27. Social Capital, Social Norms and the New Institutional Economics

PHILIP KEEFER and STEPHEN KNACK

Douglass North (1990) describes institutions as the rules of the game that set limits on human behavior, now a universally-accepted definition. North and others especially underline the crucial role of informal social norms. They predict that, like all rules of the game, social norms should affect the economic prosperity enjoyed by individuals and countries—that they should have a crucial impact, for example, on economic and political development. In fact, substantial evidence demonstrates that social norms prescribing cooperative or trustworthy behavior have a significant impact on whether societies can overcome obstacles to contracting and collective action that would otherwise hinder their development. Much of this evidence comes from outside the new institutional economics, emerging instead from scholarly research in the field of "social capital." A review of this evidence, and its implications for our understanding of the role of social norms and institutions, is therefore the focus of this chapter.

The definition of social capital is contentious, but Woolcock's encompasses most of the literature when he defines it as the norms and networks that facilitate collective action (Woolcock 1998).[1] This distinction between norms and networks corresponds roughly to Uphoff's (1990) distinction between "cognitive" and "structural" manifestations of social capital. This chapter emphasizes work related to the first half of the definition, norms, but we also discuss research more firmly rooted in the second half, networks. In particular, we review social

[1] Putnam (1993: 167) defines social capital as "features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions." Most uses of the term in the literature, however, do not limit it to those norms and networks that improve social efficiency. Coleman (1990, ch. 12) defines social capital in terms of the quantity of obligations or informal "credit slips" between parties that are likely to be repaid, thus implicating both networks (extent of obligations) and norms (which affect likelihood of repayment). Social capital that is productive for some purposes may be useless or destructive for others (Coleman, 1990: 302). For discussions of the definition and history of the term "social capital," see Woolcock (1998) and Sobel (2002), who respectively provide a sociologist's and economist's perspective. Durlauf (2002) and Portes (1998) criticize the use of vague and inconsistent definitions of social capital in the literature; Sobel (2002) agrees but argues that "a vague keyword is not sufficient reason to condemn a promising line of research."

C. Ménard and M. M. Shirley (eds.), Handbook of New Institutional Economics, 701–725.

capital research examining the role of trust and trustworthiness in economic and political development; the effect of social norms on the financing of public goods; the role of voluntary association in building socially beneficial norms; and the role of social heterogeneity in undermining them. The importance of networks, including the voluntary associations stressed by Putnam (1993), is considered primarily in the context of the emergence and impact of norms, and we do not address the literature focusing on the informational advantages of networks.

Social norms "specify what actions are regarded by a set of persons as proper or correct, or improper and incorrect" (Coleman, 1990: 243). Norms and their accompanying potential rewards (for compliance) or punishments (for noncompliance) are not the *sole* determinants of decisions by rational actors, but they "affect the costs and benefits which individuals taken into account when exercising choice" (Coleman, 1987: 135). Norms have no legal or other formal basis, and may sometimes even be in conflict with laws (Coleman, 1990: 243). Norms defined in this way can apply to various social settings with a range of payoff structures. For example, norms can take the form of conventions, resolving coordination problems, such as prescribing that one should drive on the right hand side of the road. As used in this chapter, however, "norms" will be used more restrictively to apply to collective action problems with risks of opportunism, specifically the two prisoner's dilemma variants with the most frequent real-world applications, voluntary provision of public goods and principal-agent games (sometimes called one-sided prisoner's dilemma or trust games). Trust and trustworthiness are therefore central themes in the literature discussed here.

Three conclusions emerge from a survey of this work. First, levels of trust and trustworthiness vary significantly across countries. Second, they have a significant effect on economic outcomes and development. Third, trust and trustworthiness are not simply the product of repeated games and formal institutions, which are the subject of enormous investigation in the new institutional economics and in the social sciences more generally. In order to explain the emergence and sustainability of trustworthy or cooperative behavior in principal-agent or voluntary public goods provision settings, one needs to examine as well such phenomena as the dynamics of social ostracism or participation in "dense horizontal networks."

In the first part of this chapter, we document wide variation in trust and trustworthiness across countries and individuals. This variation potentially explains why only some individuals or countries can undertake or sustain exchanges that require credible commitment in the economic, political or social realms. Subsequently we review the connections among trust, trustworthiness and credible commitment. The final section of the chapter concerns the large literature on the sources of trust and trustworthiness; we conclude that these attitudes do indeed have a significant normative aspect and cannot be viewed only as emerging from reputational forces or from formal, third party institutions.

1. Variations in Trust and Trustworthiness across Countries and Individuals

There are large differences in the extent to which people express either trust or trustworthiness, the focus of this chapter. A standard measure of trust used in cross-country comparisons is the answer that people give to the World Values Survey question, "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" Fewer than 10 percent of Brazilians, Peruvians and Filipinos in the World Values Surveys respond that most people can be trusted when asked this question. At the other extreme, more than 50 percent of Nordic respondents (Norwegians, Finns, Swedes and Danes) agree that most people can be trusted (Knack and Keefer 1997; Zak and Knack 2001).[2]

There is no similar standard measure of trustworthiness for a large sample of countries, but substantial evidence nevertheless suggests that societies differ on this dimension, as well. In an experiment conducted by *Reader's Digest*, twenty wallets containing \$50 worth of cash and the addresses and phone numbers of their putative owners were "accidentally" dropped in each of 20 cities, selected from 14 different western European countries. Ten wallets were similarly "lost" in each of 12 U.S. cities. The number of wallets returned with their contents intact was recorded for each city. Country-level proportions of the number of returned wallets are then calculated and exhibited a wide variation, from 30 percent of wallets returned in Italy, 45 percent in Portugal, 60 to 75 percent in different cities of the US, up to 100 percent in Norway and Denmark.

Knack and Keefer (1997) develop a measure of trustworthiness from the World Values Survey data that they call "civic cooperation". It is based on survey respondents' beliefs about whether or not the following actions can ever be justified: claiming government benefits to which respondents were not entitled, avoiding a fare on public transport, cheating on taxes if they had the chance, keeping money that they had found, or failing to report damage they had accidentally done to a parked vehicle. Although we sympathize with Fukuyama's (1995) claim that it is meaningful to label societies as high trust or low trust, trust and trustworthiness are in fact the product of individual behavior and decisions, and substantial individual-level deviations from societal averages are a regularity in the data. For example, there is wide individual-level variation within countries in the 50-point civic cooperation index.

Experimental evidence is consistent with this variation in the survey data. Glaeser et al. (2000) conduct an experiment in which they pair individuals; each pair meets and is then separated. One member of the pair, the sender, is given 15 dollars, and has the opportunity to send up to 15 dollars to the other member, the recipient. For each dollar sent, the "experimenter" gives an additional dollar to the recipient. The recipient then can return money to the sender. All rules of

[2] Of 79 countries in which this trust question has been asked in recent national surveys, the mean trusting percentage is 27.8, with a standard deviation of 13.7.

the game are known to all players. The amount of money sent is an indication of trusting behavior; the amount of money returned is an indication of trustworthy behavior. The amount sent averaged $12.41 in the experiment, but the standard deviation was quite high ($4.54), indicating that many participants sent much different amounts. Similarly, of the amount they received, senders on average returned 45.5 percent, but the standard deviation was 26.7 percentage points.[3]

Experimental evidence has led some to question how accurate and meaningful are survey measures of trust and trustworthiness. Glaeser et al. (2000), for example, use their experiment to ask whether the survey question on trust ("can most people be trusted") predicts *trusting* or *trustworthy* behavior by participants. Participant responses to this survey question turn out to predict trusting behavior only weakly. They do, however, predict trustworthy behavior, i.e. the willingness of recipients to return money to senders.

Despite those results, there are strong reasons to think that survey results capture aggregate levels of trust in a society. First, we would not expect trusting attitudes to survive for long in a society with few trustworthy people. Second, there is substantial direct evidence of aggregate-level correlations between trust and trustworthiness. Barr (2003) conducted experiments similar to those of Glaeser et al. (2000) in 24 Zimbabwean villages with 141 pairs of players, but did not allow the subjects to know the identity of their partners prior to or during the experiment, unlike Glaeser, et al. The Zimbabwe data indicate a high level of correlation between trusting and trustworthy behavior across villages. Measures of trust and trustworthiness from the World Values survey are also highly correlated: the civic cooperation index designed by Knack and Keefer (1997), reflecting socially trustworthy behavior, is significantly correlated (at .39) with the trust measure at the country level, again controlling for per capita income. Finally, the percentage of wallets returned in the *Readers Digest* experiment, certainly an objective and behavioral measure of trustworthiness, is correlated at .44 with responses to the "found" money question in the World Values Survey, and more generally with standard measures of trust and honesty derived from the Survey, even controlling for per capita income (Knack 2001). Figure 1 depicts the simple correlation between returned wallets and trust survey responses across countries.

The variation across individuals, within countries, in social norms of trust and trustworthiness has important implications. Fukuyama (2000) points out that norms of trust and trustworthiness may have either a narrow or wide "radius". Norms that overcome collective action problems and build trust within but not between families, social classes or ethnic groups often impose negative externalities on non-members of these groups. These narrow-radius norms can have adverse implications for welfare at the societal level, much as clientelism, as viewed by Keefer (2002), may leave clients better off than they would be in a society lacking either formal institutions or the informal institutions of

[3] In the original version of this experiment (Berg, Dickhaut and McCabe, 1995), players did not meet each other, and the amounts sent and returned were somewhat lower than in Glaeser et al. (2000).

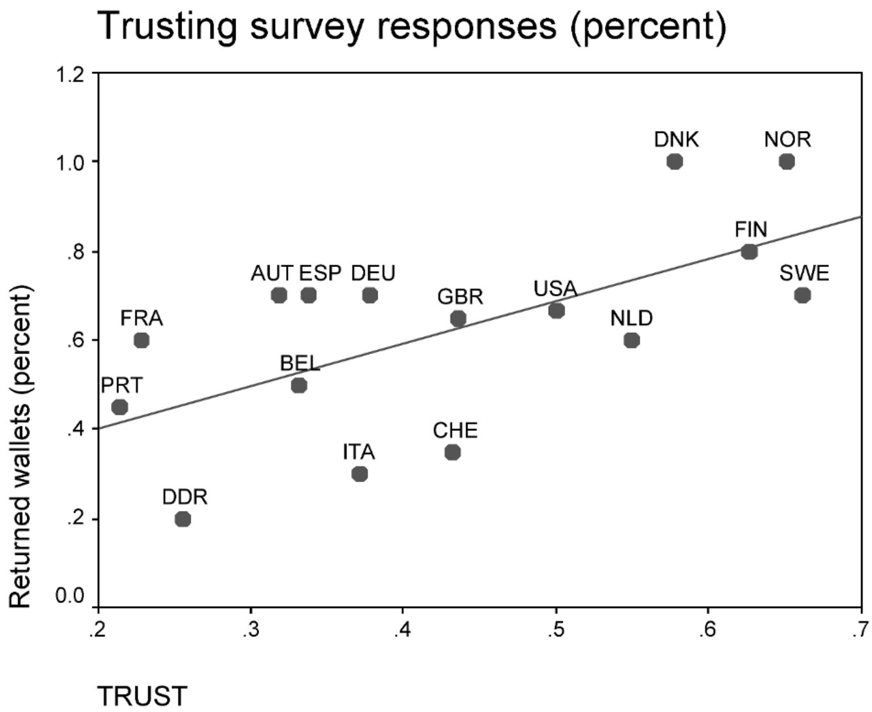

Figure 1. Returned wallets and trust across countries.

clientelism, but likely has negative effects on non-clients.[4] Strong intra-ethnic trust in an ethnically heterogeneous society may restrict the scope for transacting and lead to segmented markets, reducing gains from specialization and economies of scale (Greif 1994). The same strong ties that help members of a group can be used to exclude other (often disadvantaged) community members from the benefits of collective action (e.g. Pantoja 2002).

On the other hand, if a larger fraction of society, due to social norms, can be relied upon to fulfill contracts and fulfill their obligations under the social compact, trustworthiness can be said to be of wide radius.[5] In societies characterized by wide radius trustworthiness, individuals are not only reliable partners in contractual exchange, whether political or economic, but can also be relied upon to act in the interest of others at some expense to oneself by, for example,

[4] Even within an extended family, norms of sharing resources can reduce the incentive for a family member to start a business (Portes, 1998). Banfield (1958) attributed incompetent government and poverty in a poor Italian village to "amoral familism" preventing cooperation among citizens.

[5] Knack and Keefer (1997) refer to norms that overcome large-numbers collective action problems and build trust at the level of communities or societies (as opposed to between pairs of traders or other small-numbers settings) as norms of "civic cooperation," or "civic norms." These are simply norms of trustworthiness operating at the level of the social compact.

returning lost wallets to their owners (with the cash), or incurring the costs of providing a public good such as supervising politicians.

2. Trust and Trustworthiness and the Problem of Credible Commitment

As many of the contributions to this volume make clear, a central issue in the new institutional economics is the disruption to human interaction caused by the inability to make credible commitments. The absence of credible commitment disrupts three types of human interaction: economic exchange; relationships among voters and politicians; and the "social compact". Social norms that produce trust and trustworthiness can solve the problem of credible commitment in each of these spheres.

Problems of Credible Commitment in Economic, Political and Social Interaction

The ability of one party to an exchange to make credible promises to another party opens up a whole range of economic possibilities that would otherwise be unattainable. Absent the credibility of promises, risks of opportunistic behavior by contracting parties force them to turn to spot market transactions rather than to rely on contracts across time and space. Spot markets are sufficient to allow some gains from trade, but do not capture many or most of the potential benefits from specialization. They are incompatible with, for example, financial contracts, where creditors loan money to debtors on the promise of future repayment; employment contracts, where managers hire employees to accomplish tasks that are difficult to monitor or measure; and fixed investments, where investors rely on assurances by firms and governments that their assets will not be expropriated. Trust is obviously important in this context. Where the parties inherently trust each other, transactions that require credible promises are easier to consummate.

The policy outcomes driven by political competition crucially depend on credibility. Persson and Tabellini (2000) show that the effects of institutional change are dramatically different in societies where political promises prior to elections are credible and in societies where they are not. For example, the shift from majoritarian to proportional electoral rules increases the rents that politicians can extract for themselves when political competitors cannot make credible pre-election promises to voters, but reduces rents when they can.[6] Keefer (2002) shows that young democracies perform substantially worse on many margins than older democracies, controlling for income per capita and other characteristics. He argues that this is due to the peculiarities of political promises in young democracies. Where trust in politicians is narrowly confined to a few

[6] Majoritarian electoral rules are those where the number of seats per electoral district is small and citizens vote for candidates rather than parties; proportional representation rules are those where electoral districts are larger and citizens vote for party lists.

voters who have personally interacted with the politicians, one definition of clientelism, political competition need not improve public policy.

The credibility of political commitments also influences the ability of politicians to undertake reforms or respond to crisis, the theme of a large literature (e.g., Acemoglu and Robinson 2001). Socially beneficial reforms would always occur if the winners could compensate the losers. However, spot markets for reform, where compensation is paid at the moment that reform is approved, are notoriously difficult to construct. On the one hand, for numerous reasons, not the least of which are tight budget constraints, governments can rarely offer losers the cash value of the present value of their losses. The government can circumvent this problem by offering future compensation. Non-credible governments do not have this option, however. For example, power sector subsidies are a crippling burden on Indian states. The majority of farmers who benefit from power subsidies are poor and receive collectively a small fraction of the total subsidies. Their support for reform should be easy to buy, and sufficient. Still, even in one of the most progressive Indian states, Andhra Pradesh, reforms of the power sector have proven to be intractable.[7] One reason for this is that poor farmers do not believe government promises to compensate them in exchange for eliminating the subsidies.[8]

Human interaction obviously extends far beyond interactions in the economic and political spheres. Smoothly running societies also benefit from a well-developed and credible "social compact"—the unwritten commitments that citizens have made to each other. In many societies, the extent of these commitments is highly circumscribed because everyone believes that most individuals will shirk on their responsibilities under the compact, even though all would be better off if no one shirked. Societies in which such beliefs are widespread are limited in their ability to collect taxes, enforce laws, even to maintain clean streets.[9] Societies in which decisions of individuals are influenced by social norms are likely to exhibit less shirking on the social compact—i.e. to be more trustworthy—and hence able to govern themselves at substantially lower cost.

Evidence on the Influence of Social Norms on the Problem of Credible Commitment

The larger the fraction of people in a society who share norms prescribing co-operative or trustworthy behavior in collective action settings, the more likely is

[7] See, for example, "Power Politics–Process of Power Sector Reform in India," by Navroz Dubash and Sudhir Rajan, in *Economic and Political Weekly*, Sept 1, 2001.

[8] Wealthier farmers are at the center of efforts to organize farmers collectively in support of continued price ceilings on power. If they are excluded from attempts to buy off opponents of power sector reform, they have little interest in continuing to organize farmers—but it is only collective action by farmers that guarantees farmers that they can act against governments that renege on their promises. If wealthier farmers are included in the buy out attempts, the cost of reform goes up substantially.

[9] See Levi (1988) and Scholz and Lubell (1998) for the importance of informal norms and trust in revenue collection.

the society to have overcome problems of credible commitment in the economic, political and social spheres. That is, in the language of Fukuyama (2000), where wide-radius trust and trustworthiness are prevalent, contracting parties can dispense with costly monitoring of performance. Individuals in these societies can spend less to protect themselves from being exploited in economic and political transactions. Written contracts are less likely to be needed and they do not have to specify every possible contingency. Individuals have more resources available for innovation and investment, as they can devote fewer resources to protecting themselves—through tax payments, bribes, or private security services and equipment—from unlawful (criminal) violations of their property rights. Norms of civic cooperation reduce enforcement costs by leading individuals to internalize the value of laws and regulations even when the probability of detection for violation is negligible.

Substantial evidence suggests that trust and trustworthiness matter for interactions that rely on credible commitment. At the individual level, there is ample experimental evidence along the lines of the experiment conducted by Glaeser et al. (2000), showing that recipients who expressed trusting attitudes (the belief that most people can be trusted) returned 10 percent more money to senders than did other recipients (i.e., they were more trustworthy) controlling for other recipient characteristics.[10]

Individual level evidence does not lend itself easily to understanding the broader problems of credible commitment in the context of economic and political development. Nevertheless, a wide range of cross-country evidence also demonstrates the importance of trust and trustworthiness. Fukuyama (1995) attributes cross-national differences in economic performance to variations in trust and "spontaneous sociability."[11] Among the nations he discusses in detail, he classifies the U.S., Japan and Germany as high-trust societies, and France, Italy, China, Korea, Hong Kong and Taiwan as low-trust societies. In statistical cross-country tests, Knack and Keefer (1997) find that a ten percentage point increase in the number of citizens who express trusting attitudes is associated with an increase in per capita economic growth of almost one percentage point per year. The effects of trust on growth turn out to rival those of the fraction of children enrolled in primary education. Using a broader sample and different specifications, Zak and Knack (2001) report similar results.

These results could be affected by reverse causation: the trust coefficient could be biased upward if growth increases trust (for example, by making people more optimistic), or downward if growth decreases trust (for example, by disrupting traditional social and community ties as in Olson 1963 or Miguel, Gertler and Levine 2002). However, Zak and Knack (2001), following La Porta et al. (1997),

[10] The controls were the amount originally transferred by the sender to the recipient, whether the pair of participants were of different genders, the gender and race of recipient, and whether recipients were in their first year of college (the participants were all Harvard undergraduates).

[11] "The ability to associate depends, in turn, on the degree to which communities share norms and values and are able to subordinate individual interests to those of larger groups" (Fukuyama, 1995: 10).

use religious composition variables as instruments and find that the exogenous component of trust remains significantly related to growth.

Trust and other manifestations of social capital may also matter fundamentally to the survival of democratic government. Paxton (1999) and Inglehart (1999) argue that a culture of trust is necessary for governments to be willing to surrender power to the opposition, and therefore for the survival of democracy. Inglehart (1999) finds a strong correlation between trust and stability of democratic institutions, using cross-country data. In a classic comparative study of the U.S., U.K., Germany, Italy, and Mexico, Almond and Verba (1963) argue that a stable democratic political system depends on a strong "civic culture" with high interpersonal trust and active involvement in voluntary associations.

Studies linking trust and broad outcomes, such as growth and regime survival, have been complemented by work that looks at specific channels through which informal norms underlying trust and trustworthiness might affect these broad outcomes. Using survey data, Knack and Keefer (1997) report that citizens' confidence in government—the credibility of government—is significantly greater in higher-trust nations.[12] La Porta et al. (1997) and Knack and Keefer (1997) demonstrate that countries with more trusting citizens exhibit higher ratings in foreign investor risk assessments on subjective measures of governmental efficiency, corruption, and infrastructure quality.[13] Knack (2002) reports similar results for the American states, using more "technocratic" measures of governmental quality.

These results suggest that norms prescribing cooperation and trustworthiness enhance governmental effectiveness. Boix and Posner (1998) and Knack (2002) argue that they do this by helping voters overcome the collective action problem in monitoring and sanctioning public officials. Key to citizens' oversight of government officials is their willingness to collect and assess information about government performance and their willingness to take action (such as voting, writing letters, signing petitions, demonstrating etc.) to convey their preferences to officials and to expel poor performers. The purely self-interested citizen would neglect both tasks, and free-ride on the efforts of others. The citizen motivated by a norm of civic cooperation (one manifestation of trustworthiness) becomes more informed about politics and public affairs, and more willing to vote or in other ways exercise "voice" options, creating checks on the ability of politicians and bureaucrats to enrich themselves or narrow interests with which politicians might be allied.

As with trust and economic performance, there is a potential for endogeneity bias in tests linking trust to government performance. For example, high-trust societies may be better at keeping their governments honest, but the honesty

[12] This test controlled for income per capita and primary and secondary educational enrollment. The dependent variable was a composite of citizens' confidence in the civil service, legal system, police, and education system.

[13] La Porta et al. control for per capita income, include all countries with available data, and use trust values from the early 1990s. Knack and Keefer control for income and education, exclude formerly-communist nations, and use the earliest-available observation on trust (typically, the early 1980s).

and efficiency of government officials can in turn affect trust. "If government leaders, judges and bureaucrats are corrupt, market participants can more easily justify and rationalize their own dishonest behavior" (Drobak 1998, 103; also see Gambetta 1988, 158–63). If a government provides services effectively, communities may run more smoothly, with less crime and social strife, generating more trust and civic cooperation. However, studies using religious composition variables as instruments have found that the exogenous component of trust remains significantly related to government performance (Knack, 2002; La Porta et al., 1997).

The findings linking trust and trustworthiness in societies with government effectiveness and performance echo the findings of Putnam's (1993) pathbreaking work on the Italian regions. Putnam, however, relied primarily on measures more closely linked to the "network" aspects of social capital than the "norms" aspect from which the trust and trustworthiness discussion springs. Social capital researchers focusing on the "network" aspect, in an empirical context, ask whether people in a community or society are linked in dense horizontal relationships such as those that emerge from participation in civic activities, sports clubs, neighborhood associations and singing societies. Roughly speaking, the more dense are these horizontal relationships and the larger the fraction of the population that participates in them, the more social capital exists.

A growing literature has followed Putnam in examining the effects of horizontal networks or associational activity on economic and political outcomes in a society. Although the discussion in this chapter is focused on the normative aspects of social capital, the network approach to social capital is relevant for two reasons. First, the examination of associational activity in societies may allow investigators to skirt the difficulties raised by the potential endogeneity of measures of trust and trustworthiness. Costa and Kahn (2003a), starting from the premise that trust and trustworthiness are endogenous, consciously focus on horizontal networks rather than social norms directly. Second, the causal path from associational activity through to economic or political outcomes may pass through trust and trustworthiness.

Narayan and Pritchett (1999) find for a sample of Tanzanian villages that higher levels of associational membership are associated with higher household incomes. Isham and Kähkönen (2002) show that in villages in Sri Lanka and India with more active community groups and associations, household participation in design of community-based water projects is higher, and monitoring mechanisms are more likely to be in place. Participation and monitoring in water projects, in turn, were associated with improved health and reduced time devoted to collecting water.

Not all studies yield results consistent with Putnam's earlier findings, however. In their study of neighborhoods in Bangladesh, Pargal, Gilligan, and Huq (2002) found that associational activity in a community at best weakly predicted whether that community was successful in organizing collective action. The presence of associations that provided "private" goods or services (sports clubs and women's organizations) in the neighborhood were associated with a reduced likelihood of success in organizing voluntary waste management services, while associations providing "public" goods or services (neighborhood watch groups, and welfare, library and religious groups) had effects that were significantly positive only for some model specifications.[14]

In addition, the effects of associational activity may break down at higher levels of aggregation. Membership in groups is unrelated to measures of government performance across the American states (Knack, 2002) and across countries (Knack and Keefer, 1997), controlling for income, education and other variables.[15] This pattern is consistent with the possibility that the activities of some groups impose negative externalities on non-members, which are not captured in household-level or even community-level analyses. Knack and Keefer (1997) and Knack (2003) also find little difference in the effects of group activity, even after controlling for the type of group. They distinguish groups that might act as redistributional coalitions, with adverse economic impacts (Olson, 1982), from those that do not. However, when group memberships are divided into "Olson" groups (mainly professional associations and unions) and "Putnam" groups (social or other groups that engage in little or no lobbying on economic issues), neither type tends to be significantly associated with economic performance.

3. The Sources of Trust: What Do Social Norms Contribute That Reputation and Formal Institutions Do Not?

Although a review of the literature yields substantial evidence suggesting that social norms often make commitments more credible, a far larger literature argues for the importance of two other mechanisms through which individuals and societies lay the foundation of credible commitment: reputation and formal institutions. The role of reputation and its genesis in repeated exchange are the subject of an immense game-theoretic literature. The study of how formal institutions such as courts, industry associations, credit bureaus and political institutions such as checks and balances can solve commitment problems is a key element of the new institutional economics. Unfortunately, it is often difficult to distinguish whether trusting and trustworthy behavior emerges as the consequence of an informal social norm, or because of the presence of reputational and institutional conditions that also give rise to such behavior.

Social norms are especially interesting as a focus of inquiry to the extent that they are a new and different source of trusting and trustworthy behavior. Behavior commonly called "trust" that is grounded in reputation and formal institutions is considered to be so well understood that many authors employ different

[14] Number of associations was measured prior to the formation of any voluntary waste management services, to eliminate endogeneity concerns.

[15] These results do not directly contradict those of Putnam (1993, 2000), because his indexes of social capital mix measures of associational activity with other dimensions of social capital.

terminology to describe it, such as "assurance" (Yamagishi and Yamagishi, 1994) or "calculative trust" (Williamson, 1993).

The study of the "network" half of the social capital equation confronts similar ambiguities concerning how they produce trust and cooperation. One well-documented way in which networks operate to improve outcomes is precisely because of their reputational function. Showing the game theoretic (reputational) roots of successful networks is a key element in the influential analysis of Greif (1993), for example. To the extent that networks succeed because of their reputational effects, however, they do not justify the study of social norms, or social capital more broadly, as a separate line of scholarly inquiry into economic and political behavior. Further research is needed to distinguish the role of networks above and beyond their reputational role.

Nevertheless, at least with respect to normative social capital, there are several reasons to think that the role of reputation and formal institutions cannot be the whole story. Neither reputational nor institutional sanctions for non-trusting or non-trustworthy behavior exist in anonymous, single play trust and public goods experiments. However, most participants in these experiments exhibit at least some degree of trust and trustworthiness (Ostrom, 2000; Berg, Dickhaut, and McCabe, 1995). Intuitively, as well, the role of guilt feelings, fear of eternal damnation, or shame—consequences that are intrinsic to an individual's utility function and are linked distantly, if at all, to reputation or formal institutions—should have a significant role in motivating trusting and trustworthy behavior. Even social ostracism, a well-documented deterrent to cheating, is sufficiently removed from the standard reputational story as to constitute a substantially different phenomenon, and one worthy of independent investigation as a "second-order" norm enforcing social norms to contribute to public goods or to behave in a trustworthy manner (e.g. Coleman, 1990: ch. 11; Elster, 1989; Hardin, 1982: 172–9).The remainder of the chapter reviews evidence on the different determinants of trusting and trustworthy behavior. This evidence suggests that such behavior is less likely when institutions and reputation impose weak constraints on human interaction. Nevertheless, numerous other factors, much more difficult to explain within an institutional or reputational framework, also matter significantly.

Formal Institutions

Hobbes in *Leviathan* (1651) viewed government as the sole source of trust between strangers. Certainly, there is ample evidence of the role of formal institutions in lending credibility to exchanges that otherwise would not occur. In countries where legal codes, enforcement agencies and courts are sufficiently well-developed, the prospect of legal sanctions reduces incentives to cheat. Regulatory agencies (such as the Securities and Exchange Commission), stock exchange memberships and professional associations restrain cheating by instituting financial disclosure rules or licensing requirements (e.g. for accountants or realtors), or by promulgating formal ethical codes (e.g. bar and medical associations). Credit bureaus protect lenders from opportunistic debtors, and protect sellers from buyers paying on credit.[16] The Better Business Bureaus (formal or third-party institutions) of the United States permit reputational constraints on firms to flourish, since they facilitate the dissemination of information about firms' compliance with contractual commitments. Finally, formal institutions have more direct effects: by tying the hands of state actors and making it difficult for them to renege on their commitments, formal political institutions can strengthen trusting attitudes among individuals in a society. In societies with strong formal institutions, one would therefore expect individuals to act in more trusting ways, and at the same time to express greater confidence in the trustworthiness of others, even if such trustworthiness were simply the product of a cost-benefit calculation driven by formal institutions.

It is worth emphasizing that although a formal institution can sometimes make an informal norm unnecessary, the decline in informal norms can as well provide an impetus to the development of formal institutions. Zucker (1986) argues that in the United States, between 1840 and 1920, the increasing cultural heterogeneity of immigrants and, to a lesser degree, increasing internal migration, weakened informal institutions and disrupted social ties. "In a heterogeneous social system, a proportionately smaller number of transactions occurred between similar others" (Zucker 1986, 78). However, she further argues that formal institutions emerged to offset the effects of these exogenous demographic shocks on the informal bases for credible commitment.[17] There is nothing inevitable about the emergence of formal institutions to take the place of fading informal institutions, and Zucker attributes greater inevitability to their emergence as a result of immigration and the breakdown in social ties than is warranted. However, the associations she documents are striking and important, and the ambiguities that they inject into any discussion about the determinants of social norms need to be borne in mind.

Regardless of whether formal institutions "cause" informal institutions to disappear, or vice versa, many pieces of evidence suggest that trust and trustworthiness emerge for reasons other than the formal institutional environment. Knack and Keefer (1997) find that the extent to which the executive branch of government is constrained from acting arbitrarily and the extent to which courts are regarded as independent are both significant predictors of trust. However,

[16] In the U.S., employers often use credit bureaus to investigate job applicants. Bad credit is viewed as a predictor of shirking and thievery.

[17] At the same time that immigration was undermining informal modes of contract enforcement, letters of credit and later, credit ratings were introduced (Zucker 1986, 87); requirements of financial soundness for listing on stock exchanges became more stringent; banks devoted more resources to investigating borrowers, and increased collateral requirements (Zucker 1986, 88–89); the ratio of managers to workers in manufacturing rose, as monitoring worker effort and output became a greater concern (Zucker 1986, 91–92); the proportion of transactions occurring within hierarchies, as opposed to within markets, increased (Zucker 1986, 93); licensing standards (e.g. certification of accountants) emerged and professional associations were created (Zucker 1986, 94); and third party enforcement increased, as with the increased use of escrow accounts.

the impact of these formal institutions does not overshadow the effects of other influences on trust, such as education and income, and they leave much of the variation in trust and trustworthiness unexplained. Differences in formal institutions also do not explain the large variations in trust and trustworthiness across the U.S. states (Knack, 2002) and among individuals within countries, nor the strong downward trend from about 1965 to 1990 for the U.S. overall (Putnam, 2000; Knack, 1992). While not conclusive, the evidence is at least highly suggestive that norms that exist independently of the formal institutional characteristics of society are a key source of trust and trustworthiness.

Reputation

Reputational considerations are among the most frequently studied sources of trust. The basic reputation story is straightforward: exchange partners that expect to do business or interact in the future are less likely to renege on commitments than partners who have no such expectations. The evidence suggests that this direct reputational constraint explains trusting behavior, as we would expect, but only partially. Glaeser et al. (2000) find that the length of time that paired participants had known each other prior to the experiment had a modest impact on the willingness of senders to transfer money to recipients and a somewhat greater effect on the willingness of recipients to return money (see their Table 4). Other factors, more closely linked to the social capital literature than to the reputational literature, had a much stronger effect: the hours that senders spent studying alone—like bowling alone, a possible indicator of thin social networks which may be associated with weaker norms—had a strongly negative impact on the amounts they transferred (Glaeser et al., Table 7).[18] In situations where one did not anticipate exchanges with a particular partner to continue into the future, one's contractual behavior could still become known by and affect transactions with other potential exchange partners. Reputation with others is an important and well-documented mechanism of contractual enforcement, but not one that has been examined in the context of social norms. In one approximation to this issue, Glaeser et al. (2000, Table 4) find that the number of friends that paired participants have in common has an insignificant positive effect on both the amount sent by the sender to the recipient (trusting behavior) and on the amount returned to the sender by the recipient.[19] This result suggests that the broader reputational story is even less important than the bilateral reputational effect.

[18] The Glaeser et al. (2000) experiments provide other positive evidence that non-reputational/non-institutional factors influence the willingness of experiment participants to entrust or to return money. Respondents with siblings were much more trustworthy than respondents without siblings: the former returned more than twice as much money to senders (98 percent of what the senders originally transferred) as the latter (only 46 percent). The participant responses to trust and trustworthiness survey questions also had a significant impact on the willingness of recipients to return funds, controlling for many other participant characteristics.

[19] The regressions with common friends do not control for months that the paired participants have known each other, and vice versa.

The Threat of Social Ostracism

Even if internal sanctions (guilt, shame, fear of afterlife sanctions) from violation of norms prescribing cooperation and trustworthiness have limited force for some individuals, trust and trustworthiness may result from the threat of social ostracism of the untrusting and untrustworthy. Evidence for the importance of ostracism comes from a variety of sources. Experimental evidence indicates that many people are willing to bear sizeable costs in order to punish free-riding behavior by others, even in one-shot games where there are no future rewards for the punisher (Fehr and Gachter, 2000). Survey evidence also suggests social disapproval is a significant deterrent to voter abstention in American elections (Knack, 1992). Wherever people have voluntarily organized themselves to manage common-pool natural resources effectively over a long period of time, a key reason for success is that participants invest in monitoring and sanctioning free riding behavior (Ostrom, 1990).

The work of Henrich et al. (2001) shows that trusting and trustworthy behavior motivated by social ostracism can eventually evolve into social norms. They report the results of public goods experiments on 15 tribes or other small-scale simple societies. The tribes or communities that exhibit the most cooperation in the experimental settings are also those where the payoffs to cooperation in their main economic activities (foraging, herding, slash and burn agriculture, whaling, etc.) are highest. That is, in communities where the payoffs to norms of social ostracism are highest, trusting and trustworthy behavior are most prevalent. Since the threat of ostracism could not have played a role in the experiments—which were anonymous—it is reasonable to conclude that the trust and trustworthiness exhibited by participants had themselves evolved into social norms.

One might argue that social ostracism is simply a reputational game in which members of a society agree to punish those who exhibit destructive behavior. If this were the case, trust and trustworthiness generated by the threat of ostracism could not be seen as independent of reputation. In fact, social ostracism can emerge as the equilibrium of an infinitely repeated game. However, as Sethi and Somanathan (1996) point out, so can countless other equilibria. The difficulty with explaining social ostracism as the simple outcome of a reputational game is easy to see. Ostracism itself imposes costs on the individuals who, on behalf of society, ostracize. A problem of backward regress ensues: who will ostracize those who fail to ostracize? Treating the obligation to ostracize the untrustworthy as a norm—as indeed it seems to be—resolves this problem.[20]

Social Heterogeneity

Numerous sociological explanations of why people might trust or behave in a trustworthy fashion have been advanced. One such explanation is based on

[20] See Sethi and Somanathan (1996) for a rigorous statement of how such a norm could emerge and the conditions under which it would be stable over time. Posner and Rasmusen (1989) discuss the difficulties confronting the emergence of norms of ostracism, in the context of a broader discussion of social norms.

social distance: the more numerous the dimensions along which individuals differ and the greater are those differences, the less they interact (Akerlof 1997) and the less able they are to trust each other (Zak and Knack 2001). These dimensions might include blood and ethnic ties, language, culture, education, income, wealth, occupation, social status, political and economic rights, and geographic distance. According to Zucker (1986, 63):

> Just as ethnicity, sex, or age may be used as an index of job skills by employers, they can be used as an index of trust in a transaction. They serve as indicators of membership in a common cultural system, of shared background expectations. In general, the greater the number of social similarities (dissimilarities), the more interactants assume that common background expectations do (do not) exist, hence trust can (cannot) be relied upon.

There are at least four reasons why socially dissimilar people may be less trusting or trustworthy. Similarity may imply greater risk of social opprobrium or ostracism in the event of improper behavior towards another. In smaller or close-knit communities, the strong likelihood of social interaction between agents and principals can enhance trust in their contractual agreements, as cheating may prompt ostracism. If the agent values the principal's respect, shame is another potential cost of cheating, even (or especially) when the principal does not ostracize the cheating agent.[21] John Stuart Mill (1848, 135–136, 444) wrote that "... much of the security of person and property in modern nations is the effect of manners and opinion" and of "the fear of exposure". As the earlier discussion repeatedly notes, a norm enforced by ostracism is similar to, but in substantial ways different from, the usual reputational story.

The quote from Zucker (1986) suggests a second possibility, however. People believe themselves to be inherently trustworthy and are prepared to act that way when they find other people whom they believe to be inherently trustworthy, as well. However, when social distance grows, their confidence in the inherent trustworthiness of others weakens. In this view, convergent expectations and similarity in preferences for public goods (broadly defined) are an important basis for trust, and the divergent experiences and values implied by greater social distance undermine trust formation.

A third possibility relates to the role of fairness in determining the exact content of norms prescribing cooperation, for example how much one should contribute voluntarily to a public good and under what circumstances. Collective action theorists have long posited that much conformity to social norms prescribing cooperation is motivated by a sense of fairness or reciprocity (e.g., Hardin, 1982), and experimentalists are beginning to accumulate empirical evidence supporting this view (Fehr and Gachter, 2000). While a minority may believe they have a moral obligation (based on religious belief for example) to cooperate even if no one else does, most people appear to be "contractarians" or "conditional cooperators" who feel bound by norms to cooperate only

[21] Shame differs from guilt in that it is activated only when others learn that one has cheated.

if a sufficient number of others cooperate. Social heterogeneity can reduce the likelihood that a consensus will emerge on what constitutes a fair set of contributions toward the public good. For example, within a group of people with similar incomes and tastes for a public good, equal voluntary contributions to the public good is a prominent solution. Where incomes or tastes vary markedly, however, the rich and poor are likely to disagree on what constitutes fairness, and the sense of obligation to contribute will suffer (Hardin, 1982: 92).[22]

Finally, and most simply, altruism may be greater in more homogeneous groups. Where an individual's utility function takes into account the costs her decisions impose on others, she is more likely to contribute voluntarily to public goods and to refrain from cheating in principal-agent games.

All of these four cases predict that the more homogeneous a society, the more trust a (randomly selected) principal will place in a (randomly selected) agent. Consistent with these arguments, cross-country studies have found that ethnic and linguistic homogeneity increase trust, while income inequality decreases it (Knack and Keefer 1997; Zak and Knack 2001; Alesina and Ferrara 2002, 2000). Experimental evidence is mixed, but not inconsistent with these results. Glaeser et al. (2000, Table 4) present results in which differences in nationality and race have an insignificant negative effect on trusting behavior (the willingness of senders to transfer funds), but a significant and negative effect on trustworthy behavior (recipients returning funds to senders).

There is considerable evidence, as well, that social heterogeneity undermines civic cooperation or social trustworthiness in the sense defined by Knack and Keefer (1997). Cooperation with the census and participation in groups are lower where ethnic heterogeneity and income inequality are higher (Alesina and La Ferrara, 2002, 2000; Vigdor, 2004; Costa and Kahn, 2003a). Desertion in the Union Army in the U.S. Civil War was higher in companies with greater diversity in age and occupation (Costa and Kahn, 2003b). If one equates, as is reasonable, desertion and non-cooperation with the census as evidence of civic non-cooperation or non-trustworthiness, then this work presents strong evidence that social heterogeneity undermines potentially important social norms.

The documented relationship between trust and government performance suggests that to the extent that social heterogeneity influences trust it should also influence government performance. Easterly and Levine (1997) find that ethnic heterogeneity in countries is correlated with a range of indicators of inefficient policies, including a high black market currency premium, high corruption levels, low schooling rates, a lack of financial development, and poor infrastructure. Using cross-city and cross-county data for the U.S., Alesina, Baqir, and Easterly (1999) find lower levels of public good provision in more ethnically-divided areas. Miguel and Gugerty (2002) show similar results across Kenyan communities. Keefer and Knack (2002) conclude that property rights are more uncertain in highly-polarized societies, as measured not only by ethnic tensions

[22] Prospects for a high-trust equilibrium would then depend critically on the number of Kantians or unconditional cooperators available to catalyze cooperative behavior by the conditional cooperators.

and heterogeneity but also by income and land inequality. Berg and Sachs (1988) test the effects of income inequality on indebtedness, concluding that polarized countries are more likely to default on sovereign debt, as indicated by discounts on country debt in secondary markets.

At a much lower level of aggregation, Karlan (2003) finds that more culturally homogeneous rotating credit associations have lower default rates on loans.[23] Similarly, Kähkönen (1999) shows that collective action for water supply increases with homogeneity of caste, kinship and ethnicity. Grootaert (1999) finds more frequent participation in collective action by members of homogenous than of heterogeneous associations among Indonesian villagers, with kin group and religious dimensions particularly important.[24] To the extent that cooperation in the pursuit of socially desirable public policies is one indicator of norms of civic cooperation, all of this evidence is consistent with the thesis that social heterogeneity undermines social norms on which trust and trustworthiness heavily rely. Two other possible explanations cannot be easily excluded, however.

First, as Alesina, Baqir and Easterly argue, people may prefer to finance public goods that benefit other people like themselves. Second, as Keefer and Knack (2002) argue, where individuals in a collective are simply more different in their preferences, collective decision making is naturally also more difficult and less likely to yield jointly optimal outcomes, independent of any norms of cooperation or mutual dislike.

Group Membership and Trust

An additional possible determinant of trust and trustworthiness emerges from the "network" or "associational" definition of social capital. Coleman argues that the number, intensity and structure of "horizontal" interactions among individuals in a community facilitate the emergence of desirable norms and trust (1990, 318–319).[25] Putnam argues that voluntary associations, in particular, "instill in their members habits of cooperation, solidarity, and public-spiritedness" with positive spillovers for trust and cooperative behavior in the larger social arena (Putnam 1993: 89–90). The underlying rationale for these conclusions is three-fold. First, common membership may reflect and nurture common interests. Second, greater

[23] Homogeneity of credit associations, whether measured by kinship, location, gender, landholding or income levels, is not associated with higher repayment rates in some studies, at least in part because income shocks are likely to covary more in homogeneous groups (van Bastelaer, 2000).

[24] However, he finds household expenditures, asset ownership, and access to credit are positively associated with membership in heterogeneous associations. Diversity of education, occupation and economic status are particularly beneficial, indicating greater gains from exchange when knowledge and skills are more specialized.

[25] However, less dense but more extensive networks may provide access to more valued information (Granovetter, 1973). These "weak ties" may also be less costly to maintain. Research on business firms has found that project teams with the most numerous direct ties with other units took longer to complete their tasks than those with fewer ties (Hansen, 2002). Reviewing the vast literature on informational implications of networks is beyond the scope of this chapter.

and more intense contact with other people may increase the value of social ostracism as a punishment for untrustworthy behavior, operating in the same way as reputation. Finally, this intense contact may increase information about and confidence in the inherent trustworthiness of others.

Other scholars have subsequently argued that whether or not group memberships and other social ties have beneficial effects on norms of reciprocity and generalized trust, or on outcomes such as the performance of governments and economies, depends on the purpose of the group, the diversity and inclusiveness of its membership, and the intensity and nature of the group's activities (e.g., Stolle and Rochon 1998 and Varshney 2002). Groups segregated by class, occupation, or ethnicity may build cooperation and trust only among group members, perhaps even encouraging distrust between members and nonmembers.[26] In Weimar Germany, civil society organizations were organized along existing cleavages, and "socialists, Catholics, and bourgeois Protestants each joined their own choral societies and bird-watching clubs[.]" (Berman, 1997: 425). Under those circumstances, active associational life worked to reinforce rather than overcome narrow particularistic interests.

Not surprisingly, in light of these arguments, the evidence linking group membership and trust is mixed. Brehm and Rahn (1997) find that membership in groups and trust are strongly related in U.S. survey data, and that causation runs in both directions. Using survey data for the U.S., Sweden and Germany, Stolle and Rochon (1998) conclude that membership in all types of associations is conducive to generalized trust, but do not correct for the possibility that more trusting individuals are more likely to be active in groups. Using data from the Michigan Socialization Studies from 1965–82, Claibourn and Martin (2000) find that lagged trust levels are unrelated to contemporaneous group memberships, and that lagged memberships are only weakly related to contemporaneous levels of trust.

All of these studies are conducted at the individual-level, however, and do not capture any external effects—whether positive or negative—of group memberships on non-members. Cross-country analysis, which would capture any such external effects, shows that group memberships are significantly associated with trust (Knack, 2003). This link is particularly strong for groups that have primarily social goals, in contrast to unions and professional or trade associations, which tend to have more redistributional objectives.[27] Pargal, Gilligan and Huq (2002), looking at 65 neighborhoods in Dhaka, Bangladesh, found that the neighborhood average of trust in one's neighbors was unrelated to each neighborhood's average membership in civic associations.

[26] In later work, Putnam (2000: 22) is more careful to note that some social networks facilitating cooperation among their members can have detrimental effects for the wider community. Also see Olson (1965, 1982) for discussion of the role of social ties and social sanctions in generating collective action on behalf of narrow interests.

[27] Earlier work (Knack and Keefer, 1997) relying on a smaller sample of countries had surprisingly found trust was linked more closely with membership in redistributional groups than with membership in social groups.

The evidence that group membership does not correlate systematically with measures of trust bears upon only one of the several arguments that Putnam has advanced. For example, group participation—controlling for social heterogeneity and other factors that undermine the effectiveness of group participation—may also stimulate broader elements of civic cooperation, such as choosing to vote and in other ways supervise politicians. These issues have just begun to be addressed (see Varshney 2002). As with trust, however, there can be external costs imposed on non-members. Alatas, Pritchett, and Wetterberg (2002) found that households participating in village organizations sponsored by the Indonesian government reported higher levels of "voice," participation and information. However, a large "crowding-out" effect on other villagers actually led to a net decline in participation. Some of the effects of community-level collective action can be zero-sum. Wade's (1988) study of irrigation and collective action in south India found that well-organized villages were more successful in bribing public officials to increase their water allocations at the expense of other villages.

4. Conclusion

Intense research effort into social capital has yielded important contributions to the new institutional economics. First, levels of trust and trustworthiness are widely divergent across societies. Second, these differences are partly attributable to differences in formal institutions and reputational mechanisms that are of great concern in other literatures. Third, however, the strength of social norms underlying trust and trustworthiness also appears to vary dramatically, with important implications for government effectiveness, growth in incomes, and other development outcomes. A concern for policy implications is an important characteristic of the New Institutional Economics, and is present as well in the literature on social capital. Research into the origins of formal institutions conducive to development (to credible commitment, for example) suggests that such institutions are difficult to develop *de novo*. This research has shown that political institutions matter tremendously for whether political promises are credible and whether public policy is less or more divergent from the socially optimal. However, the research is equally clear that progress in the development of formal institutions is difficult to accelerate and far from guaranteed.

In the same way, the evidence suggests that social norms that prescribe cooperation at the level of entire societies are also difficult to instill.[28] Such broad and intractable features of a society as its social heterogeneity can stand in the way of the development of trust and civic cooperation. Woolcock (1998:186) writes that

[28] Questions of how social norms emerge and evolve over time in response to changes in technology, population, the political environment, etc., and the extent to which internalization of norms is individually rational (Coleman, 1990; Elster, 1989), are beyond the scope of this chapter.

> "The challenge for development theorists and policy-makers alike is to identify the mechanisms that will create, nurture, and sustain the types and combinations of social relationships conducive to building dynamic participatory societies, sustainable equitable economies, and accountable developmental states".

However, as Keefer and Shirley (2000) argue, in societies where formal and informal institutions of wide "radius" are missing it may be possible in the short and medium-term to improve just the reach and functioning of informal norms that operate only within family, religious or ethnic groups, despite the risks that this poses for inter-group transactions and cohabitation.

At the same time, the evidence is fairly clear that income equality and education are linked to trust and other development-promoting norms; education and income distribution are two characteristics of countries that are much more amenable to intervention. Similarly, the importance of trust and trustworthiness are sufficiently well-documented, and ways to measure them are sufficiently well-developed, that efforts to assess them are amply justified. Such assessments are particularly necessary prior to undertaking activities that appear to be development-promoting, but have a clear potential to disrupt the bases for social norms. The assessments actually could provide an additional rationale for certain projects; for example, a land tax or the construction of rural roads could disrupt feudal social relations that discourage the development of more socially-efficient norms and networks. On the other hand, dislocation due to dam-building or other massive infrastructure development is almost surely destructive of social norms and networks on which trust and trustworthiness depend; the costs of that destruction would need to be weighed against the benefits of the infrastructure project itself.

Even at the community level, it may be difficult to foster social norms or networks. For example, to the extent that voluntary associations may be a dimension of social capital with favorable effects on trust, provision of public services, or economic outcomes, a natural question is whether and how activity in groups can be encouraged by governments or donors. Even among social capital enthusiasts, the consensus is to proceed with great caution on this front. Gugerty and Kremer (2002) examined the impact of a donor-funded program to strengthen rural women's groups in Kenya. They find that groups randomly chosen to receive donor funding experienced larger turnover in membership, and changes in leadership in favor of men or more educated women.

The difficulties of formulating robust policy recommendations are directly related to inadequacies in our knowledge base regarding the sources of social capital, whether norms, networks or trust. Opportunities for future research immediately suggest themselves, however, and do so with some urgency. High priorities for future research include documenting institutional mechanisms for defusing tensions among groups with few common norms or networks to unite them; describing the conditions under which the distrust associated with ethnic heterogeneity can be alleviated; and identifying ways in which governments or donors can support bottom-up production of norms and networks in non-distorting ways. Such research would have been premature ten years ago; now, however, the wealth of evidence showing the pervasive and significant effects of social norms provides a strong impetus to such work.

The authors are grateful to Mary M. Shirley, Thierry van Bastelaer and anonymous reviewers for valuable comments and suggestions. The conclusions of this chapter are not intended to represent the views of the World Bank, its Executive Directors, or the countries they represent.

REFERENCES

Acemoglu, Daron and James A. Robinson. 2001. "Inefficient Redistribution". *American Political Science Review* 95(3): 649–661.

Akerlof, George. 1997. "Social Distance and Social Decisions". *Econometrica* 65(5): 1005–1027.

Alatas, Vivi, Lant Pritchett, and Anna Wetterberg. 2002. "Voice Lessons: Evidence on Social Organizations, Government Mandated Organizations, and Governance from Indonesia's Local Level Institutions Study". Unpublished manuscript.

Alesina, Alberto, Reza Baqir, and William Easterly. 1999. "Public Goods and Ethnic Divisions". *Quarterly Journal of Economics* 114(4): 1243–1284.

Alesina, Alberto and Eliana La Ferrara. 2002. "Who Trusts Others?" *Journal of Public Economics* 85(2): 207–234.

Alesina, Alberto and Eliana La Ferrara. 2000. "Participation in Heterogeneous Communities". *Quarterly Journal of Economics* 115(3): 847–904.

Almond, Gabriel. A. and Sidney Verba. 1963. *The Civic Culture: Political Attitudes and Democracy in Five Nations*. Princeton, NJ: Princeton University Press.

Banfield, Edward C. 1958. *The Moral Basis of a Backward Society*. Chicago, IL: The Free Press.

Barr, Abigail. 2003. "Trust and Expected Trustworthiness: Experimental Evidence from Zimbabwean Villages". *Economic Journal* 113(6): 14–30.

Berg, Andrew and Jeffrey Sachs. 1988. "The Debt Crisis: Structural Explanations of Country Performance". *Journal of Development Economics* 29: 271–306.

Berg, Joyce, John Dickhaut, and Kevin McCabe. 1995. "Trust, Reciprocity, and Social History". *Games and Economic Behavior* 10: 122–142.

Berman, Sheri. 1997. "Civil Society and the Collapse of the Weimar Republic". *World Politics* 49(3): 401–429.

Boix, Carles and Daniel N. Posner. 1998. "Social Capital: Explaining its Origins and Effects on Government Performance". *British Journal of Political Science* 28: 686–693.

Brehm, John and Wendy Rahn. 1997. "Individual-Level Evidence for the Causes and Consequences of Social Capital". *American Journal of Political Science* 41(3): 999–1023.

Claibourn, Michele P. and Paul S. Martin. 2000. "Trusting and Joining? An Empirical Test of the Reciprocal Nature of Social Capital". *Political Behavior* 22(4): 267–291.

Coleman, James. 1990. *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.

Coleman, James. 1987. "Norms as Social Capital" in G. Radnitzky and P. Bernholz (eds.), *Economic Imperialism*. New York: Paragon.

Costa, Dora L. and Matthew E. Kahn. 2003a. "Understanding the Decline in Social Capital, 1952–1998". *Kyklos* 56(1): 17–46.

______ 2003b. "Cowards and Heroes: Group Loyalty in the American Civil War". *Quarterly Journal of Economics* 118(2): 519–548.

Drobak, John N. 1998. "Law Matters". *Washington University Law Quarterly* 76(1): 97–104.
Durlauf, Steven. 2002. "Bowling Alone: A Review Essay". *Journal of Economic Behavior and Organization* 47: 259–273.
Easterly, William and Ross Levine. 1997. "Africa's Growth Tragedy: Policies and Ethnic Divisions". *Quarterly Journal of Economics* 112(4): 1203–1250.
Elster, Jon. 1989. "Social Norms and Economic Theory". *Journal of Economic Perspectives* 3(4): 99–117.
Fehr, Ernst and Simon Gachter. 2000. "Fairness and Retaliation: The Economics of Reciprocity". *Journal of Economic Perspectives* 14(3): 159–181.
Fukuyama, Francis. 1995. *Trust: The Social Virtues and the Creation of Prosperity*. New York. The Free Press.
Fukuyama, Francis. 2000. *The Great Disruption: Human Nature and the Reconstitution of Social Order*. New York. Simon and Schuster.
Gambetta, Diego. 1988. *Trust: Making and Breaking Cooperative Relations*. Oxford. Blackwell.
Glaeser, Edward L., David Laibson, Jose A. Scheinkman, and Christine L. Soutter. 2000. "Measuring Trust". *Quarterly Journal of Economics* 115(3): 811–846.
Granovetter, Mark. 1973. "The Strength of Weak Ties". *American Journal of Sociology* 78: 1360–1380.
Greif, Avner. 1993. "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition". *The American Economic Review* 83(3): 525–548.
——— 1994. "Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies". *Journal of Political Economy* 102(5): 912–950.
Grootaert, Christiaan. 1999. "Social Capital, Household Welfare and Poverty in Indonesia". Local Level Institutions. Working Paper no. 6. Washington, DC: The World Bank.
Grootaert, Christiaan and Thierry van Bastelaer (eds.). 2002. *The Role of Social Capital in Development: An Empirical Assessment.* New York: Cambridge University Press.
——— 2002. *Understanding and Measuring Social Capital: A Multi-Disciplinary Tool for Practitioners*. Washington, DC: The World Bank.
Gugerty, Mary Kay and Michael Kremer. 2002. "The Impact of Development Assistance on Social Capital: Evidence From Kenya" in C. Grootaert and T. van Bastelaer (eds.), *The Role of Social Capital in Development*. New York: Cambridge University Press, Chapter 7, pp. 213–233.
Hansen, Morton T. 2002. "Realizing Opportunities: A Social Capital Model of Knowledge Sharing in Multi-unit Companies". *Organization Science*.
Hardin, Russell. 1982. *Collective Action*. Baltimore, MD: Resources for the Future.
Henrich, Joseph et al. 2001. "In Search of Homo Economicus : Behavioral Experiments in 15 Small-Scale Societies". *American Economic Review Papers and Proceeding* 91(2): 73–78.
Inglehart, Ronald. 1999. "Trust, Well-Being and Democracy" in M. Warren (ed.), *Democracy and Trust*. Cambridge: Cambridge University Press.
Isham, Jon and Satu Kähkönen. 2002. "Institutional Determinants of the Impact of Community-Based Water Services: Evidence from Sri Lanka and India". *Economic Development and Cultural Change* 50(3): 667–691.
Kähkönen, Satu. 1999. "Does Social Capital Matter in Water and Sanitation Delivery? A Review of Literature". Social Capital Initiative Working Paper no. 9. Washington, DC: The World Bank.
Karlan, Dean. 2003. "Social Capital and Group Banking". Dissertation chapter, Massachusetts Institute of Technology.
Keefer, Philip. 2002. "Clientelism and Credibility". Presented at the 2002 Conference of the International Society of New Institutional Economics, Boston, MA.

——— and Stephen Knack. 2002. "Polarization, Property Rights, and the Links Between Inequality and Growth". *Public Choice* 111: 127–154.

——— and Mary M. Shirley. 2000. "Formal versus informal institutions in economic development" in Claude Menard (ed.), *Institutions, Contracts and Organizations*. Cheltenham, UK: Edward Elgar.

Knack, Stephen. 1992. "Civic Norms, Social Sanctions, and Voter Turnout". *Rationality and Society* 4: 133–156.

——— 2001. "Trust, Associational Life, and Economic Performance" in J. Helliwell (ed.), *The Contribution of Human and Social Capital to Sustained Economic Growth and Well-Being*. Quebec: Human Resources Development Canada.

——— 2002. "Social Capital and the Quality of Government: Evidence From the U.S. States". *American Journal of Political Science* 46(4): 772–785.

——— 2003. "Groups, Growth and Trust: Cross-Country Evidence on the Olson and Putnam Hypotheses". *Public Choice* 117: 341–355.

——— and Philip Keefer. 1997. "Does Social Capital Have an Economic Payoff? A Cross-Country Investigation". *Quarterly Journal of Economics* 112(4): 1251–1288.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. 1997. "Trust in Large Organizations". *American Economic Review Papers and Proceedings* 87: 333–338.

Levi, Margaret. 1988. *Of Rule and Revenue*. Berkeley, CA: University of California Press.

Miguel, Edward and Mary Kay Gugerty. 2002. "Ethnic Diversity, Social Sanctions, and Public Goods in Kenya". Unpublished Working Paper, University of California, Berkeley, CA.

Miguel, Edward, Paul Gertler, and David I. Levine. 2002. "Did Industrialization Destroy Social Capital in Indonesia?" Unpublished Working Paper, University of California, Berkeley, CA.

Mill, John Stuart. 1848. *Principles of Political Economy*. London: John W. Parker.

Narayan, Deepa and Lant Pritchett. 1999. "Cents and Sociability: Household Income and Social Capital in Rural Tanzania". *Economic Development and Cultural Change* 47(4): 871–897.

North, Douglass C. 1990. *Institutions, Institutional Change and Economic Performance*. New York: Cambridge University Press.

Olson, Mancur. 1963. "Rapid Growth as a Destabilizing Force". *Journal of Economic History* 23: 529–552.

——— 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, MA: Harvard University Press.

Olson, Mancur. 1982. *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities.* New Haven, CT: Yale University Press.

Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.

Ostrom, Elinor. 2000. "Collective Action and the Evolution of Social Norms". *Journal of Economic Perspectives* 14(3): 137–158.

Pantoja, Enrique. 2002. "Qualitative Analysis of Social Capital: The Case of Coal-mining Areas in Orissa, India" in C. Grootaert and T. van Bastelaer (eds.), *Understanding and Measuring Social Capital*. Ch. 5, pp. 108–151.

Pargal, Sheoli, Daniel Gilligan, and Mainul Huq. 2002. "Social Capital in Solid Waste Management: Evidence from Dhaka, Bangladesh" in C. Grootaert and T. van Bastelaer (eds.), *The Role of Social Capital in Development*. Ch. 6, pp. 188–212.

Paxton, Pamela. 1999. "Is Social Capital Declining in the United States? A Multiple Indicator Assessment". *American Journal of Sociology* 105(1): 88–127.

Persson, Torsten and Guido Tabellini. 2000. *Political Economics: Explaining Public Policy*. Cambridge, MA: The MIT Press.

Portes, Alejandro. 1998. "Social Capital: Its Origins and Applications in Modern Sociology". *Annual Review of Sociology* 24: 1–24.

Posner, Richard and Eric Rasmusen. 1989. "Creating and enforcing norms, with special reference to sanctions". *International Review of Law and Economics* 19: 369–382.

Putnam, Robert. 2000. *Bowling Alone: Collapse and Revival of American Community*. New York: Simon & Schuster.

Putnam, Robert with Robert Leonardi and Raffaella Y. Nanetti. 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press.

Scholz, John T. and Mark Lubell. 1998. "Trust and Taxpaying: Testing the Heuristic Approach to Collective Action". *American Journal of Political Science* 42(2): 398–417.

Sethi, Rajiv and E. Somanathan. 1996. "The Evolution of Social Norms in Common Property Resource Use". *American Economic Review* 8(4): 766–788.

Sobel, Joel. 2002. "Can We Trust Social Capital?" *Journal of Economic Literature* 55: 139–154.

Stolle, Dietlind and Thomas Rochon. 1998. "Are All Associations Alike? Member Diversity, Associational Type and the Creation of Social Capital". *American Behavioral Scientist* 42(1): 47–65.

Van Bastelaer, Thierry. 2000. "Does Social Capital Facilitate the Poor's Access to Credit? A Review of the Microeconomic Literature". Social Capital Initiative Working Paper no. 8. Washington, DC: The World Bank.

Varshney, Ashutosh. 2002. *Ethnic Conflict and Civic Life: Hindus and Muslims in India*. New Haven, CT: Yale University Press.

Vigdor, Jacob L. 2004. "Community Composition and Collective Action: Analyzing Initial Mail Response to the 2000 Census". *Review of Economics and Statistics* 82(1): 251–271.

Wade, Robert. 1988. *Village Republics: Economic Conditions for Collective Action in South India*. New York: Cambridge University Press.

Williamson, Oliver E. 1993. "Calculativeness, Trust and Economic Organization". *Journal of Law and Economics* 36: 453–486.

Yamagishi, Toshio and Midori Yamagishi. 1994. "Trust and Commitment in the United States and Japan". *Motivation and Emotion* 18(2): 129–166.

Woolcock, Michael. 1998. "Social Capital and Economic Development: Toward a Theoretical Synthesis and Policy Framework". *Theory and Society* 27: 151–208.

Zak, Paul and Stephen Knack. 2001. "Trust and Growth". *Economic Journal* 111: 295–321.

Zucker, Lynne G. 1986. "Production of Trust: Institutional Sources of Economic Structure, 1840–1920". *Research in Organizational Behavior* 8: 53–111.