

IT TAKES TWO: THE RECIPROCAL RELATIONSHIP BETWEEN SOCIAL CAPITAL AND DEMOCRACY

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ABSTRACT

What is the relationship between social capital and democracy? Some scholars, following Tocqueville, argue that social capital is an important precondition to democracy (Inglehart 1997; Putnam 1993). Others argue that social capital is in fact “endogenous” to democratic institutions (Jackman and Miller 1998). This paper explores a third possibility, often acknowledged but not yet tested empirically: a reciprocal relationship between social capital and democracy. Drawing on the 1990-93 World Values Survey and a variety of other cross-national data, I first present evidence that democracy and social capital are related at the bivariate level, and that this relationship persists in more fully specified models. I then estimate a structural equations model, allowing for a reciprocal linkage between interpersonal trust and the quality of democracy in particular. The results indicate a degree of reciprocity, although democracy’s impact on social trust is much greater than social trust’s impact on democracy. Thus these results also provide some confirmation of the endogeneity thesis.

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I. INTRODUCTION

One reason for the intense scholarly and public attention to social capital is its alleged consequences for democracy. These consequences were articulated 150 years ago by Tocqueville (1988 (1835): 514), who said:

A single Englishman will often carry through some great undertaking, whereas Americans form associations no matter how small a matter. Clearly the former regard association as a powerful means of action, but the latter seem to think of it as the only one.

Thus the most democratic country in the world now is that in which men in our time carried to the highest perfection the art of pursuing in common the objects of common desires and have applied this new technique to the greatest number of purposes. Is that just an accident, or is there really some necessary connection between associations and equality?

Thus, “bowling alone” (Putnam 1995) bothers us not because solitary figures at the alley are inherently depressing, but because their alienation has political consequences.

This formulation contains a causal order, not always explicitly stated, whereby social capital is an important precondition for democracy. Of course, the connection is not self-evident. For one, Levi (1996: 49) questions the link “between bird watching and political activism.” An even more pointed criticism is that this causal order is precisely backwards. Jackman and Miller (1998) argue that Putnam’s (1993) and Inglehart’s (1997) conceptions of social capital are embedded in a political cultural framework that corrupts the original conception (Coleman 1988, 1990), which was embedded in a rational choice framework. Jackman and Miller favor the rational choice approach because it “endogenizes” social capital and highlights the incentives, particularly the institutional ones, that create or inhibit cooperation and trust. Thus, if the endogeneity thesis is correct, democratic institutions produce social capital, not the reverse.

Debate over the relationship between social capital and democracy is part of a larger dispute about the role of culture in explaining democracy stability. For example, in his research,

Inglehart argues that culture helps produce economic prosperity and democratic stability. In modeling these phenomena, he typically includes some measure of culture (or “values”) as an independent variable. Jackman and his colleagues (e.g., Jackman and Miller 1996a, 1996b) challenge these empirical results and assert the primacy of institutions. Inglehart (1997: 207) rejoins by arguing against “Institutional Determinism.”

However, a third possibility is that there is a *reciprocal* relationship between social capital and democracy. The norms of trust and cooperation thought to comprise social capital could provide fertile soil for the germination and cultivation of democratic institutions, while these institutions could themselves create incentives for trust and cooperation. Even in this seemingly polarized debate, Inglehart (1997: 10) writes, “the relationships between economics and culture and politics are mutually supportive, as are the various systems of a biological organism.” Putnam (1993: 182-84) asserts that, “Tocqueville was right: Democratic government is strengthened, not weakened, when it faces a vigorous civil society,” but also that “changing formal institutions can change political practice.” However, though these statements seem to imply a reciprocal relationship between social capital and democracy, this possibility has not been tested empirically. In this paper, I do so by examining the connection between manifestations of social capital and democratic institutions. Drawing on the 1990-93 World Values Survey, as well as a variety of macro-level indicators, I model social capital as the product of individual-level factors, as in Brehm and Rahn (1997), and aggregate-level attributes of countries. The results provide at least an initial purchase on the interaction of social capital and democracy.

The paper proceeds by first examining the concept of social capital in both its rational choice and political culture formulations and then discussing the extant literature on the

relationship between social capital and democratic institutions. After outlining the data and measures, I present evidence of the bivariate relationship between democracy and social capital, as well as evidence that this relationship persists in a non-recursive multivariate model. The analysis concludes with a structural equations model that allows for a reciprocal link between social capital and democracy. I focus in particular on social trust and the “quality” of democracy. A discussion of the results and a conclusion follows.

II. THE CONCEPT OF SOCIAL CAPITAL: CULTURAL AND RATIONAL CHOICE FORMULATIONS

The term “social capital” was first used by Loury (1977) to communicate the idea that social relationships constitute a resource for individuals, akin to physical or human capital. Coleman (1988, 1990) elaborates this concept: social capital is not, he writes, a “single entity.” Instead, its manifestations have two common characteristics: “[t]hey all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within that structure” (1990: 302). Social capital has value because “aspects of social structure to actors [are] resources that can be used by the actors to realize their interests” (305). Chief among these resources is trust. For example, a merchant’s chances of making a sale increases as buyers come to perceive her as trustworthy. Coleman’s point is that trust varies with the nature of the interaction, such as whether the interaction is repeated over time.

Jackman and Miller (1998: 54) argue that Coleman’s conception of social capital has been perverted by political culture, such that trust becomes a “durable social [norm] absorbed by individuals.” Among the guilty parties, they assert, are Putnam and Inglehart.¹ Inglehart’s

¹ Fukuyama (1995) also falls into the cultural camp, according to Jackman and Miller.

research program consists of two major thrusts. First, he is interested in identifying value orientations among the mass public, in particular those relating to “postmaterialism,” and tracking their dynamics over time (Inglehart 1977, 1990). His second concern is linking these value orientations to economic and political outcomes at the country level (Inglehart 1988, 1997). In the tradition of earlier studies (e.g., Almond and Verba 1963), Inglehart places his research in the context of culture. For him, “a culture is a system of attitudes, values, and knowledge, that is widely shared within a society and is transmitted from generation to generation” (1997: 15). Inglehart (1997: 188) defines social capital in particular as “a culture of trust and tolerance, in which extensive networks of voluntary associations form.” He then links this culture to democracy:

Democratic institutions depend on trust that the opposition will accept the rules of the democratic process. One must view one’s opponents as a *loyal* opposition who will not imprison or execute you if you surrender political power to them, but can be relied on to govern within the laws, and to surrender power if your side wins the next election. (172)

Inglehart argues further that culture, operationalized as values like interpersonal trust, is an empirically significant predictor of the level of democracy and of democratization (see chapter 6).²

In defining social capital, Putnam (1995: 664-65) actually borrows explicitly from Coleman, defining social capital as “features of social life – networks, norms and trust – that enable participants to act together more effectively to pursue shared interests.” In *Making Democracy Work* (1993), Putnam takes advantage of a “natural experiment,” the simultaneous creation of Italian regional governments in 1970, to examine the impact of social capital on these governments’ effectiveness. He finds that patterns of association and civic engagement strongly

relate to institutional performance; the existence of these patterns in northern Italy explains why it out-performs the South. His argument extends further, back through the centuries, as he finds evidence of divergent civic capacities even in late-medieval times. It is precisely this kind of claim, of durability over time, that leads some scholars to see Putnam's argument as primarily cultural (e.g., Laitin 1995).³ Culture, as manifested in the attitudes and orientations of the mass public, is often thought to be transmitted through socialization. If so, these attitudes will be learned early in life, and thus should be more stable. This individual-level stability produces an aggregate-level stability in culture.⁴

Inglehart's (1997) argument hinges on the alleged stability of culture. In one portion of his analysis, he uses measures of values from the 1990-93 World Values Survey to predict the stability of democracy, measured as the "years of continuous democracy" from 1920-95. On its face, this argument seems temporally backwards: how can values circa 1990 predict democracy fifty years or more ago (Jackman and Miller 1998: 57-58)? Inglehart (1997: 184-88) acknowledges this issue but argues that cultural variables display an impressive amount of empirical stability.

However, Putnam's research on "bowling alone" in the contemporary United States casts some doubt on the alleged stability of social capital. He (1995) reports that civic engagement, as measured by questions about interpersonal trust and group memberships in the General Social

² Trust is the most robust "cultural" variable (Inglehart 1997: 192, Table 6.5). Inglehart also includes a measure of organizational memberships, which has no effect on the stability of democracy but does associate positively with changes in democracy from 1990-95 (Inglehart 1997: 204).

³ Putnam himself claims that he did not intend to depict the cultures of these two Italian regions (Tarrow 1996: 390, fn. 7).

⁴ However, there are attempts to construct culturalist explanations of change (Eckstein 1988; Ross 1998).

Survey, has declined precipitously since 1974, controlling for education.⁵ Putnam examines a variety of explanations for this decline, but finally settles on a generational argument. Beginning around 1930, he argues, successive birth cohorts show a declining in propensity to join, ushering in the end of the “long civic generation.” The “mysterious anti-civic ‘X-ray’” producing this generational shift is television, as the number of hours spent watching television is negatively associated with group memberships.

Both *Making Democracy Work* and the “bowling alone” thesis have attracted numerous critics. Interestingly, many of them echo to some extent Jackman and Miller’s endogeneity critique. Levi (1996: 46-47) writes, “Sometimes he [Putnam] uses the term trust to suggest confident expectations due to knowledge, institutional arrangements, or incentive systems that enable an individual to predict behavior and thus count on someone else. In other cases trust seems to imply a general morality within the community itself.” The former suggests more the rational choice formulation advocated by Jackman and Miller, while the latter suggests a more cultural conceptualization.⁶

Tarrow (1996: 394), commenting on *Making Democracy Work*, notes that strong civic competence coincides with “popular politics,” which suggests the importance of mobilization by political parties. This leads Tarrow to a broader theoretical criticism of Putnam: “there is one alternative or complementary explanation for Putnam’s findings that he never considers: the effect of the pattern of state-building on indigenous civic capacity” (394). An example is the legacy of colonial exploitation of Southern Italy and its effect on associational life. Thus,

⁵ As noted by Jackman and Miller (1998: 57), this argument is in some tension with the thrust of *Making Democracy Work*. Whereas traditions of civic association in Italy proved remarkably durable over hundreds of years, just as if they were “cultural,” in the U.S. social capital appears to have declined sharply and rapidly in just a few decades.

⁶ Nevertheless, Putnam is not in any way opposed to the insights of rational choice theory. For example, in chapter six of *Making Democracy Work*, he draws extensively on the insights of game theorists who have explored collective action and public goods, of which social capital constitutes one example.

Tarrow argues, top-down as well as bottom-up factors affect civic capacity (395). The influence of top-down factors suggests that civic capacity is endogenous.

Skocpol (1996) and Valley (1996), critiquing the bowling alone thesis, also emphasize the importance of institutions in structuring the political economy of organizations.⁷ Valley, citing Rosenstone and Hansen (1993), notes how declining mobilization by political parties has suppressed voter turnout. Skocpol emphasizes the structure of organizations themselves, in particular the decline of “federated” associations, which have national, state, and local chapters. These associations were “built from the top down” (24), and thus “an association may decline not only because people with the wrong sorts of individual traits proliferate in the population, but also because opportunities and cultural models for that association ... wither in the larger society and polity” (22).⁸

On the whole, then, Putnam and Inglehart both craft arguments that draw to at least some extent on a political cultural approach to social capital. Moreover, their critics are alike in their attention to features of political life that might affect, and thus “endogenize,” social capital. What does the endogeneity thesis look like in more elaborate form? Jackman and Miller (1998) discuss the logic of this notion. Again following Coleman, they (1998: 51) argue that, “considering trust endogenous encourages us to ask which arrangements provide incentives for trust.” Their discussion of these arrangements highlights the role of organizations and institutions:

Rather than emanating from a culture of trust, social capital is a public-good by-product of organizations. Individuals join these organizations in the expectation of securing benefits. As the organization continues to provide those benefits, it

⁷ Many other critics of the bowling alone thesis argue that the reports of the death of civic America are greatly exaggerated (Jackman and Miller 1998; Schudson 1996; Ladd 1996). Others, such as Norris (1996), question the causal impact of television.

⁸ To be fair, Putnam (1996) is entirely receptive to these comments.

builds a reputation for being trustworthy, providing in the process a feedback mechanism that enhances trust. (55)

Political institutions also condition the context in which trust may or may not flourish. Jackman and Miller (1998: 56) use ethnic conflict as an example, arguing that many ethnically divided societies experience little ethnic conflict because their political institutions “raise the cost of using the state for ethnic violence. Indeed, by altering each group’s incentives, effective institutions can make tolerance self-enforcing.” A more pertinent example is civic engagement. If social capital is truly endogenous to institutions, the nature of a political regime should affect the opportunities for participation in voluntary associations. For instance, an authoritarian regime might view voluntary activity as potentially subversive, and thus tightly regulate such activity by limiting freedom of association or channeling activity into state-approved organizations. By contrast, a democratic regime committed to civil and political liberties would permit a wide range of groups to flourish. Countries that fall somewhere in between, with some democratic and some less democratic tendencies, could conceivably allow voluntary activity but engage in selective acts of repression.

III. THE EMPIRICAL RELATIONSHIP BETWEEN SOCIAL CAPITAL AND DEMOCRACY

Several works address the link between democratic institutions and trust and associational life. Almond and Verba (1963, esp. ch. 10 and 11) provide initial evidence. Using survey data, they find that respondents in the United States, Great Britain, and Germany, the three established democracies in their sample, have a higher degree of trust and a greater propensity to join groups than respondents in Italy and Mexico, two countries whose democratic record is more checkered. In a similarly designed project, Booth and Richard (1998) use surveys

to examine social capital in six Central American countries. They find an association between interpersonal trust, group memberships, and the level of democracy. However, they contend that the relationship is ultimately “interactional” because political repression inhibits associational life (797), though they do not systematically test the interaction between institutions and social capital.

By contrast, Muller and Seligson (1994) argue that democratic institutions produce trust. Their thesis is: “the successful persistence of democracy over time is likely to cause increases in levels of civic culture attitudes because high levels of subjective political competence, pride in the political system, and interpersonal trust are a rational, learned response to the experience of living in a country that has a stable democratic regime” (635). Their evidence suggests that the number of years of continuous democracy is strongly related to civic culture.⁹

Inglehart (1997: 197-205) responds to this argument first on various empirical grounds.¹⁰ More important here is his theoretical defense of the causal order: culture before institutions (207-208). He concedes that a reversed order, institutions before culture, is quite plausible: “This model contains a grain of truth: institutions *do* help shape their society’s culture – along with many other factors” (206). However, he settles on the prior role of culture: “Stable democracy, by contrast, depends on a deeply rooted sense of legitimacy among the public” (206). He argues that “Institutional Determinism” is an insufficient explanation of political outcomes: “[I]f it were simply a question of getting the right institutions, the world would be much nicer. One could simply xerox the U.S. Constitutions and mail it out to all the governments of the world” (207). The Soviet Union is, he argues, an example of a country with

⁹ For a debate over the relation of culture and economic growth, see Granato, Inglehart, and Leblang (1996a, 1996b), Jackman and Miller (1996a, 1996b), and Swank (1996).

a democratic constitution, but no real democracy. Drawing on Putnam, he cites the differences in trust between Northern and Southern Italy, even though they “have lived under the same political institutions since unification 125 years ago” (207), as evidence that institutions do not necessarily determine culture.¹¹

Ultimately, though both Inglehart and Muller and Seligson have the data to do so, neither conducts any empirical test of the reciprocal relationship between culture and institutions. Hence this paper fills an important gap in the existing literature.

IV. MEASURING SOCIAL CAPITAL AND DEMOCRACY

Measuring social capital cross-nationally is not easy. Very little comparable, systematic data on trust and associational life exist across a variety of countries. However, one important exception is the World Values Survey (WVS). The 1990-93 wave of this study was conducted in forty-two countries, including a variety of seldom-surveyed non-Western and less-developed nations. The WVS includes conventional indicators of both trust and group memberships.¹² Trust is gauged with the following question: “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” Group memberships are measured by handing respondents a list of sixteen organization types and asking “which, if any, do you belong to?” The trust question was asked in all forty-three countries, but seven countries, generally less developed ones, are missing group membership

¹⁰ For example, he argues that their model, originally applied to shifts in the level of democracy in the 1970s and 1980s, is less powerful when applied to shifts in democracy from 1990-95. His own empirical analysis of 1990-95 demonstrates the effectiveness of cultural variables.

¹¹ However, others portray Italian institutional history differently. Tarrow (1996), as noted above, points to different patterns of state-building, including the debilitating colonial legacy in Southern Italy.

data.¹³ To obtain a composite measure of civic engagement, I simply summed the number of types of groups in which a respondent reported membership.¹⁴

To measure democracy, I operationalize two different aspects: *quality* and *stability*. Several studies argue that quality, or the “level” of democracy, should not be conflated with stability (Bollen 1980; Bollen and Jackman 1985). Quality refers to the degree of democracy at a particular point in time, in this case 1989-90, roughly the year in which the WVS was carried out. Like Inglehart (1997), I rely on two separate Freedom House measures, one capturing the extent of political rights, and the other the extent of civil liberties.¹⁵ Both are scored on seven-point scales. Because these two measures are very highly correlated ($r = .98$), I combine them into a single additive measure, coded from 1 to 14, with higher values indicating a higher level of democracy.

Measuring democratic stability entails operationalizing the political history of a nation, and is thus a tricky exercise at best. Inglehart’s (1997: 165) measure is the number of years since 1920 that “top leadership was chosen by free and competitive elections.” This measure has the advantage of allowing for “interruptions” in democracy, meaning years in which, for example, an authoritarian regime was in place. To construct a similar measure, I rely on Polity

¹² For stylistic variety, I will refer to trust both as “social trust” and “interpersonal trust.” Synonyms for “group membership” include “civic engagement” and, less often, “associational life.”

¹³ They are: South Africa, India, Turkey, Nigeria, Czechoslovakia, Poland, and Belarus. For a brief discussion of these missing data, see Inglehart (1997: 189).

¹⁴ One problem with this measures is that it does violence to the nuances of associational life in each country. The Wuthnow (1991) edited volume includes a number of case studies of the “voluntary sector” in various countries. What these studies show, in part, is a great deal of variation among countries despite surface similarities. For example, while both Sweden and the United States have high rates of voluntarism, the Swedish sector is quite corporatist and linked with the state, while the American sector is much more, indeed often explicitly, independent of the state (Boli 1996). Another potential problem with these data is their cross-national validity, as survey questions can easily mean different things in different contexts. However, Paxton (1998) shows that measurement models of social capital generate comparable factor loadings across countries, which indicates that there is some comparability of these questions in different contexts. Finally, the particular measure of group memberships is also the subject of some debate (Baumgartner and Walker 1988, 1990; Smith 1990).

¹⁵ Freedom House scores for all countries across time are available on-line at <http://www.freedomhouse.org>.

III data, which include a yearly measure of the quality of democracy (coded 0-10) for a large sample of nations. I constructed a dichotomous measure of democracy, coded 1 if a particular country scored 8 or above in a given year, and then summed the number of ones across 1920-90, generating a measure that runs from 0 to 71. This measure has a good deal of face validity; nations like the United States and Canada score highly (71 years) while Russia and other former Soviet Republics score low (no years). An example of an interrupted case is Belgium, whose experience under the Nazis subtracts slightly from its overall score on this measure (66 years). Furthermore, this measure correlates highly with Inglehart's ($r = .93$). Overall, though somewhat crude, "years of continuous democracy" appears an adequate indicator of democratic stability.

[insert Figures 1-4 and Table 1 about here]

Figures 1-4 provide a first cut at the relationship between social capital and democracy. These scatterplots show a positive association between the two manifestations of social capital, group memberships and social trust, and the two measures of democracy. The relationship between democratic stability and social capital appears stronger than that between the quality of democracy and social capital, at least as measured by the r-squareds. As Table 1 also shows, those countries who demonstrate more social capital tend to be long-standing Western democracies. For example, among the ten countries with the highest average number of memberships per capita, eight are long-established democracies (East Germany and South Korea are the two exceptions; see Table 1). By contrast, those countries that demonstrate less social capital are typically less-developed and possess a more checkered democratic history, if they have any at all. Thus, those countries with fewer group memberships include former communist

states (Romania, Slovenia, and Bulgaria) and two Latin American nations (Argentina and Mexico).

However, it is also important to note that this relationship contains notable variation. As Figure 1 illustrates, countries with a long democratic history are not always similar in their civic engagement. Sweden and Switzerland were both democratic during the entire 1920-90 period, but manifest quite different levels of group memberships – an average of 2.08 for Sweden and 0.73 for Switzerland. Similar variation exists in the relationship between level of democracy and social capital. Furthermore, there are a variety of interesting outliers. China exhibits a relatively high level of social trust (60.3% of Chinese respondents said “most people can be trusted”) while scoring very low on both measures of democracy. East Germans (labeled “GDR” on Figures 1 and 3) join groups at a rate disproportionate to the democratic history of their country and to the quality of its democracy in 1989-90. The average number of memberships per capita among East Germans is 1.67, almost exactly the same as Canada. On the whole, then, these scatterplots demonstrate a clearly positive, but far from perfect, relationship between social capital and democracy in these countries.

V. MULTIVARIATE MODELS OF SOCIAL CAPITAL

Given the bivariate relationship between social capital and democracy, a logical next question is, does this relationship hold up in a multivariate context? Inglehart (1997) shows that, at a macro-level, social trust is significantly associated with democratic stability. Here I treat both social trust and group memberships as *dependent* variables, and democracy as an explanatory variable. The multivariate models presented here also advance our understanding of

social capital by examining both individual- and macro-level correlates. As Brehm and Rahn (1997) demonstrate, social trust and civic engagement are associated with a variety of individual-level attributes. However, social capital may also be associated with attributes of the country in which respondents live, such as its democratic stability. These models also represent an initial test of the endogeneity thesis: for the thesis to have empirical bite, democracy must have an impact on social capital, net of other variables at the individual and aggregate levels.

To construct these models, I merged a number of country-level indicators with the individual-level data in the World Values Survey. Many of these indicators come from Inglehart (1997). Similarly, the individual-level indicators and hypotheses draw on Brehm and Rahn (1997). Below I list the indicators included in these multivariate models, and a brief theoretical expectation for each.

Country-Level Measures

Democracy: Operationalized as both the *level* and *stability* of democracy, as discussed previously. Both measures of democracy should associate positively with social capital.

Economic wealth: Measured as the *logged per capita gross national product*, as of 1990. National wealth should also be positively associated with social capital.

Education: Measured as the *percent of the college-age population enrolled in higher education in 1988* (see Inglehart 1997: 357). Increases in education at the individual level are associated with greater social capital (Brehm and Rahn 1997). The same should also be true at the macro-level.

Occupational structure: Measured as the *percent of the gross domestic product generated by the service sector in 1988* (also from Inglehart 1997). It should also have a positive impact on social capital, as a burgeoning service sector is generally thought to indicate a more developed economy.

Ethnic Fractionalization: Computed as $1 - \text{the percent of a country's population belonging to the largest ethnic group}$ (Britannica Book of the Year 1990). At greater values of this variable, the largest ethnic group comprises a smaller percentage of the population, meaning that other

smaller groups are more numerous. Greater fractionalization may indicate a more conflicted society, which should inhibit levels of civic engagement and, in particular, interpersonal trust.¹⁶

Income inequality: Measured by the *size of the income share received by upper quintile of households* (Inglehart 1997).¹⁷ Brehm and Rahn (1997: 1009) hypothesize that, “when society’s rewards become more inequitably distributed, people may begin to feel exploited by others, thereby diminishing their faith in their fellow citizens.”

Individual-Level Indicators

Civic Engagement

Interpersonal trust: This is measured by the dichotomous question described above. Trust is expected to produce a greater propensity to join.¹⁸

Psychological engagement: Brehm and Rahn get at psychological engagement through *political engagement*, which they measure with partisanship. I rely instead on two questions about respondents’ interest in politics, one which asks how important politics is in their lives, and the other which asks how often they discuss politics with their friends. These two questions are then combined into an additive index. Political engagement is also hypothesized to have a positive effect on civic engagement.

Resources: Two intuitive measures of resources are *education* and *income*. Other things equal, the better-educated should possess both cognitive skills, and the better-off more leisure time, leading them to greater civic engagement. I also include respondents’ *age*, which again should have a positive effect (see Putnam 1995: 673).

Social Trust

Civic engagement: As discussed above, this is based on the battery of group membership questions, which were summed to determine the total number of memberships per respondent. Civic engagement should positively effect trust – indeed this is at the core of Putnam’s work – since the interactions that come from associational activity build relationships among people that increase their confidence in each other.¹⁹

¹⁶ Inglehart (1997) relies on a different measure of fractionalization: the probability that two people drawn at random from a country will not speak the same language. This measure, while correlated with the one I employ ($r=.58$), is missing a value for seven countries.

¹⁷ Inglehart (1997: 357) collected this measure but does not cite a specific date or source, referring to “studies in the 1970s and 1980s.” Unfortunately, several countries are also missing for this indicator.

¹⁸ Technically, if I were to follow Brehm and Rahn’s specification precisely, confidence in government should also be included, since it is part of the tripartite linkage that forms the core of their model. However, in their model, its effect on group memberships was insubstantial, and thus I excluded it.

¹⁹ Brehm and Rahn, like Putnam (1993) and others, couch this point in the theoretical framework of a prisoner’s dilemma. In a repeated game, players have an incentive to cooperate since defection will presumably engender punishments in later iterations. Trust derives from these repeated, cooperative interactions.

Confidence in institutions: This is an approximation of Brehm and Rahn’s measure of trust in government. The World Values Survey includes a series of questions about respondents’ confidence in fourteen various institutions, such as the army, the courts, the educational system, and so forth. I averaged these indicators into a single measure of confidence, which is expected to have a positive association with trust, since, as Brehm and Rahn (1997: 1003) note, citing Lane (1959), confidence in government officials may be a “specific instance of trust in mankind”.

Life experiences: Following Brehm and Rahn, I include *education*, which is expected to associate positively with social capital.

Collective experiences: One kind of collective experience could be generational. I therefore constructed a series of a dummy variables for *age cohorts*, divided into groups of comparable sample size (25 and under, 25-40, 41-55, 56 and above). If Putnam’s work on the United States is generalizable to other countries, older cohorts – i.e., those closer to the “long civic generation” – should exhibit more trust. Because I exclude the dummy variable for the oldest cohort from the analysis, each of the other cohort variables should exhibit a negative relationship with trust, compared to this oldest cohort. However, there are good reasons to be skeptical of this hypothesis. One might expect, in newly developed democracies, that the younger generations would actually be more “civic,” since older generations would have been socialized under non-democratic regimes that would most likely inhibit social capital. Thus, older generations would be less inclined to participate when the opportunity was made available.

General affective predispositions: Constructed by combining two questions, one measuring life satisfaction – “All things considered, how satisfied are you with your life as a whole these days?” – and another measuring happiness itself – “Taking all things together, would you say that you are very/quite/not very/not at all happy?” Rahn and Brehm (1997: 1009-10) argue that life satisfaction often depends on one’s mood; in turn, people often attribute feelings that derive from mood to external sources. Thus, people who are generally grumpy or dissatisfied may externalize their mood on others, as manifested by decreased interpersonal trust.

Results

[insert Tables 2 and 3 about here]

To gain an initial foothold on this large dataset, I estimated a model for each country, comprised only of the individual-level variables described above.²⁰ These are presented in Tables 2 and 3. The analysis of group memberships relies on ordinary least squares regression,

²⁰ For no apparent reason, some country surveys did not include every variable. For example, South Korea and Switzerland did not ask respondents how many children were living in their home. When this occurred, I estimated the baseline model without the missing variable.

and the analysis of social trust on logit since the dependent variable is dichotomous. These models demonstrate that while some variables have explanatory power cross-nationally, others have an inconsistent effect. When group memberships is the dependent variable (see Table 2), political engagement, education, social trust, and, to a lesser extent, income all have consistent positive impact, as hypothesized. By contrast, age, the number of children, and the size of town have effects that are rarely significant and inconsistent in sign.²¹ When social trust is the dependent variable (see Table 3), a similar group of variables retains explanatory power in this sample of countries – notably, happiness, group memberships, confidence in institutions, political engagement, and education. Income and the age cohort dummy variables are only inconsistently significant; the cohort variables also exhibit no clear direction cross-nationally.²²

Based on these results, I then built a series of models that combine the most consistently important individual-level variables with the country-level variables. Naturally, it would be possible to build a more precisely specified model by interacting certain individual-level variables with dummy variables for specific countries. However, the goal in this case is merely to determine if the relationship between democracy and social capital persists when a sensible set of control variables is included in the model.

[insert Table 4 about here]

Table 4 presents a regression model of civic engagement comprised both of individual- and country-level indicators. The World Values Survey's sample size is obviously enormous (around 25,000 in these analyses), generating so much statistical power that obtaining significant coefficients is unremarkable. It is therefore necessary to focus more on the substantive

²¹ Following Brehm and Rahn, I also included number of children at home and the size of the respondent's town in these equations. However, the effect of these variables was rarely significant, so I do not show those coefficients in Table 2.

magnitude of the coefficients; to this end, I present both unstandardized and standardized estimates. These estimates generally confirm theoretical expectations. Each of the individual-level variables has a positive effect on group memberships; political engagement and education have particularly large effects. The coefficients for years of continuous democracy, percent in higher education, and percent of GDP from the service sector are also positive, as hypothesized, though only years of continuous democracy has much substantive impact. Indeed, its standardized coefficient of .32 is the largest of *any* variable in the model.²³ Income inequality is, as expected, negatively associated with group memberships. Ethnic fractionalization actually appears positively associated with civic engagement, contrary to expectations, but the magnitude of its effect is negligible. The coefficient for GNP is surprisingly negative and significant, a result that may derive from collinearity between GNP and both measures of democracy ($r = .59$ for democratic stability, and $r = .65$ for level of democracy). (GNP has its hypothesized positive impact when both measures of democracy are excluded from the model.) A final surprising finding is the absence of any effect for level of democracy. This variable is not statistically significant at conventional levels and is indeed negative in sign, contrary to expectations. It appears that civic engagement is associated with democracy, as the endogeneity thesis predicts, but only with democratic stability in particular.²⁴

²² Table 3 does not present the coefficients for several other variables - church attendance, unemployment, marital status (divorced or not), and size of town - because they were even less consistently significant.

²³ This impact of years of continuous democracy is somewhat ironic: it appears to confirm the endogeneity thesis, yet Jackman and Miller (1996a) critique it harshly. Referring to Inglehart's "years of continuous democracy," which assigns France a value (37) half that of the United States (75), they scoff at the notion that France is half as democratic as the United States. However, below I present a rationale for why the stability of democracy should be related to group memberships in particular.

²⁴ The results of this model were generally unchanged when I experimented with several alternative country-level indicators, all gleaned from the *Human Development Report*. Replacing the percent in higher education with a measure based on the literacy rate and the mean years of schooling in 1990 (*HDR* 1991) produced similar results, though the effect of this alternative measure is a bit weaker than the original measure. I also substituted two different measures of income inequality, which have a different pattern of missing data than Inglehart's measure. One captures the income share of the lowest 40% and the other the ratio of the income share of the top quintile to

[insert Table 5 about here]

Table 5 presents the logit analysis of social trust. Again, all of the individual-level variables have a significant, positive impact, with roughly comparable magnitudes as measured by their marginal effects. The country-level variables also generally conform to theoretical expectations. Both measures of democracy are positively associated with social trust, as is the percent in higher education. One notable difference, however, is that in this case the level of democracy is more powerful than democratic stability: the marginal effect of level of democracy is over five times greater (.165 vs .031). Ethnic fractionalization has a negative impact, as hypothesized, though its marginal effect is comparatively small. As in the analysis of group memberships, GNP has a counterintuitive negative effect, though again this result appears driven by the correlation between GNP and democracy.²⁵

These non-recursive models demonstrate that the relationship between democracy and social capital is quite robust. At least initially, social capital appears endogenous to democratic institutions, even with a host of control variables in the model. Perhaps the most interesting finding, however, is that the two manifestations of social capital, group memberships and social trust, are associated with *different* aspects of democracy. Years of continuous democracy, the measure of democratic stability employed here, is associated with a propensity to join groups,

that of the lowest quintile (the year of these two measures varies across countries from 1981-93; see *HDR* 1996). In each case, substitution generated similar results, except that GNP and ethnic fractionalization were of the hypothesized sign, while the service sector variable's coefficient was actually negative. The level of democracy did attain statistical significance in one of these specifications, but again it was *negative* in sign.

²⁵ A variety of other specifications generated comparable results. First, I substituted Inglehart's measure of ethnic fractionalization for my own. Second, I substituted the measure of education based on literacy and the mean years of schooling for the percent in higher education. Third, I substituted the two other measures of income inequality described above (fn. 24) for Inglehart's measure. Finally, I deleted the individual-level group memberships variable in order to regain some cases from the seven countries missing for this variable (thereby increasing the sample size by around 8,000), while retaining all the other variables presented in Table 2. In all cases, the results were substantively similar, though the service sector and ethnic fractionalization variables were not significant in all specifications. However, both measures of democracy retained their significance in all models.

while the level of democracy is not. By contrast, level of democracy has a much stronger impact on social trust than does democratic stability.

In some respects, this makes sense because civic engagement and social trust are quite different phenomena. The former is a behavior – the act of joining groups – that depends on having the opportunity to do so. In other words, for people to join groups, groups must first exist. It may be that a nation can develop a burgeoning civic economy only after years of stable democratic institutions, since establishing and building groups takes time. By contrast, social trust is an attitude, and, like a variety of other political attitudes, it may be anchored more to the current context, including the contemporary level of democracy. Social trust may be, in some respects, a sign of the times, just as presidential approval often reflects the state of the economy. If so, we would expect the level of trust to change as institutions change, such that a newly democratized country could exhibit high levels of social trust even before its democratic government persisted long enough for a panoply of civic groups to develop. Admittedly, these notions are purely speculative, and much further research is needed to tease out the linkages between political institutions and democracy.

VI. A STRUCTURAL EQUATIONS MODEL OF SOCIAL TRUST

A structural equations model offers several advantages that the non-recursive regression and logit models presented above lack. For one, by treating social capital and democracy as latent variables with observed indicators, measurement error can be taken into account. This is all the more important given that the measures of social capital and democracy employed here are certainly reductions of elaborate phenomena. More importantly, structural equations models

allow for more complex relationships among variables; the most important is the reciprocal linkage between social capital and democracy. At this early stage, I focus on a model of social trust, ignoring for the moment civic engagement. Figure 5 presents a schematic representation of this model.

[insert Figure 5 about here]

Social trust and the quality of democracy are both modeled as latent variables, with one observed indicator apiece – the dichotomous measure of social trust and the Freedom House score for 1989-90, respectively. These latent variables are themselves functions of other exogenous factors. In particular, social trust is endogenous to roughly the same set of individual- and country-level factors as presented in Table 2. The only exception is years of continuous democracy, which I exclude to focus on the relationship between the level of democracy and social trust. As discussed before, this relationship is more important, as the effect of democratic stability on social trust is fairly meager. I do not include GNP as a predictor of democracy because its effect is complicated by collinearity. However I do include it as an exogenous influence on democracy; its presence helps to identify the model and is consistent with other empirical evidence (Burkhart and Lewis-Beck 1994). The key set of parameters is captured by the reciprocal linkage between the latent variables social trust and democracy.²⁶

[insert Table 6 about here]

Table 6 presents both unstandardized and standardized coefficients from this model. The estimates themselves conform to theoretical expectations as well as to the logit results presented

²⁶ Several other constraints were built into the model. Following convention, both factor loadings were restricted to one. The intercepts of both latent variables were set to zero. Furthermore, ζ_1 , ζ_2 , and δ_2 were standardized so that their means equaled zero and their variances one. The mean of δ_1 was also set to 0, but its variance was left unconstrained. The model was estimated via the maximum likelihood package in AMOS. Further work is necessary to evaluate the robustness of the results to different sets of assumptions.

in Table 2.²⁷ All of the individual-level variables have their hypothesized positive impact on social trust, as does the country-level measure of percent in higher education. Income inequality, ethnic fractionalization, and percent of GNP from the service sector all have a negative impact on trust. Finally, GNP has a large, positive impact on quality of democracy, confirming the general finding of modernization theory.

But most importantly, there is initial confirmation of a reciprocal linkage between social trust and quality of democracy, although it is hardly a symmetric one. While both latent variables have a significant positive impact on each other, democracy's effect on social capital is by far the greater of the two. The standardized coefficient for quality of democracy is .041, which is almost six times greater than the coefficient for social trust (.007).

VII. CONCLUSION

The results presented here support the notion of a reciprocal linkage between social capital and democracy: social trust is associated with increases in the quality of democracy, and vice versa. However, the endogeneity thesis (Jackman and Miller 1998; Muller and Seligson 1994) appears to have more empirical bite than the cultural thesis (Inglehart 1997), as the effect of democracy on social trust is much greater than social trust's effect on democracy.

These findings serve first to clarify the relationship between the quality of democracy and social trust. While throughout this paper the two have been assumed to associate positively, it is also possible that in less democratic regimes, social trust might not suffer if people somehow

²⁷ The issue of model fit in structural equations models is somewhat unresolved. Bollen (1989) recommends reporting and evaluating variety of measures of fit, as I do here. In this case, the chi-squared statistic is not very helpful, since in large samples it is always highly significant. This model does fairly well as measured by the

band together and rely on each other to survive political repression and, often, economic hardship. That possibility seems less probable now. Second, these findings draw attention to the importance of the broader political context in which citizens live. Social trust is often discussed as bubbling up from the interactions of individuals, whether it be within bowling leagues, as in Putnam, or in repeated negotiations among buyers and sellers, as in Coleman. However, this focus on the micro-level, as it were, should not lead us to ignore the macro-level. The basic nature of the political regime conditions the extent to which citizens will trust their fellow citizens.

Tasks for future research include elaborating the structural equations model to include civic engagement as well as social trust. Civic engagement must itself be modeled as having a reciprocal linkage both with democracy and with social trust. A second, more theoretical task is to specify more precisely the mechanisms that connect democratic institutions to social capital. The implications of a more elaborate theory and model will shed important light on the underpinnings of social capital, its relationship with democracy, and indeed on the interaction between political culture and institutions more generally.

Figure 1. Scatterplot of Group Memberships and Years of Continuous Democracy

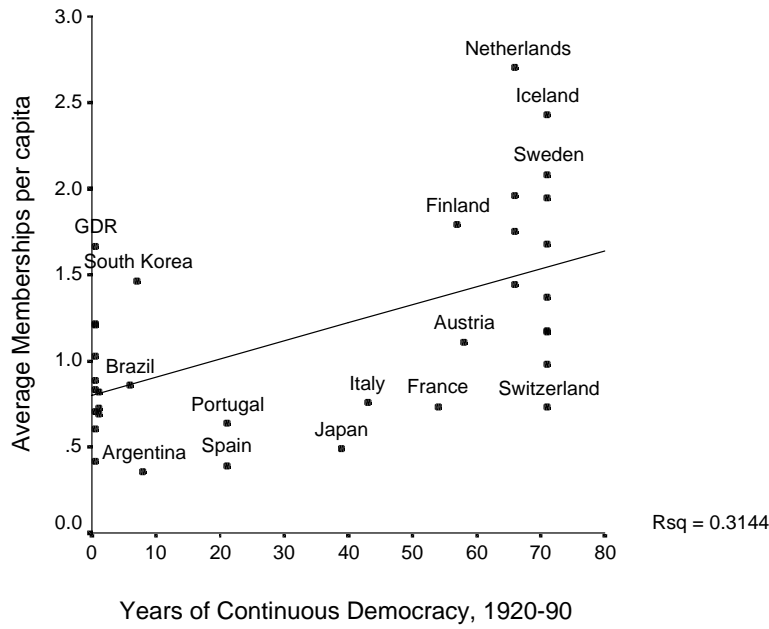


Figure 2. Scatterplot of Social Trust and Years of Continuous Democracy

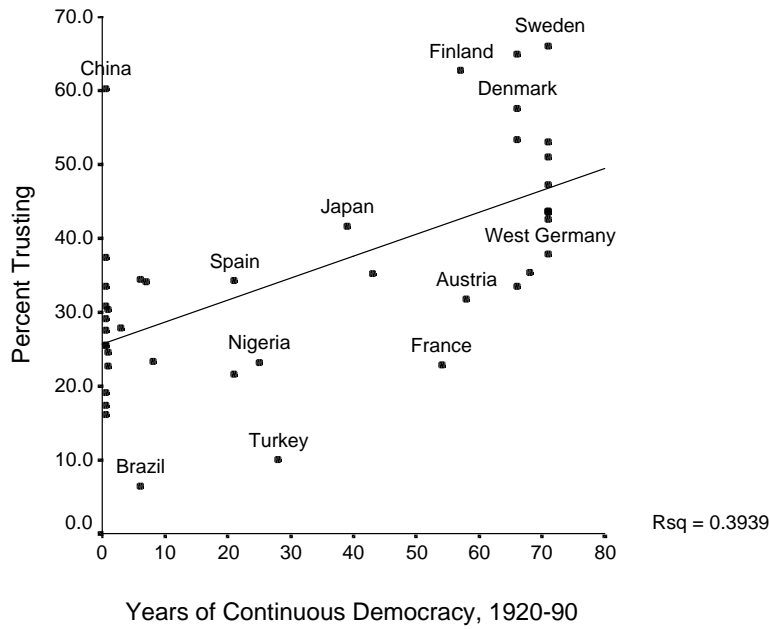


Figure 3. Scatterplot of Group Memberships and Level of Democracy

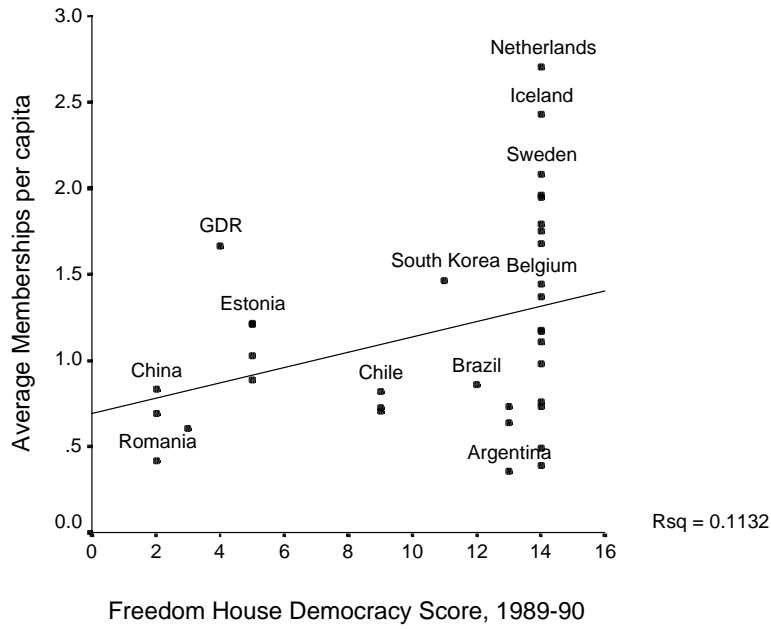


Figure 4. Scatterplot of Social Trust and Level of Democracy

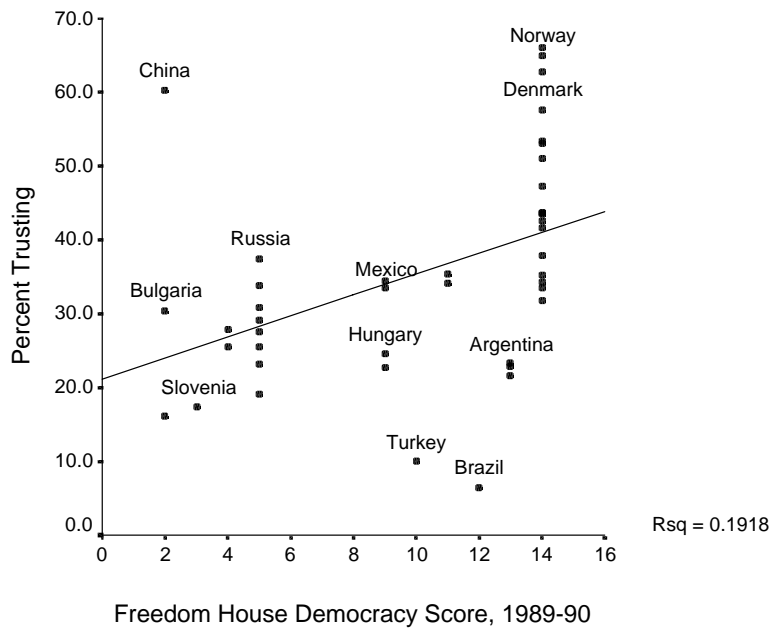


Table 1. Social Trust and Civic Engagement by Country (1990-93 WVS)

Country	N	% Trusting	Average Memberships
Sweden	944	66.1	2.08
Norway	1156	65.1	1.96
Finland	558	62.7	1.79
China	985	60.3	.83
Denmark	992	57.7	1.75
Netherlands	965	53.5	2.70
Canada	1673	53.1	1.68
United States	1782	51.1	1.94
Ireland	988	47.4	.98
Britain	1440	43.7	1.18
Iceland	672	43.6	2.43
Northern Ireland	298	43.6	1.17
Switzerland	863	42.6	.73
Japan	911	41.7	.49
West Germany	1725	37.9	1.37
Russia	1818	37.5	1.03
India	2365	35.4	-
Italy	1932	35.3	.76
Poland	852	34.5	-
South Korea	1229	34.2	1.47
Spain	3887	34.2	.39
Belgium	2576	33.5	1.44
Mexico	1384	33.5	.70
Austria	1301	31.8	1.11
Lithuania	1000	30.8	.89
Bulgaria	977	30.4	.69
South Africa	2594	29.1	-
Czechoslovakia	1394	27.8	-
Estonia	1008	27.6	1.22
East Germany	1168	25.6	1.67
Belarus	997	25.5	-
Hungary	968	24.6	.73
Argentina	961	23.3	.36
Nigeria	935	23.2	-
France	939	22.8	.73
Chile	1458	22.7	.82
Portugal	1149	21.7	.64
Latvia	903	19.0	1.21
Slovenia	972	17.4	.60
Romania	1083	16.1	.42
Turkey	1012	10.0	-
Brazil	1766	6.5	.86
Mean (std. deviation)		35.3 (14.7)	1.11 (1.53)
Correlation		.62 (p< .001)	

Table 2. Individual-Level Models of Civic Engagement, by Country

Country	Unstandardized OLS Coefficients					Adj. R ²	N
	political engage	educ	trust	income	age		
Netherlands	.23***	.15***	.45**	.10**	.03***	0.14	730
Iceland	.30***	.09**	.44**	nd	-0.004	0.12	488
Sweden	.26***	.10**	.48**	-0.03	0.01	0.10	538
Norway	.33***	.13***	.45**	.08**	.02***	0.15	664
US	.37***	.20***	.43***	.15***	0.005	0.19	1387
Finland	.24**	.12**	.34#	-0.02	.02*	0.06	426
Denmark	.18***	.10***	0.18	.16***	-0.004	0.22	591
Canada	.21***	.16***	.17#	.16***	.01***	0.12	1379
E. Germany	.21***	.04*	0.03	0.02	0.003	0.06	914
S. Korea	.15***	nd	-0.07	.12***	0.002	0.05	1169
Belgium	.34***	.12***	.32**	.06*	.007#	0.13	1220
W. Germany	.23***	.10***	0.09	0.01	.005*	0.10	1537
Estonia	.18***	.08***	.16*	.06*	-0.002	0.09	979
Latvia	.18***	.05*	-0.13	.06#	-0.0004	0.04	831
Britain	.21***	.23***	.32**	.05**	.01***	0.20	1048
N. Ireland	0.09	.29***	0.08	.17***	.01*	0.30	226
Austria	.21***	0.03	.51***	.07**	-.007#	0.13	758
Russia	.10***	.07***	.12*	.07***	-0.002	0.09	1450
Ireland	.18***	.01***	0.13	.11***	0.0002	0.19	872
Lithuania	.08**	.06***	0.02	0.01	-0.002	0.04	943
Brazil	.11***	.12***	0.17	0.02	0.006	0.05	906
China	.10**	.06**	0.11	-0.01	.007#	0.05	603
Chile	.19***	.03#	.26*	.03#	.007*	0.08	1004
Italy	.21***	.05***	.29***	.06*	-.006**	0.15	1272
France	.15***	.07**	.31**	.07***	.01***	0.15	627
Hungary	.10***	.06***	.21*	.04#	0.003	0.08	758
Switzerland	.24***	nd	.39***	.06**	0.0003	0.14	663
Mexico	.17***	-0.02	.20*	.04#	-0.003	0.03	948
Bulgaria	.11**	.08***	.31**	0.01	.07*	0.07	739
Portugal	.15***	0.01	.17*	0.02	0.002	0.06	985
Slovenia	0.04	.05**	.30**	.04#	-.08**	0.08	720
Japan	.19***	-0.01	.26**	0.003	-0.005	0.05	768
Romania	.10***	.03**	0.03	-.03*	-0.001	0.04	1065
Spain	.12***	.04***	0.06	0.004	.003**	0.08	2823
Argentina	.05**	0.04***	0.03	.04*	0.002	0.07	647

Table entries are unstandardized OLS coefficients. Dependent variable is the number of group memberships. Coefficients for number of children and size of town are not shown. *** $p < .001$; ** $p < .01$; * $p < .05$; # $p < .10$. Nd - no data available.

Table 3. Individual-Level Models of Social Trust, by Country

Country	Logit Coefficients									N
	Happy	No. Mems	Confid	Pol. Engmt.	Educ	Income	Age 18-25	Age 26-40	Age 41-55	
Sweden	.09*	.14**	.62**	0.09	.08*	-.04#	-0.35	0.23	0.14	745
Norway	.14**	.12*	.63**	0.11	.09**	.06#	0.34	.44*	.40#	905
Finland	.16***	0.07	0.22	0.11	.10*	0.03	-0.11	-0.49	-0.39	535
China	0.05	0.09	.44#	.22**	.08*	-0.03	-0.25	-0.32	-.54#	583
Denmark	.08*	.16**	.63**	.13*	.06*	0.01	-0.06	0.25	0.06	833
Neth.	0.04	.09*	.39#	.18**	.12***	0.04	.64*	.54*	.41*	726
Canada	0.24	.07*	0.15	.19***	.17***	.05#	-1.00***	-.40*	-0.16	1361
US	.09***	.11***	-.27#	0.006	.11***	.06#	-.98***	-.59***	-0.26	1357
Ireland	.06#	.10#	.52**	.10#	0.06	.11**	-.62*	-1.01***	-0.21	857
Britain	.09**	.15**	0.14	-0.06	.13***	0.03	-1.26***	-.70***	-.50*	1052
N. Ireland	0.06	0.07	0.34	0.09	0.08	.13#	-.98#	0.26	0.14	228
Iceland	.08#	.14**	0.18	.15*	nd	nd	-0.39	0.25	.48#	654
Switz.	.07#	.34***	nd	.16*	nd	0.04	1.25**	0.35	.49*	600
Japan	.17***	.21*	-0.15	-0.02	.15***	.10**	0.37	0.19	0.33	716
W. Germ.	.16***	0.001	0.21	.08#	.13***	0.002	-0.15	-0.03	0.11	1449
Russia	.06*	.17**	.33**	0.06	-0.007	0.009	-0.25	-.46**	-.44*	1339
India	.10***	nd	0.06	.06#	0.02	0.008	-0.2	-0.18	-0.2	1850
Italy	.09**	.22***	0.15	.21***	0.04	.12*	0.08	-0.08	-0.09	1255
Poland	.08*	nd	.29#	0.07	.10**	0.02	-0.24	-.55*	-0.007	788
Spain	.10***	0.05	0.06	.16***	.04**	.05*	-.27#	0.14	-0.05	2769
S. Korea	.12***	-0.05	-0.05	0.08	nd	0.002	0.15	0.3	-0.07	1028
Belgium	.06*	.11***	0.15	.09*	.08**	0.03	0.04	-0.01	0.06	1441
Mexico	.10**	.11#	.33**	-0.03	-0.01	-0.06	-0.12	-0.16	-0.2	925
Austria	-0.02	.24***	-0.005	.13*	.06#	-0.003	0.28	-0.005	0.31	941
Lithuania	.11***	-0.005	0.08	.12#	.07#	0.05	0.38	0.29	0.17	851
Bulgaria	.12***	.22**	-.32#	0.06	.11**	-.12*	0.009	-0.06	-0.12	778
S. Africa	.10***	nd	.27**	.13***	0.01	-0.04	-.45**	-.34*	-0.09	2237
Czech.	.15***	nd	.48**	.15#	.07*	0.05	-0.29	-.51**	-0.15	1364
Estonia	.10**	.13*	.34#	-0.01	0.07	-.0003	-0.25	-0.21	0.12	909
E. Germ.	.16***	0.05	0.25	.12#	.13***	-0.04	.48#	.48*	.65**	1069
Belarus	.10**	nd	.43**	nd	.11**	0.003	.68*	.51#	.51#	895
Hungary	0.02	0.11	0.34	.19*	.12**	0.06	0.08	-0.22	-0.09	622
Argentina	.11*	0.03	-0.4	.22**	0.02	-0.04	.85#	0.53	.56#	425
Nigeria	-.06*	nd	.25#	0.09	0.009	-0.06	1.2	1.11	1.45#	747
France	.08#	.19*	.61*	.19*	.18***	-0.01	-0.13	0.44	0.19	618
Chile	0.007	.10*	0.11	.11*	0.01	.05#	0.09	-0.11	-0.11	1355
Portugal	.10**	.12#	0.01	.10#	.06*	-0.02	-0.13	0.03	-.54*	970
Latvia	0.12*	-0.34*	-0.12	0.12	0.08	-0.07	-1.41*	-0.67	0.1	327
Slovenia	0.22	.16#	.57**	.14#	.15***	.12*	-0.23	-0.18	-0.004	846
Romania	0.06	0.01	0.07	0.02	0.03	-0.02	-0.46	-0.32	0.09	1058
Turkey	0.05	nd	-0.2	0.09	.12**	-0.15	-0.61	-0.02	0.08	816
Brazil	0.06	0.04	0.03	-0.06	.14*	0.004	-.64#	-0.33	excl	1342

Note: Cell entries are logit coefficients. Dependent variable is coded 0-‘You can’t be too careful’ and 1-‘Most people can be trusted.’ Coefficients for church attendance, marital status, size of town, and unemployment are not shown. ***p<.001; **p<.01; *p<.05; #p<.10. Nd – no data available. Excl – excluded by analysis.

Table 4. Regression Models of Civic Engagement

Independent Variable	Coefficient (Std. Error)	Beta
<i>Individual-Level Factors</i>		
Political Engagement	.20*** (.007)	.189
Education	.08*** (.004)	.161
Income	.03*** (.004)	.054
Age	.004*** (.001)	.049
Social Trust	.28*** (.02)	.089
<i>Country-Level Factors</i>		
Years of Continuous Democracy (1920-90)	.02*** (.001)	.320
Level of Democracy (1989-90)	-.003 (.008)	-.008
Logged GNP 1990 (\$1000s)	-.19*** (.02)	.023
Income Inequality	-.008*** (.002)	-.030
% in Higher Education (1988)	.002*** (.001)	.001
% of GDP from Service Sector (1988)	.004* (.002)	.002
Ethnic Fractionalization	.004* (.001)	.001
Constant	-.51 (.09)	
Adjusted R ²	.17	
S.E.E.	1.39	
Weighted N	25,397	

*Table entries are both unstandardized and standardized OLS regression coefficients with standard errors in parentheses. Dependent variable is the number of group memberships. Countries and their respective weighted n included in this model: France (2010), Britain (2006), West Germany (2261), Italy (1534), Netherlands (385), Denmark (127), Spain (1382), Ireland (158), US (1562), Canada (1378), Japan (1705), Mexico (966), Hungary (936), Norway (931), Sweden (770), Finland (548), Bulgaria (872), China (1115), Portugal (407), Lithuania (944), Latvia (843), Estonia (988), and Russia (1568). ***p<.001; **p<.01; *p<.05.*

Table 5. Logit Models of Social Trust

Independent Variable	Coefficient (std. error)	Marginal Effect
<i>Individual-Level Factors</i>		
Political Engagement	.09 (.01)	.031
Education	.09 (.005)	.062
Income	.03 (.006)	.017
Group Memberships	.13 (.01)	.046
Confidence in Institutions	.26 (.03)	.030
Happiness	.11 (.006)	.065
<i>Country-Level Factors</i>		
Years of Continuous Democracy (1920-90)	.004 (.001)	.031
Level of Democracy (1989-90)	.16 (.01)	.165
Logged GNP 1990 (\$1000s)	-.44 (.04)	-.146
Income Inequality	-.03 (.003)	-.042
% in Higher Education (1988)	.005 (.002)	.020
% of GDP from Service Sector (1988)	-.02 (.003)	-.053
Ethnic Fractionalization	-.004 (.001)	-.014
Constant	-1.53 (.15)	
-2 * Log-Likelihood	30746.7	
χ^2 (d.f.=13)	2305.1	
Percent Correctly Predicted	64.97%	
Weighted N	24,378	

Table entries are logit coefficients with standard errors in parentheses. Dependent variable coded 0-“You can’t be too careful” and 1-“Most people can be trusted.” All coefficients significant at $p < .001$. Marginal effect is equal to the predicted probability of a trusting response when each variable is increased by one standard deviation, minus the predicted probability when all variables are at their means. Countries and their respective weighted n included in this model: France (1971), Britain (1994), West Germany (2125), Italy (1508), Netherlands (385), Denmark (126), Spain (1356), Ireland (155), US (1543), Canada (1359), Japan (1582), Mexico (928), Hungary (921), Norway (924), Sweden (804), Finland (535), Bulgaria (813), China (1085), Portugal (400), Lithuania (851), Latvia (871), Estonia (910), and Russia (1434).

Figure 5. Structural Equations Model

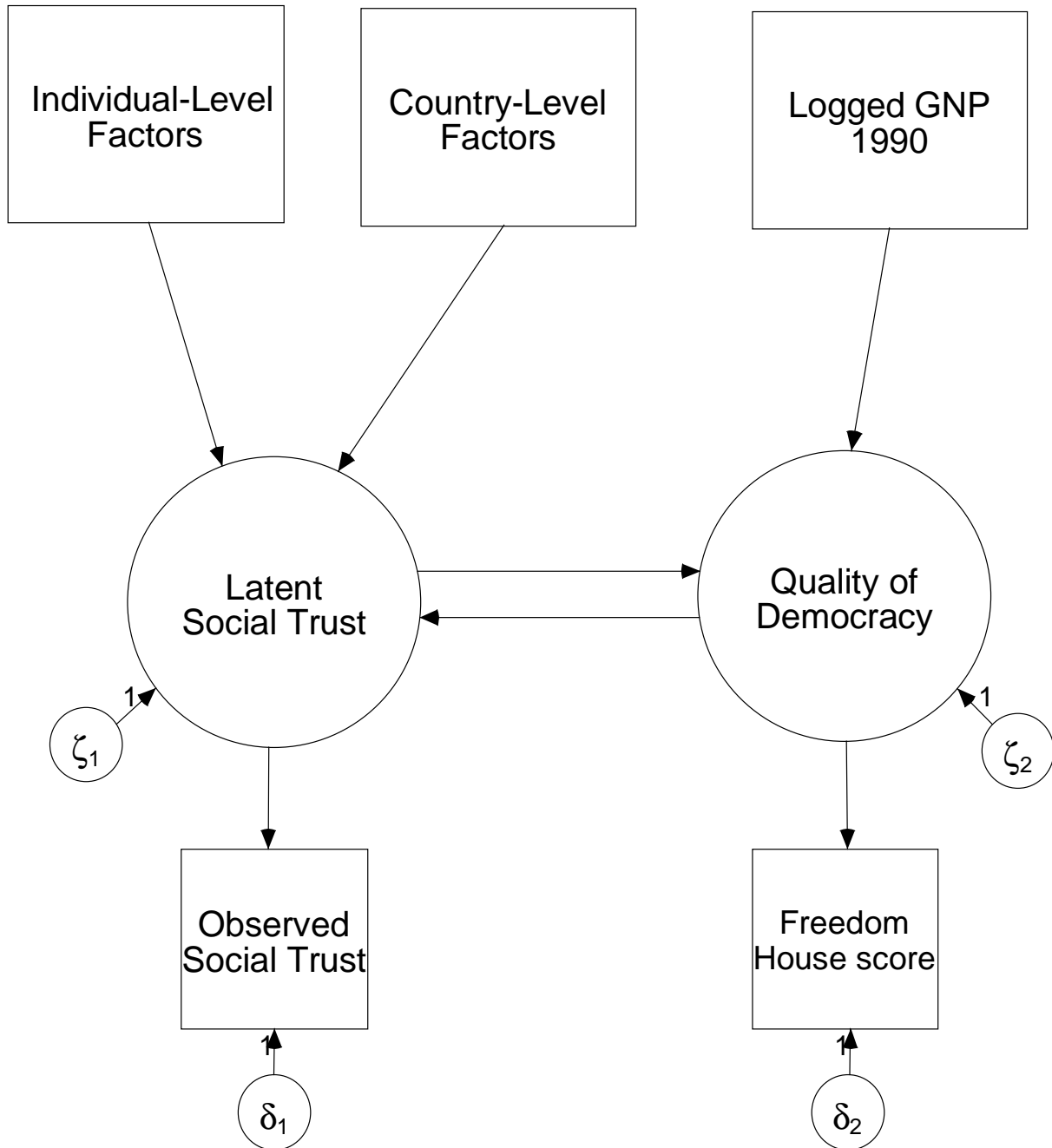


Table 6. Structural Equations Model of Social Trust and Quality of Democracy

	Dependent Variable			
	Social Capital		Democracy	
	b	beta	b	beta
Quality of Democracy (latent)	.01 (.002)	.041		
Social Capital (latent)			.03 (.005)	.007
Logged GNP per capita 1990			.03 (.002)	.965
Political Engagement	.02 (.002)	.031		
Education	.02 (.001)	.051		
Income	.007 (.001)	.018		
Group Memberships	.03 (.002)	.046		
Confidence in Institutions	.07 (.007)	.031		
Happiness	.03 (.001)	.063		
Income Inequality	-.004 (.001)	-.023		
Percent in Higher Education (1988)	.001 (.000)	.024		
Percent of GNP from Service Sector (1988)	-.003 (.001)	-.030		
Ethnic Fractionalization	-.001 (.000)	-.020		
χ^2_{11}			27167.3	
Incremental Fit Index			.96	
Tucker-Lewis Index			.67	
RMSEA			.32	

Table entries are both unstandardized (b) and standardized (beta) coefficients from the structural equations model depicted in Figure 5, with standard errors in parentheses. All coefficients significant at $p < .001$. $N=23,670$.

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