



Social Capital and Community Governance*

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Abstract

Social capital generally refers to trust, concern for one's associates, a willingness to live by the norms of one's community and to punish those who do not. While essential to good governance, these behaviors and dispositions appear to conflict with the fundamental behavioral assumptions of economics whose archetypal individual—*Homo economicus*—is entirely self-regarding. We regard these behaviors and dispositions as aspects of what we term *community governance*. We suggest that (i) community governance addresses some common market and state failures but typically relies on insider-outsider distinctions that may be morally repugnant; (ii) the individual motivations supporting community governance are not captured by either the conventional self-interested preferences of *Homo economicus* or by unconditional altruism towards one's fellow community members; (iii) well-designed institutions make communities, markets and states complements, not substitutes; (iv) with poorly designed institutions, markets and states can crowd out community governance; (v) some distributions of property rights are better than others at fostering community governance and assuring complementarity among communities, states and markets; and (vi) far from representing holdovers from a premodern era, the small scale local interactions that characterize communities are likely to increase in importance as the economic problems that community governance handles relatively well become more important.

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1 Introduction

Social capital generally refers to trust, concern for one's associates, a willingness to live by the norms of one's community and to punish those who do not. These behaviors were recognized as essential ingredients of good governance among classical thinkers from Aristotle to Thomas Aquinas and Edmund Burke. However, political theorists and constitutional thinkers since the late 18th century have taken *Homo economicus* as a starting point and partly for this reason have stressed other *desiderata*, notably competitive markets, well-defined property rights, and efficient, well-intentioned states. Good rules of the game thus came to displace good citizens as the *sine qua non* of good government.

The contending camps that emerged in the nineteenth and early twentieth centuries, advocating *laissez faire* on the one hand or comprehensive state intervention on the other as *the* ideal form of governance, defined the terms of institutional and policy for much of the Twentieth century. Practically-minded people who, by conscience or electoral constraint, had adopted less dogmatic stances in favor of seeking solutions to social problems, never accepted the cramped intellectual quarters of this debate, but it flourished in academia, as a glance at mid or even late twentieth century comparative economic systems texts will show. The shared implicit assumption of the otherwise polarized positions in this debate was that either the market or the state could adequately govern the economic process. There was nothing else on the menu, and mix and match was out of the question. But the common currency of this debate—inflated claims on behalf of spontaneous order or social engineering—now seems archaic. Disenchanted with utopias of either the left or the right, as the century drew to a close, and willing to settle for less heroic alternatives, many came to believe that market failures are the rule rather than the exception and that governments are neither sufficiently informed or sufficiently accountable to correct all market failures. Social capital was swept to prominence not on its merits, but on the defects of its alternatives.

Those to the left of center are attracted to the social capital idea because it affirms the importance of trust, generosity, and collective action in social problem solving, thus countering the idea that well-defined property rights and competitive markets could so successfully harness selfish motives to public ends as to make civic virtue unnecessary. Proponents of *laissez faire* are enchanted because it holds the promise that where markets fail—in the provision of local public goods and many types of insurance for example—neighborhoods, parent teacher associations, bowling leagues, indeed anything but the government, could step in to do the job.

American liberals, along with social democrats and market socialists, might not have joined in had limits of governmental capacity and accountability not been unmistakably demonstrated in the bureaucratic arrogance and the dashed hopes of

five year plans the world over. Conservatives might have been less avid if their once idealized institutions had fared better. But the Great Depression early in the past century, as well as growing environmental concerns and rising inequalities at its close, tarnished the utopian capitalism of the textbooks. The demise of these twin illusions of our century thus cleared the intellectual stage for social capital's entry.

Thus, a decade ago otherwise skeptical intellectuals and jaded policy makers surprised and impressed their friends by touting the remarkable correlation between choral societies and effective governance in Tuscany, the perils of a nation that bowled alone, and the Alexis de Tocqueville characterization of America as a nation of joiners. President George Bush urged Americans to turn away from government to the "thousand points of light" of a vibrant civil society, and Hillary Clinton told us that "it takes a village to raise a child." The World Bank dedicated a website to the subject.

The social capital boom reflected a heightened awareness in policy and academic circles of real people's values, which are not the empirically implausible utility functions of *Homo economicus*, of how people interact in their daily lives, in families, neighborhoods, and work groups, not just as buyers, sellers, and citizens. and of the bankruptcy of the ideologically charged planning-versus-markets debate.

Perhaps social capital, like Voltaire's God, would have to have been invented if it did not exist. It may even be a good idea. A good *term* it is not. Capital refers to a thing that can be owned—even a social isolate like Robinson Crusoe had an axe and a fishing net. By contrast, the attributes said to make up social capital describe relationships among people. As with other trendy expressions, "social capital" has attracted so many disparate uses that we think it better to drop the term in favor of something more precise. "Community" better captures the aspects of good governance that explain social capital's popularity, as it focuses attention on what groups *do* rather than what people *own*. By community we mean a group of people who interact directly, frequently and in multi-faceted ways. People who work together are usually communities in this sense, as are some neighborhoods, groups of friends, professional and business networks, gangs, and sports leagues. The list suggests that connection, not affection, is the defining characteristic of a community.

In the next section we propose an alternative framework which we term "community governance." We begin with some examples, and present a simple model and some experimental evidence demonstrating the plausibility of the underlying behavioral assumptions. We then turn to some endemic problems with community governance and challenges to be addressed by those who share our conviction that policy design should recognize and enhance the complementarities among markets, states and communities.¹ We close with some speculations about the future

importance of communities.

We will attempt to show that (i) community governance addresses some common market and state failures but typically relies on insider-outsider distinctions that may be morally repugnant; (ii) the individual motivations supporting peer monitoring and other aspects of community governance are not captured by either the conventional self-interested preferences of *Homo economicus* or by unconditional altruism towards one's fellow community members; (iii) well-designed institutions make communities, markets and states complements, not substitutes; (iv) with poorly designed institutions, markets and states can crowd out community governance; (v) some distributions of property rights are better than others at fostering community governance and assuring complementarity among communities, states and markets; and (vi) far from representing holdovers from a premodern era, the small scale local interactions that characterize communities are likely to increase in importance as the economic problems that community governance handles relatively well become more important.

2 Community Governance

Communities are part of good governance because they address certain problems that cannot be handled either by individuals acting alone or by markets and governments.

In some of Chicago's neighborhoods studied by Felton Earls, Robert Sampson, and Steven Raudenbush (1997) for example, residents speak sternly to youngsters skipping school, creating a disturbance, or decorating walls with graffiti. Residents are also willing to intervene to maintain neighborhood amenities such as a local firehouse threatened with budget cuts. These are all examples of what the authors term "collective efficacy." In other neighborhoods residents adopt a more hands-off approach. Sampson, Raudenbush and Earls found considerable variation in the neighborhood levels of collective efficacy, with examples of rich and poor, black and white neighborhoods exhibiting both high and low levels. Remarkably, ethnic heterogeneity was considerably less important in predicting low collective efficacy than were measures of economic disadvantage, low rate of home ownership, and other indicators of residential instability. Where neighbors express a high level of collective efficacy, violent crime is markedly lower, controlling for a wide range of community and individual characteristics, including past crime rates. Chicago's neighborhoods illustrate the informal enforcement of community norms.

The Toyama Bay fishing cooperatives in Japan studied by Erika Seki and Jean-Philippe Platteau Platteau and Seki (1999) illustrate another aspect of community

¹Similar proposals are advanced by Hayami (1989) and Aoki and Hayami (2000).

problem solving. Faced with variable catches, as well as the high level and changing nature of skills required, some fishermen have elected to share income, information and training. One coop which has been highly successful since its formation thirty-five years ago consists of the crews and skippers of seven shrimp boats. The boats share income and costs, repair damaged nets in common, and pool information about the changing location and availability of shrimp. Elder members pass on their skills, and the more educated younger members teach others the new high tech methods using Loran and sonar. The coop's income- and cost-pooling activities allow its boats to fish in much riskier and higher yield locations, and the skill- and information-sharing raises profits and reduces productivity differences among the boats. Fishing, off-loading the catch, and marketing by individual boats are synchronized to increase the transparency of the sharing process and make opportunistic cheating on the agreement easy to detect. The poor fishing families in Kerala studied by Anita Abraham (1985) have no access to banks or formal insurance, but they cope with the vagaries of the catch by a system of multilateral zero-interest consumption loans that are unsecured by any collateral, but are always repaid.

The plywood workers who own their firms in Oregon and Washington benefit from both the peer-monitoring of the Chicago neighbors and the risk-pooling of the fishermen. They elect their managers and require of their members ownership of a share of the firm as a condition of employment and employment in the firm as a condition of ownership. These coops have successfully competed with conventionally organized firms in the industry, both union and non union, for over a generation, their success largely attributable to high levels of work commitment and savings on managerial monitoring of workers (when one firm converted to cooperative ownership the supervisory staff was cut by three quarters). The econometric analysis of Ben Craig and John Pencavel (1995) indicates that total factor productivity (output per unit of labor and capital combined) is significantly higher than in their conventional counterparts. When faced with cyclical downturns in the demand for plywood the coops, unlike their competitors, do not fire or layoff workers, but rather elect to take cuts in either wages or hours, thus pooling the cyclical risk among all members rather than imposing it on a few (see also Pencavel 2000).

As these examples suggest, communities solve problems that might otherwise appear as classic market failures or state failures: namely, insufficient provision of local public goods such as neighborhood amenities, the absence of insurance and other risk-sharing opportunities even when these would be mutually beneficial, exclusion of the poor from credit markets, and excessive and ineffective monitoring of work effort. Communities can sometimes do what governments and markets fail to do because their members, but not outsiders, have crucial information about other members' behaviors, capacities, and needs. Members use this information both to uphold norms (work norms among the plywood workers and the fishermen,

community behavioral norms in Chicago) and to make use of efficient insurance arrangements that are not plagued by the usual problems of moral hazard and adverse selection (the fishermen and the plywood workers). This insider information is most frequently used in multilateral rather than centralized ways, taking the form of a raised eyebrow, a kind word, an admonishment, gossip or ridicule, all of which may have particular salience when conveyed by a neighbor or a workmate whom one is accustomed to call one of “us” rather than “them.”

Communities thus may make an important contribution to governance where market contracts and government fiat fail because the necessary information to design and enforce beneficial exchanges and directives cannot effectively be used by judges, government officials, and other outsiders. This is particularly the case where ongoing relationships among community members support trust, mutual concern, or sometimes simply effective multilateral enforcement of group norms. This idea, old hat in sociology, long predates recent interest in social capital even among economists. A generation ago, Kenneth Arrow and Gerard Debreu provided the first complete proof of Adam Smith’s conjecture two centuries earlier on the efficiency of invisible hand allocations. But the axioms required by the Fundamental Theorem of Welfare economics were so stringent that he stressed the importance of what would now be called social capital in coping with its failure:

In the absence of trust...opportunities for mutually beneficial cooperation would have to be foregone...norms of social behavior, including ethical and moral codes (may be) ...reactions of society to compensate for market failures. (Arrow 1971):22.

Communities are one of the ways these norms are sustained (Bowles and Gintis 1999, Bowles and Gintis 1998).

3 Communities and Incentives

The task of comparative institutional analysis today, having left behind the plan vs. market debate, is to clarify what class of problems are handled well by differing combinations of institutions. Advances in contract theory, mechanism design, game theory and related fields now allow economists to say quite a bit about this. Markets are attractive because of their ability to make use of private information. so where comprehensive contracts may be written and enforced at low cost, markets are often superior to other governance structures. Moreover, where residual claimancy and control rights are closely aligned, market competition provides a decentralized and difficult to corrupt disciplining mechanism that punishes the inept and rewards high performers.

Like markets, the state is relatively well suited for handling particular classes of problems. In particular, the state is attractive because it alone has the power to make and enforce the rules of the game that govern the interaction of private agents. Therefore in cases where an economic process will be effective only if participating is mandatory (e.g., participating in a social insurance program, or paying for national defense).

Communities, however, may solve problems that both states and markets are ill-equipped to address, especially where the nature of social interactions or of the goods and services being transacted makes contracting highly incomplete or costly. Community governance relies on dispersed private information often unavailable to states, employers, banks, and other large formal organizations to apply rewards and punishments to members according to their conformity with or deviation from social norms. An effective community monitors the behavior of its members, rendering them accountable for their actions. In contrast with states and markets, communities more effectively foster and utilize the incentives that people have traditionally deployed to regulate their common activity: trust, solidarity, reciprocity, reputation, personal pride, respect, vengeance, and retribution, among others.

Several aspects of communities account for their unique capacities as governance structures. First, in a community the probability that members who interact today will interact in the future is high, and thus there is a strong incentive to act in socially beneficial ways now to avoid retaliation in the future. Second, the frequency of interaction among community members lowers the cost and raises the benefits associated with discovering more about the characteristics, recent behavior and likely future actions of other members. The more easily acquired and widely dispersed this information, the more will community members have an incentive to act in ways that result in collectively beneficial outcomes. Third, communities overcome free-rider problems by its members directly punishing 'anti-social' actions of others. Monitoring and punishment by peers in work teams, credit associations, partnerships, local commons situations, and residential neighborhoods is often an effective means of attenuating incentive problems that arise where individual actions affecting the well being of others are not subject to enforceable contracts (Whyte 1955, Homans 1961, Ostrom 1990, Tilly 1981, Hossain 1988, Dong and Dow 1993b, Sampson, Raudenbush and Earls 1997).

But how might communities enforce such norms, in the absence of the state's judicial apparatus? A famous approach by Alchian and Demsetz (1972) suggests that residual claimancy should be assigned to an individual designated to monitor team members' inputs, thus ensuring the incentive compatibility for the (non-contractible) activity of monitoring itself, while addressing the members' incentive to free ride by the threat of dismissal by the monitor. Alchian and Demsetz' account hinges on the *ad hoc* assumption that monitoring itself is difficult to monitor. Otherwise

it would not be clear why team members should not be the residual claimants and hire a monitor to oversee their behavior. Another well-known solution (Holmström 1982) recommends a principal multi-agent relationship in which efficiency or near-efficiency is achieved through contracts that make individual team members residual claimants on the effects of their actions without conferring ownership rights on them. Holmström's solution is infeasible, however, when there are significant stochastic influences on the level of performance of the team, team members have limited wealth, and capital and insurance markets are imperfect, all of which we take to be part of the usual state of affairs.

In recent years a number of interesting contributions have suggested mechanisms that avoid these shortcomings. Varian (1990) and Stiglitz (1993) rely on the small size of the interacting group, and on repeated interactions with low discount rates. Banerjee, Besley and Guinnane (1994) and Dong and Dow (1993b) model and provide empirical analysis of groups such as credit or production cooperatives whose members are constitutionally empowered to punish malfeasance by fellow members. Dong and Dow (1993a) assume shirking can be controlled by the threat of non-shirkers to exit the community.

These explanations have in common that individuals are treated as self-interested. By contrast, many behavioral scientists outside of economics have sought to explain communities by relations of altruism, affection, and other non-self-regarding motives. Many of these approaches, however, have treated the community organically without investigating whether or not its structural characteristics are consistent with conventional notions of equilibrium based on intentional action. In this section we develop a model using the methodologically individualism and equilibrium orientation of economics (specifically, game theory), together with a particular strand of those stressing other-regarding preferences, namely the commonly observed human proclivity for enforcing group norms, even at a cost to oneself.

We introduce non-self-interested motives because we believe explaining how communities enforce norms through mutual monitoring requires going beyond this traditional model of the individual actor. The treatment of social penalties by Besley and Coate (1995) and of peer pressure by Kandell and Lazear (1992) reflect a similar dissatisfaction with the conventional behavioral model. Communities often are capable of enforcing norms, we suggest, because a considerable fraction of members are willing to engage in the costly punishment of shirkers without a reasonable expectation of being personally repaid for their efforts. We call this behavior *strong reciprocity*. A strong reciprocator is predisposed to cooperate with others and punish non-cooperators, even when this behavior cannot be justified in terms of self-interest. We review the considerable evidence that strong reciprocity motives are common in Bowles and Gintis (2000). See also Fehr and Gächter (2000) and Gintis (2000).

A second distinctive characteristic of our model is that small group size is not required for the success of mutual monitoring. We have chosen to model a form of mutual monitoring consistent with large group size in light of the evidence that where individual incentives are infeasible the performance of even quite large groups—work teams of over a hundred, for example—may be enhanced by group incentives (Hansen 1997, Ghemawat 1995, Knez and Simester 1998).

By performing a laboratory experiment involving a public goods game with punishment, we provide empirical evidence for the behavioral relevance of strong reciprocity in teams, including the fact that the willingness to punish shirkers is capable of sustaining high levels of contribution to the public good and does not decrease in larger teams.

To clarify the ways that communities and social capital might solve market failures consider the following model and related experimental evidence, which draws upon Bowles, Carpenter and Gintis (2000).

4 Mutual Monitoring in Teams

Consider a team of n members. Each member can either work or shirk, and each is an equal residual claimant on team output. Suppose working costs a team member one dollar of utility, but adds $q > 1$ dollars to team output. Since output is shared equally, a member pays one dollar but his own share of the output is q/n , so the gain g from shirking is given by $g = 1 - q/n$. If g is positive, which we assume, then self-interested agents facing no other constraints or opportunities will simply shirk, so team output will be zero. However if members can be induced somehow to work, each will have net payoff $q - 1 > 0$. We show that with mutual monitoring, a positive level of output can be obtained if there are a sufficient number of strong reciprocators among the team members.

Suppose team members can monitor others at cost c , with the ability to impose a penalty s on a team member discovered shirking. This cost s may involve public criticism, shunning, threats of physical harm and the like. We assume that acts of punishment, like work effort, are non-verifiable and hence not subject to contract. Some team members are self-interested and so never monitor or punish. However, a number k of team members are *strong reciprocators*, who are motivated to punish shirkers in proportion to the harm they impose on group members other than the shirker. The harm done to the rest of the team when a member shirks is $z = q(1 - 1/n)$, which we refer to the *social cost of shirking*. We suppose that strong reciprocators experience a subjective payoff ρz from disciplining a shirking member. We call ρ the *propensity to punish shirkers*.

With the above assumptions, we find that if the cost of monitoring is less than the

subjective payoff to punishing shirkers (i.e., if $c < \rho z$) and if the gain from shirking is less than the amount of punishment a shirker can expect to receive (i.e., if $g < ks$), then a fraction $c/\rho z$ of team members will shirk in each period, and a fraction g/ks of members will monitor and punish shirkers. The theorems described informally here are proved in Bowles et al. (2000). We find that

- If these conditions hold, then they continue to hold when team size is increased.
- The level of monitoring *increases* when team size increases, although the effect is small, since $g = 1 - q/n$ is close to 1 for large n .
- The fraction of team members who shirk remains constant when team size increases.
- The social welfare difference per team member between a first best world with no shirking and the equilibrium of this game is $c(q - 1)/\rho z$, which does not depend on team size.

Our model of mutual monitoring in teams depends critically on the underlying behavioral assumption that strong reciprocity motives will induce sufficient punishment levels to sustain high levels of team output. We ran an experimental public goods game to test this assumption, extending the standard protocol for a public goods game by making each player's contribution to the public good known to all team members at the end of each round, and allowing players to punish others based on this information, at a cost to themselves. Fehr and Gächter (2000) used a similar experimental setting to show that there is indeed a propensity to punish, and that allowing costly punishment in a multiperiod punishment setting prevented the decay of cooperation usually found in public goods experiments.

The subjects thus play the following game for ten rounds. Subjects are randomizing assigned to teams of $n = 5$ or $n = 10$ members. Each player receives an endowment of money at the beginning of each round and is given an identifying (id) number from 1 to n . We will call the endowment "one dollar" in conformity with our analysis in the previous section (the experimental endowment was actually 20 'francs,' redeemable for money at the end of the session). Each player then private contributes some portion of this dollar, say x_i for player i , to the public account. The experimenter multiplies the money in the public account by a factor $q > 1$, and distributes the proceeds equally among the players. The factor q which, as in the previous section represents the productivity of work, is chosen so that $g = 1 - q/n$ is positive; i.e., a self-interested player will contribute nothing to the public account.

The experimenter then reveals to each subject the amount contributed by the other team members, together with their id number, and allows each member, to

“assign points” to particular id numbers. Assigning one point to an id number reduced the payoff to the team member with that id number by ten percent, at a cost of ten percent of the original endowment to the “assigner.” Subjects could assign more than one point, but at increasing costs to themselves per point assigned. After each round the memberships of the teams were randomly reshuffled, so participants engaged in a series of ten non-repeated interactions. Of course even in this so called “stranger treatment” there is some small probability that one will share team membership with the same individual on another round, but we do not believe that our subjects took this into account. We used $q = 1.5$ (low productivity) for one five-person team, and $q = 3.75$ (high productivity) for the other, and we used $q = 3.0$ (low productivity) for one ten person team and $q = 7.5$ (high productivity) for the other. A total of twelve sessions were conducted with 205 participants.² Each session took approximately 45 minutes from sign-in to payments and subjects earned \$19.81 on average, including the show-up fee.

We want to test the following hypotheses.

Hypothesis 1: Shirking induces punishment.

Hypothesis 2: The propensity to punish is not lower in larger teams.

Hypothesis 3: Shirkers respond to punishment by increasing their contribution in the next round.

Hypothesis 4: Mutual monitoring sustains high levels of contribution to the public good.

Hypothesis 5: Altruism does not explain punishment, in the sense that players punish shirkers even when punishment does not lead to higher group earnings.

Note that hypotheses 1 and 4 replicate Fehr and Gächter (2000), while hypotheses 2, 3 and 5 support the behavioral assumptions of the model in the previous section.

The period-by-period results averaged across treatments that appear in Figure 1 strongly support Hypotheses 1 and 4. Just as in previous public goods experiments, we find an erosion of public contributions and rise in shirking in the treatment groups in which punishment is not allowed. By contrast, when costly punishment is allowed, we observe a striking decline in the level of shirking, and a rising willingness to punish fellow team members. The upward rising “punishment per unit of shirking” is estimated from a regression equation in which we predict the number of punishment points deployed against each member on the basis of the level of shirking the member chose on the previous round. The equation includes dummy variables for the distinct treatments. The results show that a unit of shirking initially

²In addition to the 145 subjects in the treatment groups, 60 subjects were assigned to no-punishment control sessions to verify that there is nothing unusual about our subject pool or procedures. We found that the control groups replicate the usual level and rate of decay of cooperation

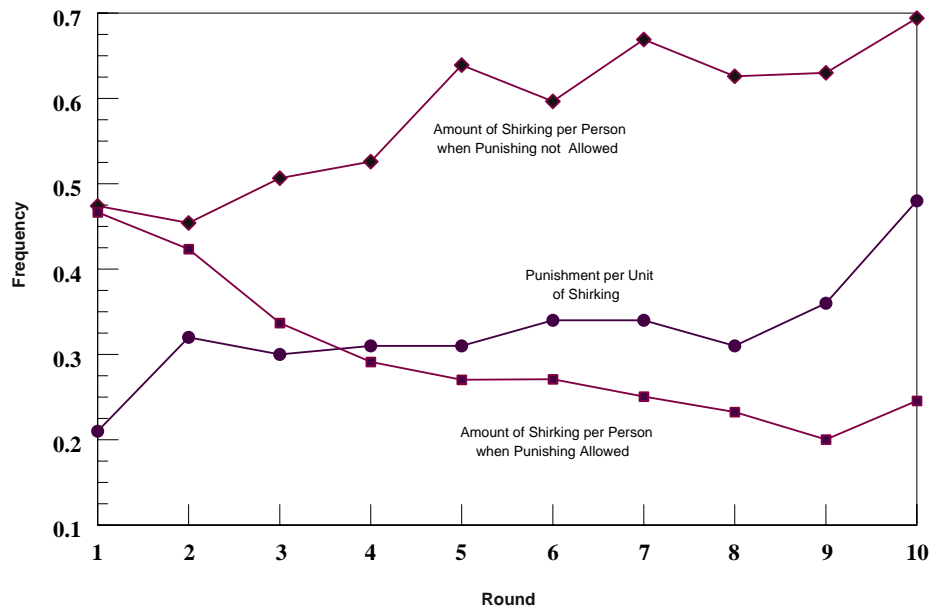


Figure 1: Shirking and Punishment. For the treatments in which punishment is an option, it is extensively used in all periods, shirking falls over time, and the amount of punishment per unit of shirking rises. When punishment is not available, shirking rises over time.

induced a bit more than a fifth of a unit of punishing, rising to almost half a unit at the end of the session. All of the coefficients reported were highly significant, the lowest t -statistic, occurring in period one being 5.34. Note that the team members who engaged in increased shirking in the terminal period were severely punished (the t -statistic in the case being 10.79). The increasing punishment incurred by shirking over the rounds suggests that either the subjects were engaged in a learning process, or they became increasingly intolerant of shirking.

To test Hypothesis 2, we compare the amount of punishment per dollar of shirking in the small and large treatment groups. Since the harm q caused to the group per unit of shirking differs across treatments, we must take care to compare only treatments roughly equal in this respect. The five-person, high productivity teams ($q = 3.75$) and the ten-person low productivity teams ($q = 3.00$) are comparable, with q slightly lower in the larger group. If group size *per se* discourages pun-

ishment, we should find less punishment in the large team, low q treatment. But we do not. Comparing the propensities to punish, we find that despite the slightly lower harm that shirking inflicts, members of large teams *punish more* in terms of the average level of punishment, significant to the 1% level.

Hypothesis 3 asserts that being punished leads shirkers, whom we define as those subjects who contribute less than the average level for that round, to increase their next-round contribution. We test this by regressing the change in a shirker's public contribution between one period and the next on the punishment points received by the shirker in the earlier period as a result of his or her contribution. We find that the coefficient on the points received last period term is positive and significant. One punishment point assigned to a shirker results in an increase of 0.38 of a point in subsequent contribution.

Finally Hypothesis 5 asserts that players punish shirkers because they value upholding norms, *per se*. In other words, punishment cannot be accounted for as an instrumental strategy of altruists who want to increase the payoffs to others. Hypothesis 5 is sustained by the positive (indeed elevated) level of the propensity to punish in the terminal period indicated in Figure 1. Punishing shirkers in this period was the last action taken before the experiment ended and so could not have been done with the expectation that the shirkers' subsequent response would benefit others. We conclude that the motivation for punishment must include the desire to inflict a cost on shirkers.

Our experimental evidence thus provides some support for the behavioral assumptions of our model, and for our interpretation that much of the success of community governance derives from mutual monitoring motivated by what we have termed motives of strong reciprocity. But community governance, while often effective, need not be socially beneficial.

5 Community Failures

Like markets and governments, communities also fail. The personal and durable contacts that characterize communities require them to be of relatively small scale, and a preference for dealing with fellow members often limits their capacity to exploit gains from trade on a wider basis. Moreover, the tendency for communities to be relatively homogeneous may make it impossible to reap the benefits of economic diversity associated with strong complementarities among differing skills and other inputs. Neither of these limitations is insurmountable. By sharing information, equipment, and skills, for example, the Japanese fishermen exploited economies of scale unattainable by less cooperative groups, and reaped substantial benefits from the diversity of talents among the membership. Similarly cooperation in the local

business networks in what is called “the third Italy” along with their associated local governments allow otherwise unviably small firms to benefit from economies of scale in marketing, research and training allowing their survival in competition with corporate giants. But compared to bureaucracies and market, which specialize in dealing with strangers, the limited scope of communities often imposes inescapable costs.

A second “community failure” is less obvious. Where group membership is the result of individual choices rather than group decisions, the composition of groups is likely to be more culturally and demographically homogeneous than any of the members would like, thereby depriving people of valued forms of diversity. To see this imagine that the populations of a large number of residential communities are made up of just two types of people easily identified by appearance or speech, and that everyone strongly prefers to be in an integrated group but not to be in a minority. If individuals sort themselves among the communities there will be a strong tendency for all of the communities to end up perfectly segregated for reasons that Thomas Schelling (1978) pointed out in his analysis of neighborhood tipping. Integrated communities would make everyone better off, but they will prove unsustainable if individuals are free to move. See Young (1998) and Bowles (2001) for models demonstrating this result.

Economists use the terms “market failures” and “state failures” to point to the allocative inefficiencies entailed by these governance structures, and so far our discussion of these along with community failures has conformed to the canon. But like markets and states, communities often fail in other, sometimes more egregious ways. Most individuals seek membership in a group of familiar associates and feel isolated without it. But the baggage of belonging often includes poor treatment of those who do not. The problem is exacerbated by the group homogeneity resulting from the neighborhood tipping community failure above. When insider-outsider distinctions are made on divisive and morally repugnant bases such as race, religion, nationality or sex, community governance may contribute more to fostering parochial narrow-mindedness and ethnic hostility than to addressing the failures of markets and states. This downside of community becomes particularly troubling when insiders are wealthy and powerful and outsiders are exploited as a result.

The problem is endemic. Communities work because they are good at enforcing norms, and whether this is a good thing depends on what the norms are. The recent resistance to racial integration by the white residents of Ruyterwacht (near Cape Town) is as gripping an account of social capital in action as one can imagine (Jung 1998). Even more striking is Dov Cohen’s (1998) study of U.S. regional differences in the relationship between violence and community stability. With Richard Nisbett (1996) he has described a “culture of honor” that often turns public insults and arguments into deadly confrontations among white males in the South

and West, but not in the North. Cohen's research confirms finding that in the North, homicides stemming from arguments are less frequent in areas of higher residential stability, measured by the fractions of people living in the same house and the same county over a five year period. But this relationship is inverted in the South and West, residential stability being positively and significantly related to the frequency of these homicides where the culture of honor is strong.

6 Enhancing Community Governance

Many adherents of the liberal philosophical tradition—whether conservative advocates of *laissez faire* or their social democratic and liberal socialist critics—have for these reasons seen communities as anachronistic remnants of a less enlightened epoch that lacked the property rights, markets and states adequate to the task of governance. In this view communities are not part of the solution to the failures of markets and states, but part of the problem of parochial populism or traditional fundamentalism. Many holding this view have long since rejected any dogmatic adherence to either pole of the planning versus markets opposition. But these anchors still moor the ship of good government as firmly as ever, debate now centering on the optimal location along the resulting continuum.

Those advocating social capital, or as we would prefer, community governance, as an important aspect of policy-making and institution-building have come to be dissatisfied with this view, doubting (with Kenneth Arrow) that states or markets, in any combination, can be so perfected as to make norms redundant, and believing that the substantial drawbacks of this third form of governance can be attenuated by adequate social policy. Many have also pointed to cases where efforts to perfect the market or assure the success of state interventions have destroyed imperfect but nonetheless valuable community-based systems of governance, suggesting that policy paradigms confined to states and markets may be counterproductive.

Unlike the utopian capitalism of textbook neoclassical economics and the utopian statism of its subbranch called welfare economics, which for the past fifty years has imagined that governments have both the information and the inclination to offset market failures, there can be no blueprint for ideal community governance. As Elinor Ostrom (1990), James Scott (1998) and other field researchers have stressed, communities solve problems in a bewildering variety of ways with hundreds of differing membership rules, *de facto* property rights, and decision-making procedures. But the above cases may suggest some of the elements that are frequently found in well-governing communities and which might form part of a public policy aimed at enhancing the desirable aspects of community governance.

The first, strongly supported by our experimental evidence, is that members

of the community should own the fruits of their success or failure in solving the collective problems they face. The Japanese fishermen, skippers and crew alike, own shares in the output of their coop and hence directly benefit from its success in a way that employees on fixed wages would not. Among the Chicago residents, communities in which home ownership is common exhibit much higher levels of “collective efficacy” even after controlling for a large number of demographic and economic variables. The most likely explanation is that home owners benefit fully from their neighborhood improvement interventions, not only from the improved quality of life but from the enhanced value of their homes. This interpretation is consistent with the fact that Sidney Verba and his collaborators (1995) found that controlling for a large number of demographic and other variables, U.S. home owners are more likely to participate in local but not national politics, and Edward Glaeser and Denise Depasquale (1999) found in a sample of German individuals that changes in home ownership predict changes in levels of civic participation. Finally, the plywood worker-owners’ success would be inexplicable were it not for the fact that as residual claimants on the income stream of the coop, each own the results of the others efforts. As these examples suggest, in order to own the success of one’s efforts, community members must generally own the assets with which they work, or whose value is affected by what the community does.

Second, the cases above and hundreds like them suggest that well-working communities require a legal and governmental environment favorable to their functioning. The Chicago residents’ success in reducing crime could hardly have been realized had the police not been on call. The Japanese fishing coops numbering more than a thousand work within national and prefectural environmental and other regulations which they are free to complement by locally made rules, but not to override. A comparison of Taiwanese and South Indian farmer-managed irrigation organizations shows that the greater success of the former is due to the effective intervention of national governments in providing a favorable legal environment and handling cases in which the informal sanctions of the community would not be adequate (Lam 1996, Wade 1988) Similar community-governmental synergy is found in Tendler’s study of the delivery of health care (1997) and Ostrom’s account of urban infrastructure (1996), both in Brazil. The fact that governmental intervention has sometimes destroyed community governance capacities does not support a recommendation of *laissez faire*.

The face-to-face local interactions of community are thus not a substitute for effective government but rather a complement. Neglect of this point no doubt explains some of the popularity of the social capital concept. A Gallup Poll recently asked a large national sample of Americans “Which one of the following groups do you think has the greatest responsibility for helping the poor: churches, private charities, the government, the families and relatives of poor people, the poor them-

selves, or someone else?” They also asked if inequalities in income and wealth were “acceptable” or “a problem that needs to be fixed.” While the sample was evenly split between the government on the one hand and all of the non-governmental responses on the other, those unconcerned about the level of inequality were almost three times as likely to support the private approach than the government solution.³ Those favoring the social capital option in this case were seemingly more motivated by the fact that it would shrink government than by the hope that it would reduce inequality.

Thus both a legal and governmental environment that complements the distinctive governance abilities of communities and a distribution of property rights that makes members the beneficiaries of community success are key aspects of policies to foster community problem-solving. Developing an institutional structure such that states, markets and communities are mutually enhancing is a challenging task, however. For example, where property rights are ill-defined and informal contractual enforcement is essential to mutually beneficial exchange, more precisely defined property rights may *reduce* the multifaceted and repeated nature of interpersonal contact on which community governance is based (Bowles and Gintis 1998). Similarly, there is considerable evidence that attempts to induce higher levels of work effort, compliance to norms, or environmental conservation by mobilizing self-interested motives through the use of fines and sanctions may undermine reciprocity and other social motives (Fehr and Gächter 2000, Bewley 1995, Gneezy and Rustichini 2000, Cardenas, Stranlund and Willis 2000), as well as other sources cited in Bowles (1998).

A third element in the community/good governance package: active advocacy of the conventional liberal ethics of equal treatment and enforcement of conventional anti-discrimination policies. That it is not unrealistic to hope that communities can govern effectively without repugnant behaviors favoring “us” against “them” is suggested by the many examples of well-working communities that do not exhibit the ugly parochial and divisive potential of this form of governance, including all of those above.

Other ways of empowering communities can be imagined, but some should be resisted on grounds that they heighten the difficult tradeoffs between good governance and parochialism mentioned above. For example, Alesina and La Ferrara (1999) found that among U.S. localities, participation in church, local service and political groups as well as other community organizations is substantially higher where income is more equally distributed, even when a host of other possible influ-

³Christina Fong, personal communication (1999) of her analysis of data from the Gallop Poll Social Audit Survey “Haves and Have-Nots: Perceptions of Fairness and Opportunity,” a randomly selected national sample of 5001 adults between April 23 and May 31, 1998.

ence are controlled. Their finding suggests that policies to increase income equality would enhance community governance. But they also found that racially and ethnically diverse localities, measured by the probability that two randomly selected members of the population would be of different racial or ethnic groups, had significantly lower levels of participation. One may hope that pro-community public policy would not seek to increase racial and ethnic homogeneity of groups for this reason.

But simply resisting government policies which homogenize is not sufficient. If Alesina and La Ferrara's results, and others like them, suggest that successful communities are likely to be relatively homogeneous, then a heavy reliance on community governance, in the absence of adequate counteracting policies, could promote higher levels of local homogeneity simply because the success of groups and their likely longevity will vary with how homogeneous they are. Thus a competitive economy in which worker-owned cooperatives are common is likely to exhibit more homogeneous workplaces than one made up of conventional firms. The combination of within-group homogeneity and between-group competition, while effectively promoting some desirable forms of governance, seems a recipe for hostile "us versus them" sentiments. Dilemmas such as this are not likely to disappear.

7 Economic Evolution and the Future of Community Governance

The age of commerce and the dawn of democracy were widely thought to mark the eclipse of community. Writers of all persuasions believed that markets, the state, or simply 'modernization,' would extinguish the values that throughout history had sustained forms of governance based on intimate and ascriptive relationships. According to the romantic conservative Edmund Burke (1955[1790])

...the age of chivalry is gone. That of Sophisters, economists, and calculators has succeeded... Nothing is left which engages the affection on the part of the commonwealth... so as to create in us love, veneration, admiration or attachment.

The liberal Alexis de Tocqueville (1958) echoes Burke's fears in this comment on democratic culture in America during the 1830's:

Each [person]... is a stranger to the fate of all the rest... his children and his private friends constitute to him the whole of mankind; as for the rest of his fellow citizens, he is close to them but he sees them not... he

touches them but he feels them not; he exists but in himself and for himself alone...

For the socialists Marx and Engels (1972[1848])

The bourgeoisie...has put an end to all feudal, patriarchal, idyllic relations. It has pitilessly torn asunder the motley feudal ties that bound man to his "natural superiors," and has left remaining no other nexus between man and man than naked self-interest...[I]n place of the numberless infeasible chartered freedoms, it has set up that single, unconscionable freedom—free trade. (p. 475)

Many who predicted the demise of community based their argument on the notion that communities owe their existence to a distinct set of pre-modern 'values' that were bound to be extinguished by economic and political competition in markets and democratic states, or as Marx put it by "the icy waters of egotistical calculation." Modern writers as well have stressed that the parochialism on which communities thrive require cultural commitments that are antithetical to modern social institutions. Talcott Parsons' sociological system, to mention one prominent example, consistently attributes 'particularistic' values to more primitive levels of civilization, and 'universalistic' values to the more advanced.

Fred Hirsch refers to the waning of precapitalist moral codes in similar vein:

This legacy has diminished with time and with the corrosive contact of the active capitalist values. As individual behavior has been increasingly directed to individual advantage, habits and instincts based on communal attitudes and objectives have lost out. Hirsch (1976):117–118.

We do not doubt that markets and democratic states represent cultural environments in which some values flourish and others wither. Indeed, the dismay concerning their effects, expressed so long ago by Burke, Marx and de Tocqueville, may have been prescient. But the basis for the rise, fall, and transformation of communities, if we are correct, is to be sought not in the survival of vestigial values of an earlier age, but in the capacity of communities, like that of markets and states, to provide successful solutions to assist in solving contemporary problems of social coordination.

Far from being an anachronism, community governance appears likely to assume more rather than less importance in the future. The reason is that the types of problems that communities solve, and which resist governmental and market solutions, arise when individuals interact in ways that cannot be regulated by complete contracts or by external *fiat* due to the complexity of the interactions or the private or

unverifiable nature of the information concerning the relevant transactions. These interactions arise increasingly in modern economies, as information intensive team production replaces assembly lines and other technologies more readily handled by contract or *fiat* and as difficult to measure services usurp the preeminent role, as both outputs and inputs, once played by measurable quantities like kilowatts of power and tons of steel. In an economy increasingly based on qualities rather than quantities, the superior governance capabilities of communities are likely to be manifested in increasing reliance on the kinds of multilateral monitoring and risksharing exemplified above. The model of the Japanese firm as an information sharing clan has already assumed importance for this reason (Aoki 1988, Ouchi 1980).

But the capacity of communities to solve problems may be impeded by hierarchical division and economic inequality among its members. Many observers believe, for example, that the limited inequality between managers and workers in the Japanese firm is a key contributor to its success. Pranab Bardhan (1999) and Jeff Dayton Johnson (1998) have found that farmer members of irrigation organizations in Tamil Nadu, India and Guanajuato, Mexico are more likely to cooperate in making efficient use water if status and class inequalities among them are limited. These results may reflect the same behavioral regularities underlying experimental results showing that cooperation in two-person non-repeated prisoners dilemma games declines dramatically when the degree of conflict of interest implicit in the payoff matrix increases (Axelrod 1970, Rapoport and Chammah 1965).

If we are right that communities work well where the tasks are qualitative and hard to capture in explicit contracts, but the conflicts of interest among the members are limited, it seems highly likely that extremely unequal societies will be competitively disadvantaged in the future because their structures of privilege and material reward limit the capacity of community governance to facilitate the qualitative interactions that underpin the modern economy.

REFERENCES

- Abraham, Anita, "Subsistence Credit: Survival Strategies among Traditional Fishermen," *Economic and Political Weekly* 20,6 (February 9 1985):247–252.
- Alchian, Armen and Harold Demsetz, "Production, Information Costs, and Economic Organization," *American Economic Review* 62 (December 1972):777–795.
- Alesina, Alberto and Eliana La Ferrara, "Participation in Heterogeneous Communities," 1999. NBER Working Paper 7155.
- Aoki, Masahiko, *Information, Information, Incentives, and Bargaining in the*

- Japanese Economy* (Cambridge: Cambridge University Press, 1988).
- and Yujiro Hayami, “Introduction,” in Masahiko Aoki and Yujiro Hayami (eds.) *Communities and Markets in Economic Development* (Oxford: Oxford University Press, 2000).
- Arrow, Kenneth J., “Political and Economic Evaluation of Social Effects and Externalities,” in M. D. Intriligator (ed.) *Frontiers of Quantitative Economics* (Amsterdam: North Holland, 1971) pp. 3–23.
- Axelrod, Robert, *Conflict of Interest: A Theory of Divergent Goals with Applications to Politics* (Chicago: Markham, 1970).
- Banerjee, Abhijit V., Timothy Besley, and Timothy W. Guinnane, “Thy Neighbor’s Keeper: The Design of a Credit Cooperative with Theory and a Test,” *Quarterly Journal of Economics* (May 1994):491–515.
- Bardhan, Pranab, “Water Community: An Empirical Analysis of Cooperation on Irrigation in South India,” 1999. University of California at Berkeley.
- Besley, Timothy and Stephen Coate, “Group Lending, Repayment Incentives and Social Collateral,” *Journal of Development Economics* 46 (1995):1–18.
- Bewley, Truman F., “A Depressed Labor Market as Explained by Participants,” *American Economic Review* 85,2 (1995):250–254.
- Bowles, Samuel, “Endogenous Preferences: The Cultural Consequences of Markets and Other Economic Institutions,” *Journal of Economic Literature* 36 (March 1998):75–111.
- , “Economic Behavior and Institutions: An Evolutionary Approach to Microeconomics,” 2001. Princeton University Press.
- and Herbert Gintis, “The Moral Economy of Community: Structured Populations and the Evolution of Prosocial Norms,” *Evolution & Human Behavior* 19,1 (January 1998):3–25.
- and —, *Recasting Egalitarianism: New Rules for Markets, States, and Communities* (London: Verso, 1999). Erik Olin Wright (ed.).
- and —, “Walrasian Economics in Retrospect,” *Quarterly Journal of Economics* (November 2000).
- , Jeffrey Carptenter, and Herbert Gintis, “Mutual Monitoring in Teams: The Importance of Residual Claimancy and Reciprocity,” 2000. University of Massachusetts.
- Burke, Edmund, *Reflections on the Civil War in France* (New York: Bobbs-Merrill, 1955[1790]).
- Cardenas, Juan Camilo, John K. Stranlund, and Cleve E. Willis, “Local Environmental Control and Institutional Crowding-out,” *World Development* 28,10 (July 2000).

- Cohen, Dov, "Culture, Social Organization, and Patterns of Violence," *Journal of Personality and Social Psychology* 75,2 (1998):408–419.
- Craig, Ben and John Pencavel, "Participation and Productivity: A Comparison of Worker Cooperatives and Conventional Firms in the Plywood Industry," *Brookings Papers: Microeconomics* (1995):121–160.
- Dayton-Johnson, Jeff, "Rules and Cooperation on the Local Commons: Theory with Evidence from Mexico," 1998. Doctoral Dissertation, University of California at Berkeley.
- de Tocqueville, Alexis, *Democracy in America, Volume II* (New York NY: Vintage, 1958).
- Dong, Xioa-yuan and Gregory Dow, "Does Free Exit Reduce Shirking in Production Teams?," *Journal of Comparative Economics* 17 (1993):472–484.
- and —, "Monitoring Costs in Chinese Agricultural Teams," *Journal of Political Economy* 101,3 (1993):539–553.
- Fehr, Ernst and Simon Gächter, "Cooperation and Punishment," *American Economic Review* 90,4 (September 2000).
- Ghemawat, Pankaj, "Competitive Advantage and Internal Organization: Nucor Revisited," *Journal of Economic and Management Strategy* 3,4 (winter 1995):685–717.
- Gintis, Herbert, "Strong Reciprocity and Human Sociality," *Journal of Theoretical Biology* 206 (2000):169–179.
- Glaeser, Edward L. and DiPasquale, "Incentives and Social Capital: Are Homeowners Better Citizens?," *Journal of Urban Economics* 45,2 (1999):354–384.
- Gneezy, Uri and Aldo Rustichini, "A Fine is a Price," *Journal of Legal Studies* 29 (2000):1–17.
- Hansen, Daniel G., "Individual Responses to a Group Incentive," *Industrial and Labor Relations Review* 51,1 (October 1997):37–49.
- Hayami, Yujiro, "Community, Market and State," in A. Maunder and A. Valdes (eds.) *Agriculture and Governments in an Independent World* (Amherst, MA: Gower, 1989) pp. 3–14.
- Hirsch, Fred, *Social Limits to Growth* (Cambridge, MA: Harvard University Press, 1976).
- Holmström, Bengt, "Moral Hazard in Teams," *Bell Journal of Economics* 7 (1982):324–340.
- Homans, George, *Social Behavior: Its Elementary Forms* (New York: Harcourt Brace, 1961).
- Hossain, M., "Credit for Alleviation of Rural Poverty: the Grameen Bank in Bangladesh," 1988. International Food Policy Research Institute Report 65.

- Jung, Courtney, "Community is the Foundation of Democracy: But what if your Community Looks Like This?," 1998. Yale University.
- Kandel, Eugene and Edward P. Lazear, "Peer Pressure and Partnerships," *Journal of Political Economy* 100,4 (August 1992):801–817.
- Knez, Marc and Duncan Simester, "Firm-wide Incentives and Mutual Monitoring," September 1998. Graduate School of Business, University of Chicago.
- Lam, Wai Fung, "Institutional Design of Public Agencies and Coproduction: A study of Irrigation Associations in Taiwan," *World Development* 24,6 (1996):1039–1054.
- Marx, Karl and Friedrich Engels, "The Communist Manifesto," in Robert Tucker (ed.) *The Marx-Engels Reader, 2nd Edition* (New York: W. W. Norton & Company, 1972[1848]).
- Nisbett, Richard E. and Dov Cohen, *Culture of Honor: The Psychology of Violence in the South* (Boulder: Westview Press, 1996).
- Ostrom, Elinor, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge, UK: Cambridge University Press, 1990).
- , "Crossing the Great Divide: Coproduction, Synergy, and Development," *World Development* 24,6 (1996):1073–1087.
- Ouchi, William, "Markets Bureaucracies and Clans," *Administrative Sciences Quarterly* 25 (March 1980):129–141.
- Pencavel, John, "Worker Participation: Lessons from the Worker Co-ops of the Pacific North-West," June 2001. Stanford University, Department of Economics.
- Platteau, Jean-Philippe and Erika Seki, "Community Arrangements to Overcome Market Failures: Pooling Groups in Japanese Fisheries," 1999. University of Namur.
- Rapoport, Anatol and Albert Chammah, *Prisoner's Dilemma* (Ann Arbor, MI: University of Michigan Press, 1965).
- Sampson, Robert J., Stephen W. Raudenbush, and Felton Earls, "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy," *Science* 277 (August 15, 1997):918–924.
- Schelling, Thomas C., *Micromotives and Macrobehavior* (New York: W. W. Norton & Co, 1978).
- Scott, James, *Seeing Like A State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998).
- Stiglitz, Joseph E., "Peer Monitoring and Credit Markets," in Karla Hoff, Avishay Braverman, and Joseph E. Stiglitz (eds.) *The Economics of Rural Organization: Theory, Practice, and Policy* (New York: Oxford University Press, 1993) pp. 70–85.

- Tendler, Judith, *Good Government in the Tropics* (Baltimore: Johns Hopkins, 1997).
- Tilly, Charles, "Charivaris, Repertoires and Urban Politics," in John M. Merriman (ed.) *French Cities in the Nineteenth Century* (New York: Holmes and Meier, 1981) pp. 73–91.
- Varian, Hal R., "Monitoring Agents with Other Agents," *Journal of Institutional and Theoretical Economics* 46,1 (1990):153–174.
- Verba, Sidney, Kay Lehman Schlozman, and Henry Brady, *Voice and Equality: Civic Voluntarism in American Politics* (Cambridge, MA: Harvard University Press, 1995).
- Wade, Robert, "Why Some Indian Villages Cooperate," *Economic and Political Weekly* 33 (April 16 1988):773–776.
- Whyte, William F., *Money and Motivation* (New York: Harper & Row, 1955).
- Young, H. Peyton, *Individual Strategy and Social Structure: An Evolutionary Theory of Institutions* (Princeton, NJ: Princeton University Press, 1998).