black?	−.11	−.17
	(.007)	
Size of city	−.007	−.01
	(.007)	
Divorced?	−.007	−.01
	(.005)	
Unemployed?	−.032	−.05
	(.005)	
Income Inequality (GINI)	−.03	−.05
	(.006)	
Fear at night?	−.04	−.06
	(.005)	

Table 2 (*continued*)

Variable	Coeff	Std Coeff
Robbed last year?	.0009	.001
	(.005)	
Burglarized last year?	−.04	−.06
	(.005)	
Newspaper Reading	.03	.06
	(.006)	
Income at 16	.01	.02
	(.005)	
Parents' Divorced?	−.007	−.01
	(.005)	
Early Baby Boom?	−.07	−.10
	(.006)	
Late Baby Boom?	−.09	−.14
	(.006)	
Generation X?	−.08	−.13
	(.006)	
Confidence in Government		
Civic Engagement	−.18	−.08
	(.06)	
Interpersonal Trust	.10	.10
	(.03)	
Life Satisfaction	.09	.14
	(.009)	
Real Income	−.05	−.08
	(.007)	
Public Officials Not Interested	−.20	−.32
	(.008)	
Black?	.007	.01
	(.007)	
Bad news about government	.05	.07
	(.007)	
(Aggregate) Unemployment	−.003	−.004
	(.004)	
Inflation	−.02	−.03
	(.006)	
Change in finances	.02	.04
	(.005)	
Satisfaction with finances	.04	.06
	(.005)	
Presidental popularity	.03	.05
	(.006)	
Liberal-conservative self-placement	−.02	−.03
	(.004)	
Economic Expectations	.07	.11
	(.005)	

Cell entries are standardized and unstandardized coefficients from a structural equation model with latent variables. Standard errors in parentheses below coefficients.

equation is .29, for the civic engagement equation is .27, and for confidence in institutions is .17. We also note that we have freed the correlation between the error terms across these three equations since it is quite possible that variables which are omitted from our equations could well be correlated across the three processes. The estimated correlations of error terms (ϕ, in the standard LISREL notation) vary from sizable (at $-.22$ between civic engagement and trust, and at $-.58$ between civic engagement and confidence) to slight (at .03 between trust and confidence). In this section discussing the results, we first evaluate the endogenous core of the model, as presented in the schematic in Figure 1, and then turn to separate discussion of the effects of the exogenous variables for each of civic engagement, interpersonal trust, and confidence in government.

We take the reciprocal relationship between civic engagement and interpersonal trust as the most direct representation of the social capital idea. Civic engagement and interpersonal trust *are* positively related to one another, although this relationship is quite asymmetric. Respondents who participate extensively in their communities are likely to have highly positive beliefs about the helpfulness, trustworthiness, and fairness of others. The (unstandardized) coefficient on the effect of civic engagement to interpersonal trust is one of the strongest relationships of the entire model. The effect of trust in others on levels of civic engagement is considerably weaker, although of the expected sign, and statistically significant.

The combination of these results is a modest confirmation of the idea of Putnam's vicious-virtuous circle of civic engagement and positive predispositions toward others. If the resolution of collective goods problems depends upon positive and frequent encounters with others (Axelrod 1984; Putnam 1993), then the presence of any positive reciprocal relationship should be welcome, conditional on high levels of civic engagement or interpersonal trust. But if the levels of both are in decline, the positive reciprocal relationship bodes ill, since it means that the declines are self-reinforcing.

The effects of confidence in federal institutions upon the social capital dynamic are intriguing, and go some distance to ameliorate the pessimism implied in the preceding paragraph. The effect of confidence upon civic engagement is statistically significant, but substantively negligible (at .02). The more confident respondents are in the major federal institutions, the more likely they are to participate in their communities. The effect of confidence upon trust, however, is enormous (at .63), and the single largest estimate of the entire model. We take the magnitude of the effect of confidence upon trust to be confirmation of the conjecture raised by Levi (1996) that institutions, perhaps by providing reassurance that defectors will not go unpunished, can influence trust. This finding suggests that it is possible for governments to counter the vicious circle and stave off unabated declines in social capital. The finding also implies that poor performance by

government can initiate downward spirals in social capital by first undermining trust, and then feeding into the reciprocal cycle.

The decline of social capital has tangible consequences for national perceptions about political institutions. Our scale for confidence in institutions is the result of a combination of respondents' confidence in the Executive branch, the United States Supreme Court, and the Congress. The evidence here suggests strong effects from both sides of the social capital relationship upon confidence. The effect of increased civic engagement accompanies lesser confidence in federal government.

The direct effect of interpersonal trust upon confidence is positive, and the fourth largest (unstandardized) coefficient in the model for confidence. These results should be troubling to political leaders: to the extent that confidence is the currency that leaders trade in order to achieve policy goals, the independent effect of interpersonal trust on confidence warrants that even improved performance of government may not be sufficient to obtain necessary levels of confidence. It appears that confidence in institutions also requires confidence in one's fellow citizens.

We turn next to separate consideration of the equations for each of the three endogenous measures, beginning with the model for civic engagement. The most important of the exogenous causes of civic participation square with the standing literature: education is the strongest effect, followed by real family income, and partisanship. The actual magnitude of the effects implies that each one thousand dollar increase in real family income is equivalent to an additional year and a half of education, and it is debatable as to which is the more difficult hurdle to cross. The most interesting story to be told from the civic engagement equation pertains to the two measures of potential opportunity costs: each additional hour of television and each additional preschool child both dampen participation. The measure for television consumption is especially of interest, in that each additional hour per night is equivalent to an additional one thousand dollars of income or a full swing in partisanship in terms of its effect upon participation. Television, as an opportunity cost, is a serious drain upon the civic participation side of social capital.

The equation for interpersonal trust points to a number of interesting findings pertaining to real experiences. General life satisfaction is strongly related to interpersonal trust: those who are more satisfied are more trusting, by a margin which exceeds every other variable in the model.[6] A close

[6]Our conceptualization of life satisfaction is that it is an affective predisposition that is antecedent to many types of judgments (see Appendix), including beliefs about others. An alternative conceptualization of life satisfaction that we review in the Appendix perhaps would posit a different pathway. This type of approach would be inconsistent, however, with other theoretical understandings of the nature of life satisfaction.

second is being black, which requires the care in interpretation discussed above (i.e., is the strong negative effect due to real experiences with discrimination, insularity, or other unobserved processes?). Likewise, wealthier and better educated respondents are also more trusting of others than those with less of either. Victimization (measured by fear and burglary) additionally undermines trust. Put together, the picture that emerges is that levels of interpersonal trust are very much influenced by real experiences. The coefficients for age cohort, the GINI index, and unemployment also imply that social capital is affected by characteristics of the community, not just individual experiences, including the socialization of children, economic performance, and the distribution of society's resources.

Turning to the equation for confidence in government, we note that the key results here very much pattern the standing literature. There is evidence for both pocketbook (Kramer 1971, 1983) and sociotropic considerations (Kinder and Kiewiet 1981): as aggregate unemployment and inflation fall, and economic expectations rise, confidence in federal institutions also rises. Likewise, respondents who perceive significant positive changes in their family finances are more confident. But there is also a more textured side to these results: *wealthier* respondents are less confident in federal institutions. The net is that *changes* in economic status affect confidence in government such that improving status leads to greater confidence, but that *levels* of economic resources affect confidence such that as individuals become wealthier, they lose confidence in government.

Finally, we note the prominent effect of life satisfaction upon confidence: Americans transfer their unhappiness about their own lives onto confidence about federal institutions, after controlling for ideology, presidential popularity, and economic conditions.[7] As others have argued (e.g., Citrin and Green 1986), approval of the president results in more confidence in government generally. The net is that confidence of the public in the major federal institutions may be well outside of the control of political leaders to the extent that such confidence depends not only on levels of interpersonal trust, but also upon general life satisfaction.

4. Conclusions

Coleman (1990) and Putnam (1993) postulate social capital as a property of communities, such that those communities with healthier stocks of social capital are better able to avoid coercive solutions to collective goods problems than those with weak stocks of social capital. But "communities"

[7]The perverse sign on the effect of bad news on confidence may be due to the number of aggregate measures that we have included in this equation, and in the system of equations. The sign on the effect of bad news on confidence was negative in earlier versions of this model which did not include all of the aggregate measures.

do not join the PTA or enlist in farming organizations, parents and farmers do. The collective manifestation of social capital must be sustainable at the level of individual civic engagement and in individual attitudes towards others. Our paper demonstrates the presence of social capital in the form of a tight reciprocal relationship between civic engagement and interpersonal trust. In and of itself, identification of the aggregate phenomenon at an individual level is an important advance in evidence supporting the social capital idea.

Further, we found that this reciprocal relationship was quite asymmetric, where the effect of civic engagement on interpersonal trust was much stronger than the reverse effect. There are some interesting implications in this asymmetry. If one suspected that cooperative solutions depended first and foremost upon an ecology of trusting people, then one might expect that the relationship between beliefs about human nature and participation would be the stronger one: positive beliefs about others begats participation, which may cycle, but it is the initial state of trust that prompts the cycle. Instead, we find that participation is more efficient in bolstering positive impressions of others. Perhaps the direction of asymmetry leads to a more positive conclusion than would be implied by the reverse: it is probably easier for a community to generate greater levels of participation (by subsidizing the selective incentives for participation, for instance) than it is for that community to instill more trusting attitudes in others.

We find that those with more positive beliefs about others are more inclined to have confidence in the president, Congress, and the courts than those with more distrustful views of others. We demonstrate that this effect holds even when one controls for general life satisfaction, and for more objective measures of the performance of those institutions (in the form of economic conditions and general presidential approval).

Putnam (1995a, 1995b) recently demonstrated that the stock of social capital, specifically measured as membership in civic organizations, is in a state of decline. While our paper has a more limited time span and does not directly address the question of over-time dynamics, our paper does offer some insights into the factors that could account for over-time decline.

Turn first to those variables which have strong and direct effects upon civic engagement. The strongest effect, by far, is from the respondent's cognitive abilities (chiefly education) to civic engagement. But education levels have been steadily rising, and thus the state of education cannot account for over-time declines in civic participation. Stockpiles of economic resources have been fluctuating over time, and likewise cannot account for the decline. Increased television consumption and decreased psychological involvement, on the other hand, are both trended in a direction compatible with the decline and substantively significant effects.

Among those variables which had strong effects upon perceptions of

the trustworthiness of others, there are several contenders for explanations for over-time decline. Common experiences with crime, or simply the fear of walking at night near one's community, further undermine trust in others. Furthermore, as the later age cohorts ascend and earlier age cohorts decline in the composition of the population, the pointedly negative attitudes of the Baby Boom and Generation X respondents further sour impressions about the trustworthiness, helpfulness, and fairness of others.

The reciprocal relationship itself points to the final potential explanation for the over-time decline. Since the relationship is a positive, reciprocal one, there is the potential for a "virtuous" circle: an increase in the level of civic participation leads to an increase in positive beliefs about others, leading to greater participation, and so on. But it also implies the presence of a "vicious" circle: for whatever reasons the two sides of the relationship began their decline, the cycle can continue to erode simply as a product of the reciprocal connection between ever-fainter civic engagement and ever-poorer beliefs about others.

The total relationship between the two components of social capital and confidence in government is a more complicated problem, sustaining and failing to sustain parts of the arguments of the principals in the debate. We agree with Jackman and Miller (1996a, 1996b) that the support for the social capital argument requires evidence at the level of individuals, and evidence that social capital drives other outcomes, but dispute that such evidence is elusive and that rendering the components of social capital endogenous causes much damage. According to our analysis, it is true, as Putnam (1993, 1995a, 1995b) suggests, that there is a tight reciprocal relationship between civic engagement and interpersonal trust, and that this relationship has consequences for confidence in institutions. But the net effect of social capital upon confidence may be a wash: civic engagement negatively affects confidence, while interpersonal trust positively affects confidence. As Levi (1996) has argued, there is evidence here that confidence in institutions affects interpersonal trust: our results suggest that social capital may be as much a consequence of confidence in institutions as the reverse.

Manuscript submitted 1 February 1996.
Final manuscript received 9 August 1996.

APPENDIX
Construction of Exogenous Scales and Measures

Partisanship is the response to the question "Generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or what?" where strong Republicans/Democrats are coded 1, weak Republicans/Democrats are coded .67, leaning independents are coded .33, non-leaning independents are coded 0.

Newspaper reading is coded in the number of days a week that the respondent reads the newspaper.

Education is coded in years of education (from 0–20), and divided by 20 to fit a 0–1 scale. Vocabulary test is the percentage of words correctly identified by the respondent from a list of 10 words.

Real (family) income is coded in constant dollars (base is 1986), divided by $1,000.

Unemployed is coded 1 for unemployed respondents, 0 otherwise.

Life Satisfaction is a latent measure. In the psychology literature, there are two theoretical approaches to understanding the origins of life satisfaction, or subjective well-being as it is also called (Diener 1984). In one tradition, sometimes called the bottom-up approach, global life satisfaction results from the "sum" of satisfaction with different life domains, such as health, marriage, job, and friends. The other approach, a top-down perspective, sees life satisfaction as emanating from personality, mood, and biological factors. Some people are predispositionally happier than other people, and these predispositions color how the individual views not only the quality of their life overall, but also its subdomains. Recent work suggests that both approaches are probably current (e.g., Brief et al. 1993; Feist et al. 1995). Because we view mood as something that affects many kinds of judgments, including life satisfaction and its components, our measurement model is based on the top-down approach. Accordingly, we posit that the GSS life happiness question as well as questions about satisfaction with various domains all measure one latent variable, which we call life satisfaction.

The variables are recorded as follows: Happy is response to question "Taken all together, how would you say things are these days—would you say that you are very happy, pretty happy, or not too happy?" coded 1 for very happy, .5 for pretty happy, 0 for not too happy. Life is response to question "In general, do you find life exciting, pretty routine, or dull?" coded 1 for exciting, .5 for pretty routine, 0 for dull. Satisfied with X are responses to question "For each area of life I am going to name, tell me the number that shows how much satisfaction you get from that area" coded from 1 (very great deal) through 0 (none), from a seven position scale.

Media Coverage of Government: the population of Newsweek articles that referenced the federal government in some way were retrieved using LEXIS/NEXIS for the time period January 1975 through December 1994. Using the content analysis program developed by David Fan (Fan 1988), approximately 1,500 stories were analyzed for phrases describing the federal government in negative ways. For example, references to big brother, "meddlesome" or "intrusive" government, "mismanagement," or government power were coded as negative refer-

ences. The unit of analysis was the paragraph. The number of paragraphs was aggregated by quarters. For our media coverage variable, we used the total number of negative paragraphs that appeared in Newsweek stories in the first quarter of each survey year. We are grateful to Jim Stimson for the use of these data.

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