

SOCIAL CAPITAL AND COMMUNITY GOVERNANCE*

Samuel Bowles and Herbert Gintis

Community governance is the set of small group social interactions that, with market and state, determine economic outcomes. We argue (i) community governance addresses some common market and state failures but typically relies on insider-outsider distinctions that may be morally repugnant and economically costly; (ii) the individual motivations supporting community governance are not captured by either selfishness or altruism; (iii) communities, markets and states are complements, not substitutes; (iv) when poorly designed, markets and states crowd out communities; (v) some distributions of property rights are better than others at fostering community governance; and (vi) communities will probably increase in importance in the future.

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 behaviours were recognised 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 eighteenth 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 favour 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 polarised 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 centre are attracted to the social capital idea because it affirms the importance of trust, generosity, and collective action in social problem

* Thanks to Katie Baird, Michael Carter, Jeff Carpenter, Christina Fong, Yujiro Hayami, Robert Putnam and Elisabeth Wood for help and comments, as well as to the John D. and Catherine T. MacArthur Foundation for financial support.

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 – neighbourhoods, 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 the 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 idealised 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 the past century thus cleared the intellectual stage for social capital's entry.

Thus, a decade ago otherwise sceptical intellectuals and jaded policy makers surprised and impressed their friends by touting the remarkable correlation between choral societies and effective governance in Tuscany, warning of the perils of a nation that bowed alone, and quoting Alexis de Tocqueville on America as a nation of joiners. President George Bush, the elder, urged Americans to turn away from government to the 'thousand points of light' of a vibrant civil society, and then First Lady 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, (rather than the empirically implausible utility functions of *Homo economicus*), of how people interact in their daily lives, in families, neighbourhoods, 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 had it not existed. 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 Robert Putnam and others have stressed, '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 neighbourhoods, 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. Whether one is born into a community or one entered by choice, there are normally significant costs to moving from one to another.

The term community makes it clear that understanding trust, co-operation, generosity and other behaviours emphasised in the social capital literature requires the study of the structure of social interactions, and underlines the fact that the same individuals will exhibit different levels and types of social capital

depending on the social interactions in which they are engaged. This *social structural* approach to social capital may be contrasted with the more individual-based approach developed in the companion paper by Glaeser *et al.* (2002).

In the next section we propose an alternative framework which we term 'community governance'. We begin with some examples, and describe some experimental evidence demonstrating the plausibility of the underlying behavioural assumptions. Quite apart from the econometric problems stressed by Durlauf (2002) in his companion paper, we doubt that the commonly used survey instruments are reliable predictors of actual behaviours. For example, Glaeser *et al.* (2000) found that the standard questions about trust, popularised by Fukuyama (1995) and others, are entirely uninformative about either the respondent's experimental behaviour in a trust experiment for real money or the respondent's daily behaviour (willingness to loan possessions to others, etc). 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 recognise and enhance the complementarities among markets, states and communities. Similar proposals are advanced by Ouchi (1980), Hayami (1989), Ostrom (1997), and Aoki and Hayami (2000). We close with some speculations about the future importance of communities.

We will attempt to show that (i) community governance address market and state failures but typically relies on insider-outsider distinctions that may be morally repugnant and economically costly; (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 pre-modern era, the small scale local interactions that characterise communities are likely to increase in importance as the economic problems that community governance handles relatively well become more important.

1. 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 neighbourhoods studied by Sampson *et al.* (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 neighbourhood amenities such as a local fire station threatened with budget cuts. These are all examples of what the authors term 'collective efficacy'. In other neighbourhoods residents adopt a more hands-off approach. Sampson *et al.* found considerable variation in the neighbourhood levels of collective

efficacy, with examples of rich and poor, black and white neighbourhoods 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 neighbours 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 neighbourhoods illustrate the informal enforcement of community norms.

The Toyama Bay fishing co-operatives in Japan studied by Platteau and Seki (2001) illustrate another aspect of community 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 co-operative which has been highly successful since its formation 35 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 co-operative'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 synchronised to increase the transparency of the sharing process and make opportunistic cheating on the agreement easy to detect.

The plywood workers who owned their firms in Oregon and Washington benefited from both the peer-monitoring of the Chicago neighbours and the risk-pooling of the fishermen. They elected their managers and required 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. Before the entire industry moved to the South Eastern United States, these co-operatives had successfully competed with conventionally organised firms in the industry, both union and non union, for two generations, their success largely attributable to high levels of work commitment and savings on managerial monitoring of workers (when one firm converted to co-operative ownership the supervisory staff was cut by three quarters). The econometric analysis of Craig and Pencavel (1995) indicates that total factor productivity (output per unit of labour and capital combined) is significantly higher than in their conventional counterparts. When faced with cyclical downturns in the demand for plywood the co-operatives, 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 (2002) and for other examples Hansen (1997), Ghemawat (1995), and Knez and Simester (1998).

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 neighbourhood 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' behaviours, capacities, and needs. Members use this information both to uphold norms (work norms among the plywood workers and the fishermen, community behavioural 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 centralised 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 neighbour 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 Arrow 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 co-operation would have to be foregone ... norms of social behaviour, including ethical and moral codes (may be) ... reactions of society to compensate for market failures. (Arrow, 1971 p. 22)

Communities are one of the ways these norms are sustained (Bowles and Gintis, 1998, 2001).

2. 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 can be closely aligned, market competition provides a decentralised 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 programme, or paying for national defence) governments have an advantage.

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 organisations to apply rewards and punishments to members according to their conformity with or deviation from social norms. An effective community monitors the behaviour of its members, rendering them accountable for their actions. In contrast with states and markets, communities more effectively foster and utilise 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 behaviour and likely future actions of other members. The more easily acquired and widely dispersed this information, the more community members will 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 common situations, and residential neighbourhoods 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, 1993; Sampson *et al.*, 1997).

To the extent that economists have sought to understand how communities work they have treated individuals as self interested, and considered models in which self interested agents would co-operate even in interactions that at first glance appear to have defection as a dominant strategy. We have explained elsewhere why we find these explanations inadequate (Bowles and Gintis, 2001; Gintis, 2000*a*; Bowles, 2003). By contrast, many behavioural scientists outside 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 introduce a model using the methodological 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 behavioural 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 even when there is no reasonable expectation of being personally repaid for their efforts. We call this behaviour *strong reciprocity*. A strong reciprocator is predisposed to co-operate with others and punish non-cooperators, even when this behaviour 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, 2002) and Gintis (2000b).

An extensive body of evidence suggests that a considerable fraction of the population, in many different societies, and under many different social conditions, including complete anonymity, are strong reciprocators (Henrich *et al.*, 2001). We here review laboratory evidence concerning the public goods game, the game structure most relevant to the problems of community governance. For additional evidence, including the results of dictator, ultimatum, common pool resource and trust games, see Güth and Tietz (1990), Roth (1995), and Camerer and Thaler (1995). The public goods game consists of n subjects under conditions of strict anonymity. Each subject is given w 'points', redeemable at the end of the experimental session for real money. Each subject then places some number of points in a 'common account', and keeps the rest. The experimenter then gives each subject a fraction $q \in (1/n, 1)$ times the total amount in the common account. Contributing is thus an altruistic act, because it increases the average pay-off to the group ($q > 1/n$) at the expense of the individual ($q < 1$).

Contributing nothing to the common account is a dominant strategy in the public goods game if subjects are self-interested. Public goods experiments, however, show that only a fraction of subjects conform to the self-interested model. Rather, subjects begin by contributing on average about half of their endowment to the common account.

If the game is continued over several rounds, however, contributions tend to fall. In a meta-study of twelve public goods experiments Fehr and Schmidt (1999) found that in the early rounds, average and median contribution levels ranged from 40% to 60% of the endowment, in the final period (usually round ten) 73% of all individuals ($N = 1,042$) contributed nothing, and many of the remaining players contributed close to zero. The explanation of the decay of co-operation offered by subjects when debriefed after the experiment is that co-operative subjects became angry at others who contributed less than themselves, and retaliated against free-riding low contributors in the only way available to them – by lowering their own contributions (Andreoni, 1995). Experimental evidence supports this interpretation. When subjects are allowed to punish non-contributors, they do so at a cost to themselves (Dawes *et al.* 1986; Sato 1987; Yamagishi 1988a, b, 1992; Ostrom *et al.* 1992).

Fehr and Gächter (2000), for instance, set up a ten round public goods game with costly punishment, employing three different methods of assigning members to groups. Under the *Personal* treatment, the four subjects remained in the same group for all ten periods. Under the *Stranger* treatment, the subjects were randomly reassigned after each round. Finally, under the *Perfect Stranger* treatment the subjects were randomly reassigned and assured that they would never meet another subject more than once (in this case, the number of rounds had to be reduced from ten to six to accommodate the size of the subject pool). Subjects earned an average of about \$35 for an experimental session.

Fehr and Gächter (2000) performed their experiment for ten rounds with punishment and ten rounds without. Their results are illustrated in Figure 1. We see that when costly punishment is permitted, co-operation does not deteriorate, and in the Partner game, despite strict anonymity, co-operation increases almost to full co-operation, even on the final round. When punishment is not permitted, however, the same subjects experience the deterioration of co-operation found in previous public goods games.

The contrast between the Partner effect and the two Stranger effects is worth noting. In the latter case punishment prevented the deterioration of co-operation, whereas in the former case punishment led to an increase in participation over time, until near full co-operation was achieved. This result suggests that subjects are motivated by the personal desire to punish free riders (the Stranger treatment), but are even more strongly motivated when they there is an identifiable group, to which they belong, whose co-operative effort is impaired by free riding

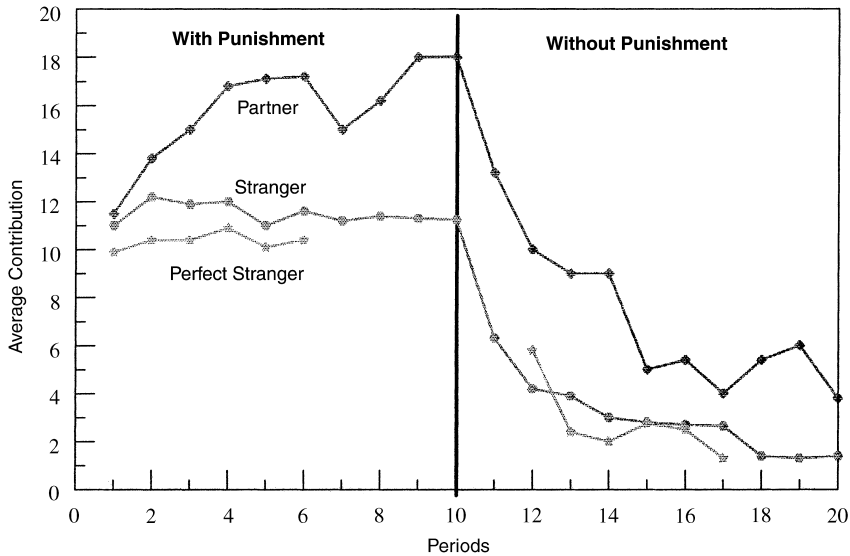


Fig. 1. Average Contributions Over Time in the Partner, Stranger, and Perfect Stranger Treatments When the Punishment Condition is Played First (adapted from Fehr and Gächter, 2000)

(the Partner treatment). The pro-sociality of strong reciprocity is thus more strongly manifested, the more coherent and permanent the group in question.

The frequency with which subjects paid to punish other group members raises serious doubts about the adequacy of the standard behavioural model, for in the perfect stranger treatment (or in the final periods of other treatments) the dominant strategy is to contribute nothing and to refrain from punishing. Indeed, strategically, punishment is identical to the contribution to the public good. Both are forms of altruism – a benefit conferred on others at a cost to oneself. The fact that subjects avidly punish low contributors, and display considerable negative affect when asked why they do so, suggests that they are responding emotionally – specifically, they are acting on feelings of anger.

Our own experiments (Bowles *et al.*, 2001; Bowles and Gintis, 2001) make it clear that the willingness to punish low contributors in perfect stranger public goods games is not based solely on altruistic feelings towards those who will benefit from the fact that those punished contribute more in subsequent rounds. Similarly, the fact that low contributors respond positively to punishment is not explained simply by their desire to avoid pay-off reductions in the future. We think it likely that punishment triggers shame by those who have shirked and that this emotional reaction to punishment (and not simply pay-off maximisation) is part of the reason for the effectiveness of punishment. The public goods experiments suggest that human motivations include the reciprocal preferences that may sustain mutual monitoring and high levels of co-operation even in communities of substantial size (Bowles *et al.*, 2001). Attention to these and other non-standard preferences is long overdue in economics. But if non-standard motives are part of the way that communities work, they are also implicated in community failures.

3. Community Failures

Like markets and governments, communities also fail. The personal and durable contacts that characterise 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 co-operative groups, and reaped substantial benefits from the diversity of talents among the membership. Similarly co-operation 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 markets, which specialise 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 Schelling (1978) pointed out in his analysis of neighbourhood tipping. Integrated communities would make everyone better off, but they will prove unsustainable if individuals are free to move. See Young (1998) and Bowles (2003) 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 neighbourhood 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, 2001). Even more striking is Cohen's (1998) study of US regional differences in the relationship between violence and community stability. Nisbett and Cohen (1996) describe a 'culture of honour' 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 the expected 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 honour is strong.

4. 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 enlight-

tened epoch that lacked the property rights, markets and states adequate to the task of governance of a modern society. 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 centring on the optimal location between the two shores.

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 sub-branch called welfare economics, which for the past 50 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 Ostrom (1990), 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 co-operative 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 neighbourhood 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 Verba *et al.* (1995) found that controlling for a large number of demographic and other variables, US home owners are more likely to participate in local but not national politics, and Glaeser and DiPasquale (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 co-operative, each owns 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, as we have seen in the public goods with punishment experiments, the unravelling of co-operation that often afflicts communities can be averted if opportunities for mutual monitoring and punishment of non-co-operators are built into the structure of social interactions. Policies to increase the visibility of the actions of peers in communities, along with policies to enhance the effectiveness of forms of multilateral sanctioning of shirkers may thus contribute to co-operative solutions to problems, even if a majority of members are self-interested. Hunter-gatherer bands that share food often practice the custom of eating in public, an effect of which is to make violations of the sharing rule evident to all. The Toyama Bay fishers practice of off-loading their catch at the same time likewise contributes to transparency in implementing their sharing rule.

An important feature of models in which co-operation in sizable groups is sustained by the punishment of shirkers is that multiple equilibria typically exist. When co-operation is common, the costs incurred by civic-minded punishers is small, and they can easily persist in a population, while when co-operation is uncommon, those who punish shirkers will incur heavy costs and will be likely to be eliminated by any plausible evolutionary process (Boyd *et al.*, 2001). This suggests that a heterogeneous population with some civic-minded members, ready to punish those who violate norms, and some self-interested members, may exhibit high or low levels of co-operation depending not on the distribution of types in the population but rather on the recent history of the group.

In 1754, David Hume (1898[1754]) advised 'that, in contriving any system of government . . . every man ought to be supposed to be a knave and to have no other end, in all his actions, than his private interest'. But he was appealing to prudence, not to realism. His next sentence reads: it is 'strange that a maxim should be true in politics which is false in fact'. However if, as Hume realised, individuals are not uniformly selfish, but rather are sometimes given to honourable sentiments, then prudence and realism alike might recommend an alternative dictum: policy makers and constitution builders should know that populations are heterogeneous and the individuals making them up are both versatile and plastic, and that good policies and constitutions are those that support socially valued outcomes not only by harnessing selfish motives to socially valued ends, but also by evoking, cultivating, and empowering public spirited motives.

There is a third desideratum for enhancing community governance. The cases above and hundreds like them suggest that well-working communities require a legal and governmental environment favourable to their functioning. The Chicago residents' success in reducing crime could hardly have been realised had the police not been on call. The Japanese fishing co-operatives 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 organisations shows that the greater success of the former is due to the effective intervention of national governments in providing a favourable 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 (1997) study of the delivery of health care and Ostrom's (1996) account of urban infrastructure, 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 themselves, 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 (Christina 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 5,001 adults between April 23 and May 31, 1998.) Those favouring 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 mobilising 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 *et al.*, 2000), as well as other sources cited in Bowles (1998).

A fourth 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 behaviours favouring '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 trade offs between good governance and parochialism mentioned above. For example, Alesina and La Ferrara (2000) found that among United States localities, participation in church, local service and political groups as well as other community organisations is substantially higher where income is more equally distributed, even when a host of other possible influences 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.

But simply resisting government policies that homogenise 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 co-operatives 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.

5. 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 'modernisation', 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 1830s:

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 civilisation, and 'universalistic' values to the more advanced.

Fred Hirsch referred 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 behaviour has been increasingly directed to individual advantage, habits and instincts based on communal attitudes and objectives have lost out. Hirsch (1976, pp. 117–18)

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 pre-eminent 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 risk-sharing exemplified above.

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 information sharing between management and production workers (Aoki, 1988). Dayton-Johnson and Bardhan (2003) have found that farmer members of irrigation organisations in Tamil Nadu, India and Guanajuato, Mexico are more likely to co-operate in making efficient use of water if status and class inequalities among them are limited. We survey other evidence as well as the theory underlying these comments in Baland *et al.* (2003) and Bardhan *et al.* (2000). These results may reflect the same behavioural regularities underlying experimental results showing that co-operation in two-person non-repeated prisoner dilemma games declines dramatically when the degree of conflict of interest implicit in the pay-off matrix increases (Axelrod, 1970; Rapoport and Chammah, 1965).

If we are right that communities work well relative to markets [and states where the tasks are qualitative and hard to capture in explicit contracts, and the conflicts of interest among the members are limited, it seems 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.

University of Massachusetts, Santa Fe Institute and University of Siena

References

- Alesina, A. and La Ferrara, E. (2000). 'Participation in heterogeneous communities', *Quarterly Journal of Economics*, vol. 115(3), pp. 847–904.
- Andreoni, J. (1995). 'Cooperation in public goods experiments: kindness or confusion', *American Economic Review*, vol. 85(4), pp. 891–904.
- Aoki, M. (1988). *Information, Incentives, and Bargaining in the Japanese Economy*, Cambridge: Cambridge University Press.
- Aoki, M. and Hayami, Y. (2000). 'Introduction', in (M. Aoki and Y. Hayami, eds) *Communities and Markets in Economic Development*, Oxford: Oxford University Press.
- Arrow, K.J. (1971). 'Political and economic evaluation of social effects and externalities', in (M.D. Intriligator, ed.), *Frontiers of Quantitative Economics*, Amsterdam: North Holland, pp. 3–23.
- Axelrod, R. (1970). *Conflict of Interest: A Theory of Divergent Goals with Applications to Politics*, Chicago: Markham.
- Baland, J.M., Bardhan, P. and Bowles, S. (2003). *Inequality, Cooperation and Environmental Sustainability*, New York: Russell Sage.
- Bardhan, P., Bowles, S. and Gintis, H. (2000). 'Wealth inequality, credit constraints, and economic performance', in (A. Atkinson and F. Bourguignon, eds), *Handbook of Income Distribution*, Dordrecht: North-Holland.
- Besley, T. and Coate, S. (1995). 'Group lending, repayment incentives and social collateral', *Journal of Development Economics*, vol. 46, pp. 1–18.
- Bewley, T.F. (1995). 'A depressed labor market as explained by participants', *American Economic Review*, vol. 85(2), pp. 250–4.
- Bowles, S. (1998). 'Endogenous preferences: the cultural consequences of markets and other economic institutions', *Journal of Economic Literature*, vol. 36 (March), pp. 75–111.
- Bowles, S. (2003). *Microeconomics: Behavior, Institutions and Evolution*, Princeton: Princeton University Press.
- Bowles, S. and Gintis, H. (1998). 'The moral economy of community: structured populations and the evolution of prosocial norms', *Evolution & Human Behavior*, vol. 19(1) (January), pp. 3–25.
- Bowles, S. and Gintis, H. (2000). 'Walrasian economics in retrospect', *Quarterly Journal of Economics*, vol. (November).

- Bowles, S. and Gintis, H. (2001). 'The economics of shame and punishment', Santa Fe Institute Working Paper.
- Bowles, S., Carpenter, J. and Gintis, H. (2001). 'Mutual monitoring in teams: the importance of shame and punishment', University of Massachusetts.
- Boyd, R., Gintis, H., Bowles, S. and Richerson, P.J. (2001). 'Altruistic punishment in large groups evolves by interdemocratic group selection', Working Paper.
- Burke, E. (1955[1790]). *Reflections on the Civil War in France*, New York: Bobbs-Merrill.
- Camerer, C. and Thaler, R. (1995). 'Ultimatums, dictators, and manners', *Journal of Economic Perspectives*, vol. 9(2), pp. 209–19.
- Cardenas, J.C., Stranlund, J.K. and Willis, C.E. (2000). 'Local environmental control and institutional crowding-out', *World Development*, vol. 28(10) (July).
- Cohen, D. (1998). 'Culture, social organization, and patterns of violence', *Journal of Personality and Social Psychology*, vol. 75(2), pp. 408–19.
- Craig, B. and Pencavel, J. (1995). 'Participation and productivity: a comparison of worker cooperatives and conventional firms in the plywood industry', *Brookings Papers: Microeconomics*, pp. 121–60.
- Dawes, R.M., Orbell, J.M. and Van de Kragt, J.C. (1986). 'Organizing groups for collective action', *American Political Science Review*, vol. 80 (December), pp. 1171–85.
- Dayton-Johnson, J. and Bardhan, P. (2003). 'Inequality and the governance of water resources in Mexico and South India', in (J.M. Baland, P. Bardhan and S. Bowles, eds), *Inequality, Cooperation and Environmental Sustainability*, New York: Russell Sage.
- de Tocqueville, A. (1958). *Democracy in America*, Volume II, New York: Vintage.
- Dong, X. and Dow, G. (1993). 'Monitoring costs in Chinese agricultural teams', *Journal of Political Economy*, vol. 101(3), pp. 539–53.
- Durlauf, S. (2002). 'On the empirics of social capital', *ECONOMIC JOURNAL*, vol. 112 (November), pp. 459–79.
- Fehr, E. and Gächter, S. (2000). 'Cooperation and punishment', *American Economic Review*, vol. 90(4) (September), pp. 980–94.
- Fehr, E. and Gächter, S. (2002). 'Altruistic punishment in humans', *Nature*, vol. 415 (10 January), pp. 137–40.
- Fehr, E. and Schmidt, K.M. (1999). 'A theory of fairness, competition, and cooperation', *Quarterly Journal of Economics*, vol. 114(August), pp. 817–68.
- Fukuyama, F. (1995). *The Social Virtues and the Creation of Prosperity*, New York: Free Press.
- Ghemawat, P. (1995). 'Competitive advantage and internal organization: Nucor revisited', *Journal of Economic and Management Strategy*, vol. 3(4) (winter), pp. 685–717.
- Gintis, H. (2000a). *Game Theory Evolving*, Princeton, NJ: Princeton University Press.
- Gintis, H. (2000b). 'Strong reciprocity and human sociality', *Journal of Theoretical Biology*, vol. 206, pp. 169–79.
- Glaeser, E.L. and DiPasquale, D. (1999). 'Incentives and social capital: are homeowners better citizens?', *Journal of Urban Economics*, vol. 45(2), pp. 354–84.
- Glaeser, E., Laibson, D. and Sacerdote, B. (2002). 'The economic approach to social capital', *ECONOMIC JOURNAL*, vol. 112(8), pp. F437–58.
- Glaeser, E., Laibson, D., Scheinkman, J.A. and Soutter, C.L. (2000). 'Measuring trust', *Quarterly Journal of Economics*, vol. 65, pp. 622–846.
- Gneezy, U. and Rustichini, A. (2000). 'A fine is a price', *Journal of Legal Studies*, vol. 29, pp. 1–17.
- Güth, W. and Tietz, R. (1990). 'Ultimatum bargaining behavior: a survey and comparison of experimental results', *Journal of Economic Psychology*, vol. 11, pp. 417–49.
- Hansen, D.G. (1997). 'Individual responses to a group incentive', *Industrial and Labor Relations Review*, vol. 51(1) (October), pp. 37–49.
- Hayami, Y. (1989). 'Community, market and state', in (A. Maunder and A. Valdes, eds), *Agriculture and Governments in an Independent World*, Amherst, MA: Gower, pp. 3–14.
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H. and McElreath, R. (2001). 'Cooperation, reciprocity and punishment in fifteen small-scale societies', *American Economic Review*, vol. 91(May), pp. 73–78.
- Hirsch, F. (1976). *Social Limits to Growth*, Cambridge, MA: Harvard University Press.
- Homans, G. (1961). *Social Behavior: Its Elementary Forms*, New York: Harcourt Brace.
- Hossain, M. (1988). 'Credit for alleviation of rural poverty: the Grameen Bank in Bangladesh', *International Food Policy Research Institute Report* 65.
- Hume, D. (1898[1754]). *Essays: Moral, Political and Literary*, London: Longmans, Green.
- Jung, C. (2001). 'Collective action and trust revisited: evidence from a small case', New School University.
- Kandel, E. and Lazear, E.P. (1992). 'Peer pressure and partnerships', *Journal of Political Economy*, vol. 100(4) (August), pp. 801–17.

- Knez, M. and Simester, D. (1998). 'Firm-wide incentives and mutual monitoring', Graduate School of Business, University of Chicago (September).
- Lam, W.F. (1996). 'Institutional design of public agencies and coproduction: a study of irrigation associations in Taiwan', *World Development*, vol. 24(6), pp. 1039–54.
- Marx, K. and Engels, F. (1972[1848]). 'The Communist Manifesto', in (R.Tucker, ed.), *The Marx-Engels Reader, 2nd Edition*, New York: W.W. Norton & Company.
- Nisbett, R.E. and Cohen, D. (1996). *Culture of Honor: The Psychology of Violence in the South*, Boulder: Westview Press.
- Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge, UK: Cambridge University Press.
- Ostrom, E. (1996). 'Crossing the great divide: coproduction, synergy, and development', *World Development*, vol. 24(6), pp. 1073–87.
- Ostrom, E. (1997). 'The comparative study of public economies', *Workshop in Political Theory and Policy Analysis: Center for the Study of Institutes, Population and Environmental Change*, Indiana University.
- Ostrom, E., Walker, J. and Gardner, R. (1992). 'Covenants with and without a sword: self-governance is possible', *American Political Science Review*, vol. 86(2) (June), pp. 404–17.
- Ouchi, W. (1980). 'Markets bureaucracies and clans', *Administrative Sciences Quarterly*, vol. 25 (March), pp. 129–41.
- Pencavel, J. (2002). 'Worker participation: lessons from the worker co-ops of the Pacific North-West', Stanford University, Department of Economics (June). F422.
- Platteau, J.-P. and Seki, E. (2001) 'Community arrangements to overcome market failure: pooling groups in Japanese fisheries', in (M. Hayami and Y. Hayami eds), *Communities and Markets in Economic Development*, Oxford: Oxford University Press, pp. 344–402.
- Rapoport, A. and Chammah, A. (1965). *Prisoner's Dilemma* (Ann Arbor, MI: University of Michigan Press.
- Roth, A. (1995) 'Bargaining experiments', in (J. Kagel and A. Roth, eds), *The Handbook of Experimental Economics*, Princeton, NJ: Princeton University Press.
- Sampson, R.J., Raudenbush, S.W., and Earls, F. (1997). 'Neighborhoods and violent crime: a multilevel study of collective efficacy', *Science*, vol. 277 (August 15), pp. 918–24.
- Sato, K. (1987). 'Distribution and the cost of maintaining common property resources', *Journal of Experimental Social Psychology*, vol. 23 (January), pp. 19–31.
- Schelling, T.C. (1978). *Micromotives and Macrobehavior*, New York: W.W. Norton & Co.
- Scott, J. (1998). *Seeing Like A State: How Certain Schemes to Improve the Human Condition Have Failed*, New Haven: Yale University Press.
- Tendler, J. (1997). *Good Government in the Tropics*, Baltimore: Johns Hopkins.
- Tilly, C. (1981). 'Charivaris, repertoires and urban politics', in (J.M. Merriman, ed.), *French Cities in the Nineteenth Century*, New York: Holmes and Meier, pp. 73–91.
- Verba, S., Scholzman, K.L., and Brady, H. (1995). *Voice and Equality: Civic Voluntarism in American Politics*, Cambridge, MA: Harvard University Press.
- Wade, R. (1988). 'Why some Indian villages cooperate', *Economic and Political Weekly*, vol. 33 (April 16), pp. 773–6.
- Whyte, W.F. (1955). *Money and Motivation*, New York: Harper & Row.
- Yamagishi, T. (1988a). 'The provision of a sanctioning system in the United States and Japan', *Social Psychology Quarterly*, vol. 51(3), pp. 265–71.
- Yamagishi, T. (1988b). 'Seriousness of social dilemmas and the provision of a sanctioning system', *Social Psychology Quarterly*, vol. 51(1), pp. 32–42.
- Yamagishi, T. (1992) 'Group size and the provision of a sanctioning system in a social dilemma', in (W.B.G. Liebrand, David M. Messick, and H.A.M. Wilke, eds), *Social Dilemmas: Theoretical Issues and Research Findings*, Oxford: Pergamon Press, pp. 267–87.
- Young, H.P. (1998). *Individual Strategy and Social Structure: An Evolutionary Theory of Institutions*, Princeton, NJ: Princeton University Press, 1998.