Civil Society

10

"There is no such thing as societies, only individuals and their families," said former British Prime Minister Margaret Thatcher. Most social scientists would disagree; for them the importance of the myriad ways people come together in society is obvious. (One type of way, of course, is through families.) In any practical discussion of economic policy, social institutions are likely to play a significant role. Whether the groups in question are religious denominations, unions, human rights or environmental advocacy organizations or some other group of people with a purpose, their impact has to be taken into account.

This chapter will appear to be more of a grab bag than the others, since the concept of civil society is essentially a residual; a group or interest belongs to civil society if it is not governmental and not in business to make money for itself in the marketplace. This includes a lot of things which have relatively little in common, except for the social space they share and the many effects, small and large, they have on each other. We will begin by exploring the relationship between civil society and the economy in general terms, but the centerpiece of the chapter will be a detailed look at the problem of organizing voluntary collective action. We will conclude with briefer considerations of the role of family structure, kinship and the overall density of networks connecting people unrelated by birth ("social capital").

10.1 Why Civil Society Matters

Let's make a list of organizations and other social elements that would be included in a civil society roll-call:

There are not-for-profit groups that play an important role in many aspects of the economy, such as private schools, foundations that make grants to support research and social action, publications that are produced to promote ideas rather than make money, groups that promote the causes of consumers, animal rights, hunters, retired people, and many more.

P. Dorman, *Microeconomics*, Springer Texts in Business and Economics,
DOI 10.1007/978-3-642-37434-0_10,

There are religious institutions at all levels, as well as the social service organizations that religions often set up. There may be competing denominations or spiritual views within a religion, and these too may be organized.

There are unions, professional associations and trade groups. These are closely tied to the economy, but they are not economic organizations in the same sense that businesses are. They sell services to their members, but, unless they have succumbed to corruption, they aim to make their members wealthier, not themselves.

There are self-help groups and the not-for-profit businesses that have sometimes evolved out of them. Organizations for recovering alcoholics or cancer survivors fit this mold, and in a sense so do automobile clubs.

There are social clubs for sports, music or other activities that not only promote their common interests, but also provide opportunities for networking. The social connections they establish can play a role in economic life. Nearly every large city, for instance, has a social club (or several) that have as their members the leading local business owners and managers. Their conversations can be expected to extend beyond how to play a particular hole on the golf course or what to order for dinner.

Families themselves are social groups, of course, especially if we take into consideration the tendrils of kinship that spread out from them. Kinship networks, as we will see, play a crucial role in some economic contexts. Families also organize most of the unpaid labor which, while largely unmeasured, plays an indispensable role in every economy.

Finally, there are valuable resources that societies hold in common, some the product of nature and others of human culture and custom. These are essential to the functioning of the economy, but it is also possible for the economy to put them at risk.

How can we sum up this kaleidoscope of social groupings, relationships and possessions? I would propose three general functions the elements of civil society perform in relation to the economy:

- They produce and distribute valuable goods and services. Unpaid production in the household will be one of focuses later in this chapter, as will the contribution of resources held in common. We will have less to say about not-for-profit and self-help organizations, but this should not be taken as a sign that they are less important. As for distribution, the connections people establish to both formal (organized) and informal networks play an important role in what they can expect to gain from the economy, a topic we will return to when we consider social capital.
- They help shape the other institutions in society, including markets themselves. In Chap. 7 there were references to the "embeddedness" of markets in social networks; in this chapter we will see some of those networks in action.
- They perform a regulatory role alongside or in place of the state. During the past few decades in particular, non-governmental advocacy groups have arisen to pressure corporations and markets to change their products, methods and social practices. These may prove to be a permanent fixture in modern industrial economies.

Our survey will begin with a detailed consideration of the problems of organizing and sustaining social action; then we will look at recent economic research into one specific type of social institutions, the family. We will end with a brief look at an emerging area of economic debate, the role of social connectedness—"social capital"—in economic outcomes.

10.2 Collective Action

We will begin with an example which, while not earth-shaking, may be familiar to many readers. Suppose a neighborhood wants to revitalize itself, beginning with a clean-up campaign—a community event to pick up and dispose of waste and litter. A day is set aside for this event, which is announced in flyers, local publications, perhaps on a billboard. Who will show up?

Start with the assumption that every individual in the neighborhood is rational and self-interested in the conventional economic sense discussed in Chap. 3. They value two things, clean streets and yards but also their own free time; in other words, they want the neighborhood to be clean but they don't feel like doing it themselves. This assumption is not too farfetched, is it? Another will be that each resident has just two choices, to participate in the cleanup or not. To keep matters as simple as possible, we will not worry about how many minutes they spend participating or how hard they work; it will be just a yes-or-no decision. Finally, we will assume that what others do (whether they participate or not) will be unaffected by each individual's choice, that there are enough of these others that the effort of each individual alone has a minuscule effect on the cleanup, and that they will either mostly take part in the cleanup or mostly sit it out, in which case the neighborhood will stay messy.

Given this set of assumptions, there are four possibilities that can arise for each person:

(a) They participate and others do too.
(b) They participate and others don't.
(c) They don't participate but others do.
(d) They don't participate, nor do others.

Based on their preference for not working, we know that each individual prefers c to a and d to b, and their preference for a clean neighborhood means they value a over b and c over d. To put it bluntly, they would like to do something else that day, but they want their neighbors to pitch in. What we don't know at this point is how they would compare a and d. If the benefits of a clean neighborhood weigh more in their estimation than the cost of spending a day cleaning, then a is preferred to d and we have once again our old friend, the Prisoner's Dilemma. This is apparent from the payoff matrix in Fig. 10.1, which uses the familiar device of treating "everyone else" as a single, composite player.

As before, we designate the action that benefits the other player as C; so participating in the clean-up is cooperating and not participating is defecting. From the standpoint of a single, self-interested individual making an independent

		Everyone Else: D	Everyone Else: C
One Person	D	(d, d)	(c, b)
One Person	C	(b, c)	(a, a)

Fig. 10.1 Payoff matrix for a two-player prisoner's dilemma. One person and everyone else are the players; *C* (cooperation) and *D* (defection) are the choices. Of the four possible outcomes, $d > b$, $c > a$, $a > b$, $c > d$, and $a > d$

decision, it is always preferable to defect. Each "one person" is better off defecting if "everyone else" defects because $d > b$, and better off defecting if everyone else cooperates because $c > a$. Since everyone feels the same way, no one would show up and the result is d—no participation, no clean-up—for all. What makes this a dilemma is that each person would prefer result a—universal participation—instead. It is a case of individual rationality standing in the way of collective rationality.

To prepare ourselves for a closer examination of this problem, let's represent it algebraically. Let P_C be the expected payoff to cooperation for a given individual, P_D be the expected payoff to defection, π be the probability that the other player (or "everyone else") will choose C, and $(1-\pi)$ be the probability that the other player will choose D. (Recall that probability is a number lying between 0 and 1, such as 20 %—0.2.) Then we can say that

$$P_C = \pi a + (1 - \pi)b \tag{10.1a}$$

$$P_D = \pi c + (1 - \pi)d \tag{10.1b}$$

Combining the two, we get:

$$P_D - P_C = \pi(c - a) + (1 - \pi)(d - b) \tag{10.2}$$

Since

$$c - a > 0 \text{ (the advantage of unilateral defection)} \tag{10.3a}$$

$$d - b > 0 \text{ (avoiding the disadvantage of unilateral cooperation)} \tag{10.3b}$$

it doesn't matter what the probability π of B's cooperation is; the right-hand side of Eq. 10.2 has to be positive. Thus the individual's expected payoff from defection always exceeds the payoff from cooperation. Since the payoffs are symmetrical, the same logic applies to every individual involved in the dilemma. Note that the algebra embodied in Eq. 10.3 is exactly the same as the technique of reading the columns in the payoff matrix. (Since $c > a$ and $d > b$, it doesn't matter for A's choice what B is expected to do.) It presents another view of what social theorists

have come to call the **collective action problem**: the difficulty in getting people to cooperate for mutual benefit when it is in their individual interest to abstain from cooperation.

10.3 Cooperation in the Repeated Prisoner's Dilemma

This algebraic version of the story, simple as it is, gives us a tool to approach one of the most important complications of the Prisoner's Dilemma model, the possibility that the game might be played repeatedly. If you think about the logic of the model, the assumption of a one-time-only game is highly unrealistic; in most real-world situations people interact with one another over a period of time. In our neighborhood clean-up story, for instance, it is unlikely that the only contact neighbors will ever have with each other is the one-day work party. The neighborhood action group will probably plan more events, and neighbors might connect through other networks as well. To take the simplest case, suppose that the clean-up event will be repeated once a month. In this case people have to consider not only what the consequences of their actions will be for the current clean-up, but also the future ones. If they don't participate, this may make it less likely that others will participate in the future, and that effect ought to be taken into account in their calculations.

We can express this additional time dimension algebraically, using the convenient device of collapsing a long string of interactions into two periods, "now" and "the future".[1] For the first period the payoffs to cooperation and defection will be exactly as they are in Eq. 10.1a–b, but the second period raises additional complications. When each player must choose C or D without knowing what the other player will do, he or she faces a fixed (but unknown) probability π that the other player will cooperate. In the two-period game, players are in a position during the second round to respond to the choices made in the first round. Suppose one player cooperates in round 1. It is possible that the other, seeing this, will be more likely to cooperate in round 2, as a way of rewarding "good behavior". By the same token, if the first defects, the second may be more likely to defect one round later. Moreover, knowing this, each individual is in a position to anticipate that cooperation today will increase the likelihood of return cooperation tomorrow, and similarly for defection. This fundamentally changes the nature of the problem. For the first time, each player may have a purely selfish interest in cooperating, since that behavior now may elicit favorable behavior from others: "Do unto others and others will do unto you."

[1] Strictly speaking, there should be more than two time periods, and players should not be certain which one will be the last. If they were sure that period t was the end of the sequence, they would choose to defect then for the reasons laid out in the analysis of the one-period game. Expecting certain defection in the last round, they would also defect in the next-to-last round, and so on right back to the beginning. This type of logic is called "backward induction"; it is common in the mathematical analysis of sequences and chains. Fortunately, most real-world repeated games are of uncertain duration, so backward induction does not apply in this strict manner.

The challenge is representing this algebraically, so that we can see *exactly* what is needed for this new-found altruism to become dominant. There are different ways to do this; the simplest relies on another convenient assumption: suppose there are only two possible strategies *over time* available to both players. One is the familiar D strategy: defect in both time periods. The other, C, involves cooperating in the first period, and then cooperating in the second only if the other player also cooperated in the first; otherwise defect. In other words, begin with cooperation, and then cooperate only if the other side cooperates. The name given to this strategy by game theorists is **tit for tat**.[2] Finally, let's suppose that both players are fully aware that these are the only two strategies but don't know at the outset which of these the other player has selected. Thus each is in the position of having to guess what the other will do; as before, we can use π to represent the probability of cooperation and $(1-\pi)$ to represent the probability of defection in the first period. In the second period, however, there are no doubts: the first player knows that if the second has defected in the first period, then she must defect in the second, while if the second player cooperated in the first period then she will continue to cooperate if the first player began with cooperation; otherwise she will switch to defection. This is all we need to express the situation algebraically. An individual's expected payoffs are

$$P_C = [\pi a + (1-\pi)b] + \frac{1}{1+r}[\pi a + (1-\pi)d] \tag{10.4a}$$

$$P_D = [\pi c + (1-\pi)d] + \frac{d}{1+r} \tag{10.4b}$$

These are only slightly more complex than Eqs. 10.2a and 10.2b. Consider Eq. 10.4a. The right-hand side has two terms. The first of these, enclosed in brackets, is the same as the right-hand side of Eq. 10.1a; this represents the payoff to cooperation in the first period. The second term represents the second-period payoff. It is discounted by $1/(1 + r)$, where r is the individual's **discount rate**. This is the rate at which he scales back the importance of the future. (Recall that the equation describes the payoff he *expects* to receive before choosing either C or D in the first round.) For instance, suppose that $r = 0.10$. This means that this player would require an extra 10 % utility in period two to offset its being in the future—110 utility units in period two mean the same in the present as 100 units in period one. Equivalently, if $r = 0.10$, $1/(1 + r) \approx 0.91$. The second term is worth about 91 % of its future value in the present. Of course, r may be greater or less than 0.10, and this variability will prove to play an important role later in the analysis.

[2] Identifying cooperation with tit for tat has become standard among game theorists, since it greatly simplifies the analysis of cooperation problems. This is also the reason I am adopting it here. In the example we are looking at, little is lost and much is gained by assuming that responses of cooperators to the other player's C and D are so cut-and-dried. Nevertheless, some care should be taken. There do exist problems for which the results obtained by analyzing tit for tat cannot be generalized to other cooperative strategies.

The expression inside the bracket in the second term represents additional consequences of a player's original choice to cooperate. If the other player is also cooperative (with probability π) then both will continue to cooperate in the second round, with a continued payoff of a. If the second player is a defector, however, the first will also defect in the second round (tit-for-tat) and receive d. Thus, if the first chooses C in the first period, he will receive a in both periods if the second is cooperative, and b in the first and d in the second if she is "defective".

Now look at Eq. 10.4b. The first term, representing the first-period consequences remain identical to Eq. 10.1b, while the second term is very simple. If the first player defects at the outset it doesn't matter whether the second is inclined to cooperate or defect; either way she will choose D in the second round and both players will receive d, which is discounted to its present value by $1/(1 + r)$.

The key question is whether the new features found on the right-hand sides of Eqs. 10.4a and 10.4b change the overall incentive for a player to defect. For this we turn to Eq. 10.5.

$$\begin{aligned} P_D - P_C &= [\pi(c-a) + (1-\pi)(d-b)] + \frac{1}{1+r}[d-\pi a-(1-\pi)d] \\ &= [\pi(c-a) + (1-\pi)(d-b)] + \frac{\pi}{1+r}(d-a) \end{aligned} \tag{10.5}$$

Once more, the first bracketed term on the right-hand side is the same as that found in Eq. 10.2. The second term, after the now-familiar discount factor, is also not very complicated. It says that if a player chooses to defect rather than cooperate, he runs the risk (π) that the other player will turn out to be cooperative, in which case he loses the benefit of mutual cooperation over mutual defection ($d-a$), discounted by its being in the future. Thus, the anticipated payoff in the second round depends on whether the "standard" incentive to defect, captured in the first right-hand term of Eq. 10.5 and which is characteristic of a one-period prisoner's dilemma, is offset by the interest each player has in trying to encourage future cooperation on the part of the other. We don't know in any general way which force will be stronger, but at least it is a possibility that cooperation-seeking may prevail.

One reason for thinking it might is that, lurking behind this equation, is the notion that period two really represents not just one period, but all future periods rolled into one. If the first player cooperates in round one and the second reciprocates, the first can enjoy the benefit of this reciprocation and continue it in round three, round four, etc. The advantages of cooperation can persist for a very long time. By the same logic, if the two players find themselves locked into a spiral of mutual defection, that can go on for a long time as well—a fact that ought to make each think very carefully before defecting in the first place. On the other hand, the future is the future and now is now; that's what the discount factor represents. If r is large enough, the long-term disadvantages of defection may not carry enough weight to override the short-term advantages.

What can we conclude? It is clear that the repeated prisoner's dilemma is not loaded in favor of defection the way a one-period prisoner's dilemma is. While the

Table 10.1 Factors that make cooperation more likely in repeated prisoner's dilemmas

Factor	Effect
1. High payoff to cooperation	Makes players more willing to bear the risks of cooperation
2. Likelihood of retaliation in response to defection	Increases the future cost of defecting in the present
3. Few gains to players who defect while others cooperate	Reduces incentive to "cash in" on defection in the present at the cost of less cooperation in the future
4. Few losses to players who cooperate while others defect	Reduces the risk of cooperating in the present
5. Low discount rate	Increases the value in the present of cooperation in the future

complexity entailed in analyzing variations of the repeated prisoner's dilemma is beyond the scope of this discussion, you should be aware that it has been studied very closely, and the conclusion that has been reached is that, while no guarantees can be offered, general cooperation can emerge as a stable outcome. (This result is known in the game theory literature as the "Folk Theorem".) While the analysis does not provide the basis for firm predictions, it does highlight the factors that play a role in determining whether collective action can succeed: there must be sufficient rewards to each player from the cooperation of other players, sufficient punishments to each player from the defection of other players, relatively modest incentives to unilaterally defect or avoid unilateral cooperation, and a sufficiently low discount rate r for most players. If all these elements are in place, bringing about cooperation is not too difficult to envision (Table 10.1).

10.4 Cooperation in the Many-Player Prisoner's Dilemma

Now let's turn to a different complication, the reality that "everyone else", a device I have used to simplify games between many players, is not really a single person at all, but a representation of a large, diverse group. If you think about the neighborhood cleanup example, lumping all the neighbors together except a single individual in one group and postulating that they all make the same choices, as I did above, is rather sneaky. It tries to get around aspects of multi-player games that might make the prisoner's dilemma less harsh. After all, maybe only some players will shirk their cleanup obligations and others won't. One possibility, for instance, is that if a few neighbors show up for work, each's contribution will be more noticeable than if the event drew either everyone or no one. Or it might be that the work will be unpleasant if just a few neighbors participate, but more enjoyable if it is a true community-wide endeavor. In other words, the fraction of "everyone else" who participates can alter each individual's payoff, potentially in a manner that might reduce the dilemma aspect of the Prisoner's Dilemma.

These questions can be addressed using a geometric device, providing we specify a few additional aspects of the game. Up to now, we have referred to the

outcome for each player, determined by his or her choice in conjunction with the other player's choice, as a single payoff that sums up all the effects in one number or letter. In multiple-person games, however, it is useful to distinguish between the costs and benefits that go into this payoff, since they may respond differently to changes in the overall level of cooperation.

The potential benefit to cooperation is whatever good it brings about. In the original prisoner's dilemma story it was the withholding of evidence from the prosecution (a good for the prisoners if not for the rest of society); in the neighborhood cleanup example it is the improved environment for all residents. Generally speaking, the benefits can have one of two characteristics: either they are constant no matter how many or few players cooperate, or they change (usually increase) with the number of players who choose cooperation. Both can occur in many contexts, but we will explore only the second, since it is most clearly relevant to the problems facing social action groups. In nearly every circumstance, more participation creates more benefits. An additional wrinkle we will add, however, is this: the benefits from collective action usually take the form of a **public good** in the sense that they cannot be withheld from those who don't contribute to them. (Public goods will be one of the topics of Chap. 15.) The benefit of a clean neighborhood is an advantage for me if I live there, whether or not I take part in the effort to clean it. Because this seems to be a general pattern, we can usually assume it, but we should be aware that there are other possibilities.

The potential cost of cooperation is the harm individuals may expose themselves to by choosing to cooperate. In the prisoner fable, the cost of not talking to the police is that sentencing may be more harsh. The cost of participating in the cleanup is the sheer unpleasantness of it. Once more, this cost can either be constant or it can depend on how many of the players choose to cooperate. Most social action situations are of the second type; whatever demands an organization makes of its members, they are more easily borne if they are more widely shared. A vivid example is a labor union; if just a few workers join they are at risk of getting fired, but as the membership expands they are more able to protect one another. We will expect, then, that the cost of cooperation depends on the extent of cooperation, once again being aware that this may not be true in particular contexts.

Assuming then that both the costs and benefits of cooperation are variable as more cooperators take part, we can depict the relationship between the payoff to cooperation and how widespread it is in Fig. 10.2 on the following page.

It illustrates the interactions between cost, benefit, and the extent of cooperation along the lines we have been discussing. The vertical axis measures utility (understood in the usual, if somewhat implausible, economic sense), while the horizontal axis measures the extent (spell that x-tent) of cooperation. The intersection of the utility axis by the X axis at 0 indicates that utility can be negative as well as positive. K, L, M and N are points, the line B represents benefits, and the line C represents costs. Benefits are zero when no one cooperates; this point is marked 0. They rise continuously as X increases. The costs of cooperating are very great at zero cooperation; this is given by the line segment from 0 to L (the measure of L's negative utility). The C curve rises as cooperation becomes more widespread,

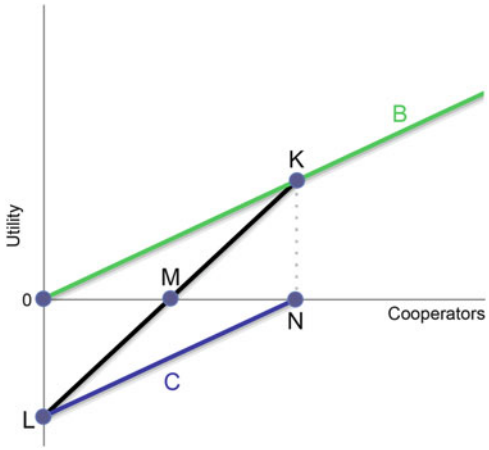

Fig. 10.2 Many-person prisoner's dilemma with variable benefits and costs. The utility (U) of an individual adopting cooperation is portrayed as a function of how many cooperators (X) there are. *B* is the benefit from cooperation; *C* is the cost. At the number of cooperators indicated by *M*, the individual breaks even; after *N* there are no more costs, only benefits

which is to say that the costs fall. At a sufficient level of cooperation, N, the costs disappear altogether. From this information we can determine the utility levels of cooperators and defectors, each represented as a function of X, the number of cooperators. The utility of defectors is straightforward; it is simply equal to the B curve, since defectors receive the benefits of cooperation (they are assumed to be public goods) but incur none of the costs. They begin at 0, rise through K, and keep on going as X increases. The cooperator story is more complicated. They receive the utility denoted by the B curve minus the cost represented by the C curve. At zero cooperation there are no benefits and L costs, so L is their (negative) utility. As cooperation increases, cooperators benefit in two ways, from the increase in cooperation benefits and the decrease in its costs. This puts them on the line segment LMK, with a steeper slope than either B or C. At M cooperators pass from the position of being net losers of utility to net gainers. At levels of X greater than N costs remain zero, so the utility function for cooperators mergers with that of defectors and follows B.

This diagram makes it possible for us to see that this many-person game has the same essential features as the two-person prisoner's dilemma: (1) There is still an incentive to defect when others cooperate, at least at any level of cooperation below N. (2) There is still a cost to cooperating when others defect, again at $X < N$. (3) General cooperation is better than general defection; all players are better off on the right side of the diagram than on the left side. As a result, a large group of individuals, such as our neighbors contemplating a cleanup, may be unable to achieve collective action despite an overwhelming common interest in it. That's the bad news. The goods news is that this simple diagram is powerful enough to provide insights that those promoting cooperation may find useful.

First, while cooperators are disadvantaged relative to defectors at lower initial levels of cooperation (below N), they are *absolutely* disadvantaged only over a lower range, below M. If it is possible for organizers to shift the attention of the players away from comparisons with defectors and toward the extent to which

cooperation is personally sustainable (not causing them net harm), the threshold level of cooperation needed to make the strategy work can fall significantly. We will return to this insight shortly.

Second, even after cooperation succeeds, we ought to be worried that it might unravel. If there are benefits to unilateral defection, no cooperative outcome is safe. First one individual, then another, and finally the entire group may try to gain an advantage by free-riding on the cooperation of the others. In the language of game theory, we are asking whether general cooperation is a **stable** equilibrium. It is clear that in Fig. 10.2 cooperation **is** stable, since, at $X > N$ the cost of cooperation is zero, and cooperators and defectors enjoy exactly the same level of utility. It is not in anyone's personal interest to switch from cooperating to defecting. In practical terms, this means that the organizer's problem (in this model) is to bring about collective action; once it is established it should maintain itself on its own.

10.5 Cooperation in More Realistic Models of Social Behavior

We have gingerly relaxed two restrictions on the original Prisoner's Dilemma model, permitting the game to be replayed many times over and allowing for large numbers of diverse players. This has brought a slight whiff of realism to the analysis, but most readers will, rightly, be unpersuaded. The fundamental simplification in the model surely has to be the presumed psychology of the players, rigidly self-interested and calculating. These do not look like the people we know (and are), and dire predictions of the failure of cooperation are hardly credible if they depend on the assumption that people are entirely asocial to begin with.

Fortunately, the recent turn towards behavioral sophistication in economic research makes it possible to discuss collective action problems more constructively. What follows is a brief survey of some of the relevant themes emerging from theoretical reflection and laboratory experiments.

1. Altruism. Recall from Chap. 3 that the common view of human motivation advanced by economists has been that people are entirely self-interested, in the sense that they consider only the consequences of an action that fall on them and ignore all the rest. This is related to the notion that markets are anonymous: no one knows who they are buying and selling from, and no one cares.

   We know from laboratory evidence, as well as common sense, that **altruism**, concern for the well-being of others apart from its effect on ourselves, is widespread but unevenly distributed. Nearly everyone is somewhat altruistic, and some people are deeply so. We would expect altruists to be more likely to choose cooperative strategies in Prisoner's Dilemma situations, and this is in fact what happens. At the same time, altruism is not a complete solution; even die-hard altruists are likely to switch to defection if their cooperative offerings to other players are not reciprocated. Part of the problem is that not everyone is an altruist; another part is that it is often difficult to tell at a distance who is an altruist, so it is not usually possible to arrange your interactions only with those likely to cooperate with you. As we saw in Chap. 3, personal contact makes

cooperation feel good to people with an altruistic streak, but much of the economy is fundamentally impersonal.

To summarize a vast outpouring of research during the last several years, it is fair to say that levels of trust and cooperation in laboratory versions of the Prisoner's Dilemma fluctuate in an intermediate range between the extremes of universal defection, as predicted in the classical two-person, one-time Prisoner's Dilemma, and no defection at all.

A reasonable question to ask is, what promotes or inhibits altruism in collective action situations? One important insight that has emerged is that there seems to be a tradeoff between appealing to self-interested and altruistic motives. An examples concerns **side payments**, which are additional benefits made available to players on the condition that they cooperate. For instance, our neighborhood cleanup group might offer participants a free raffle ticket or some other inducement. This is a common strategy, in fact, and it appears in a wide variety of contexts. If the payment is great enough that it plays a major role in attracting self-interested participants, however, it appears to crowd out the altruism motive among those who might otherwise feel it. (Unsurprisingly, this is referred to as the "crowding out effect.") In other words, the strategy of buying the loyalty of some people comes at the cost of discouraging those who would contribute for free. (We raised this possibility in the discussion of price gouging following Hurricane Charley.) Thus altruism, which is a resource at the disposal of those trying to organize collective action, presents its own dilemma: does a group tailor its appeal to altruists or the self-interested when forced to choose?

2. Social norms. People do not come to collective action situations as blank slates; they are shaped by their history and culture to respond to situations in fairly predictable ways. Indeed, current research in anthropology demonstrates conclusively that the propensity to cooperate under various conditions (as modeled by different sorts of games) differs dramatically across cultures. A Prisoner's Dilemma game played in Boston will not have the same level of cooperation as one played in a village in Kenya or Papua New Guinea. There are even large differences within cultures based on regional, ethnic and other differences.

   One approach that has proved useful is to identify particular **heuristics** that are shared by most members of a culture. A heuristic is a rule or procedure that simplifies the task of making a decision; an example is "never accept gifts from strangers". (This may or may not be your own rule of thumb, depending on your background.) Some heuristics specify circumstances under which people ought to act cooperatively, and these can be exploited by organizers. It may matter, for instance, whether people are asked to contribute in a public or private setting, or by members of the same or opposite sex, or by someone older or younger than they are. Sometimes new groups piggyback on the success of older groups in mobilizing cooperation, as when a political action group uses pre-existing religious networks; in effect, they are trying to borrow the heuristics that have arisen as a result of the social acceptance of prior forms of cooperation.

One norm in particular deserves a paragraph of its own: **fairness**. There is a large literature in economics that analyzes exactly what might be meant by this term, but we will use it more loosely. A social situation is viewed by an individual as fair if it distributes costs and benefits to those who take part in it in a manner consistent with that individual's norms. What these norms will be depends on who the individual is—her personal history, her group identifications, her time and place. For us the important issue is not the details of any particular fairness norm, but simply the fact that such norms exist and have force. There is a wealth of experimental evidence that fairness (as understood by those being studied) plays a powerful role in determining how much cooperation people will offer to others. From the standpoint of eliciting support for collective action, however, perceptions of fairness are double-edged. On the one hand, they often lead people to cooperate under conditions in which the traditional Prisoner's Dilemma analysis would predict defection, and they also encourage punishment of others when they defect. This, as we have seen, increases the costs to defection among the self-interested. On the other hand, however, they emphasize the payoffs an individual gets from cooperation *relative* to the payoffs received by others. The analysis of Fig. 10.2 makes clear, however, that such comparisons are an impediment to cooperation in a many-sided game. Organizers will want to distract people from such thoughts and get them to focus instead on what cooperation can do for *them*.

3. Prospect theory. Economics sometimes has the tendency to treat human beings as utility thermometers: given the possibility of obtaining one bundle of goods, utility rises into the hot zone, but given another it slides back down toward lukewarm. The thermometer could be dipped into any economic "payoff", and a number read off the scale. This is certainly the implication of expected utility theory as described in Chap. 3.

   This is not at all how most of us react to the world most of the time. Instead, we usually make comparisons: how well am I doing compared to how well I might be doing? And, rather than putting ourselves on a continuum of utility and disutility, we respond very differently depending on whether we are doing better or worse than the alternative we focus on. This model of human behavior has two elements, then, the notion of comparison and its effects.

   The alternative we compare ourselves to is called the **reference point**, and it has obvious parallels to the concept of a reference group studied in sociology. Like reference groups, reference points are not ordained by fate; there are many potential points of comparison available to us, and much depends on which one we gravitate toward. How healthy do I feel? Compared to what? To how healthy I felt a year ago? Or to how healthy most people in my age group that I see at work seem to feel? Or to the apparent health of the actors I see on TV? Or my older relative in a nursing home? How I see myself will depend enormously on who I compare myself to.

   The second aspect is the role played by reference points. Considerable evidence indicates that people respond quite differently depending on whether they think they are above or below this point. Above the point of comparison,

most of us feel we are OK; we may invest some energy in further improvement, but not usually very much. Below, we feel that we are doing badly and will feel a greater motivation to change our situation. In other words, the reference point is a point of discontinuity in our evaluation, marking the change from one sort of response (complacent well-being) to another (intense concern). Putting the two together—the establishment of reference points and their effects—we have the model known as **prospect theory**. (This theory gets its name from the assumption of its authors that the reference point is generally the status quo, so that the analysis applies to the process of looking forward, but it lends itself to a more general interpretation, as I have done here.)

To see the power of this theory, it is enough to consider almost any collective action situation. Return, for instance, to the problem of organizing a labor union. Will the workers in a particular company or occupation be willing to accept the risk of getting fired and the other costs of joining the effort? It depends in part on how they view the potential benefits of unionization. And this in turn depends on their sense of whether their current situation—pay, benefits, working conditions, etc.—is seen as "good enough". But what is good enough? If these workers compare themselves to workers at a different company across town they might have one standard for comparison; if they think about how well off they would be without their job they would have another; and if they think about how well off they would be if they had a larger share of influence within the company an even higher standard might emerge. From the point of view of the union organizer, the goal is to have workers judge their situation on the basis of a higher standard rather than a lower one. Thus, even if workers in other companies are doing just as badly, attention should be refocused on the potential for gains if the union is successful. There is no guarantee, however, that this refocusing will actually occur. Rather, we could say that it is the organizer's job to bring about this change in reference points: that is a large part of what the activity of "organizing" is really about. Of course, those who might oppose the union, such as the company's owners or managers, will try to have the workers think in terms of how much better off they are with the job than without it. This conflict would make no sense in the world of continuous utility adjustment postulated by conventional economics, but it is central from the vantage point of prospect theory. To repeat: in this example, the willingness of workers to engage in collective action depends crucially on what reference point they compare their situation to, and one of the chief tasks of the organizer is to encourage them to select a more demanding reference point—to set their standards as high as possible.

What makes prospect theory particularly relevant to the Prisoner's Dilemma model is the claim that people who think their well-being is below their reference point will be strongly motivated to alter that situation. It is exactly such feelings of intense need that have the potential to break through the dismal calculations of the standard one-period game. This dynamic is often observed in social movements: a moment arrives when individuals are willing to take significant risks, such as the risk of unreciprocated cooperation (taking a stand when others

back down), in response to a sense of deprivation. It is exactly this push that can propel a group past the "hump" represented by points to the left of M in Fig. 10.2 and lead to a new, stable equilibrium of cooperation.

It is important to bear in mind, however, causation runs not only from psychology to action, but also from action to psychology. Collective action plays a role in the determination of reference points by enlarging the field through a redefinition of what is possible. In the absence of collective action, when each individual acts alone, possibilities are limited, and this is likely to be reflected in the standards of comparisons people establish for themselves. Good enough is what you can do by your own efforts if you are reasonably successful. When they act together, however, people can potentially accomplish more, so it is reasonable for them to set higher standards. In this way individual perceptions and attitudes and the extent of collective action are mutually reinforcing; either low reference points and widespread defection or high reference points and widespread cooperation can be stable equilibria.

4. Social networks. One of the most interesting aspects to the study of collective action, and one of the most difficult to model, arises from the fact that most people find themselves incorporated into overlapping layers of social networks. People who might take part in a neighborhood cleanup event or join a protest group may know each other from going to school together, belonging to the same church or bird-watching club. Some of these ties may have themselves been forged in previous collective action projects, giving those who took part some experience in developing cooperation and trust. Even if they weren't, however, they provide possible channels for conveying intentions to reciprocate, and they provide additional situations in which defection can be punished.

   The density of social networks in a community is sometimes referred to as its level of "social capital". (This is just one use of the term, however; we will soon see it in a different context.) Communities with plentiful social capital are thought of as having a greater capacity to self-organize in order to meet their needs. They are more likely to have their collective voices heard and to provide the sort of services that voluntary social action is best equipped to offer.

10.6 Families as Economic Units

Before there were markets, corporations or even governments as we know them today, there were families: although they were not primarily economic institutions as we defined them in Chap. 1, they performed essential economic functions that sustained untold generations of our ancestors. Even now they are responsible for a large share of the economic production that occurs in every country, and they play an important role in determining how goods and services are distributed.

Let's begin with distribution, since it is somewhat simpler to describe. The conventional view of economics, at least for the past 200 years, has been that households receive income from labor or the ownership of property and then either save it or spend it on the output of businesses. (This will be developed more fully in

the macroeconomics portion of the text.) From this perspective, the main issue in determining how much people will be able to consume is the distribution of income across households, and this is what we will investigate in detail in Chap. 19. Nevertheless, once income enters the household the actual decisions about who consumes what are made, in most cases, by families. Depending on social customs and the relative influence of different family members, resources may be divided equally or they may go largely to just one person, the "head" of the family.

One example will illustrate the importance of this process. Children rarely earn enough money from paid work outside the home to support themselves. Child labor is widespread, and children contribute income to their families, but usually their pay is far lower than that of adults, and they tend to work fewer hours as well. Thus they are dependent on the willingness of adults to share income or other resources with them. This dependence becomes a critical variable during times of famine, when families may have to make difficult choices about how to apportion too little food among too many mouths. During particularly severe episodes, relief agencies will set up programs to distribute emergency food supplies to families, hoping to sustain them until normal economic conditions return.

In the past, relief workers would give food packages to the individual designated as the head of the household, usually an elder male, but they often found that this made little difference in the incidence of malnutrition among children. This is because it is the custom in some societies for adult men to feed themselves until they are satisfied, and only then to share food with women and children; because of this, unequal distribution within the family was perpetuating starvation. Based on research conducted by economists and anthropologists in household food distribution patterns, relief agencies began to make it a policy to give the food to women rather than men in such cases, and they found that child malnutrition declined.

Even during less desperate times, distributional inequalities within the family can have a large impact on economic life. They often determine, for instance, which children will have access to education, costly health care and other goods and services. There has been renewed interest in these issues in recent years, and economists have developed more precise models to explain differences in distribution rules between families or in response to changed circumstances, particularly as they affect the access of women to family resources compared to men.

Families also retain a large and underappreciated role in the production of goods and services. This role has diminished somewhat in the industrialized countries as commercial products replace those formerly produced at home, such as restaurant meals and child care programs. Nevertheless much remains: most house-cleaning, a large percentage of food preparation, and above all a significant share of what feminist economists have come to call **caring labor**. By this they mean the expenditure of time and effort (often emotionally demanding) to minister to family members in periods of need. This includes nursing the sick and elderly, child-rearing and responding to emergencies of various sorts as they arise.

By most calculations, these activities have enormous economic value, in the sense that it would cost quite a lot to produce them as services for sale in the market. They also have great human value, of course. Survey research, as well as common

sense, shows that if people are cut off from the care of others, even high levels of money income are not enough to restore their feeling of well-being. The point would seem to be so obvious that it could be taken for granted, but it shouldn't be.

Caring labor is labor. It absorbs time and energy that might otherwise be available for other purposes, and so it has an opportunity cost. Since it is performed disproportionately by women, it shows up as a level of stress that is often difficult to sustain, particularly if those expected to provide such services for free are also employed outside the household—the infamous "double day". The demands of caring have been shown to diminish women's opportunities to advance in paid work, or even in some cases to keep a job at all. This has led to demands for a more equitable sharing of caring and other household work, as well as for greater accommodation on the part of employers.

One important implication of this topic concerns the economics of health. There has been a steady stream of studies showing how expensive ill-health is in industrialized economies: diseases, many of them preventable, occupational and traffic accidents and other risks we face are responsible for hundreds of billions of dollars in economic costs annually. Until recently, however, the same recognition has not been given to health risks in developing countries. With fewer hospitals and health practitioners relative to the size of its population, a typical developing country is likely to show far fewer economic costs of poor health. What we have learned in the last few years, however, is that this difference is illusory: the economic value of health is just as important in the developing world, perhaps more so. One reason is that ill-health causes a great expansion of caring labor at the expense of other uses of people's time. The lesson is that, just because the costs do not show up in paid services, like hospital stays and increased workload for doctors and nurses, doesn't mean that they don't exist. Unpaid caring labor is real labor with real economic consequences.

A final point to make about families is that they constitute one of the most important social networks affecting the way markets and other economic institutions operate. One example may illustrate how this can work. Throughout the world there are enclaves of ethnic Chinese settlements, and in many countries, particularly in the Pacific basin, these communities have played a leading role in establishing local businesses. Why? A large part of the story is that in Chinese culture family connections extend widely, including distant cousins and others who might not be recognized in other societies, and there are strong bonds of obligation between family members. These extended family networks have been used to provide the start-up support for new enterprises, such as loans, advice, tips on potential suppliers and customers and initial orders. As more family members become established in business, this increases the resources available to new start-ups, and so on from one generation to the next.

Family-based business development is not restricted to the Chinese, of course; it is seen across the world in almost every society. It is so commonplace we may not notice it, but its role should not be overlooked in economic policy. One of the

challenges facing highly mobile societies with increasingly fragmented family structures is finding new networks that can offer similar economic advantages.

10.7 Social Capital

In Chap. 3 it was argued that all human knowledge relies on metaphor, and that economics is no exception. The concept of social capital exemplifies this, for it is a metaphor built on other metaphors. First comes the notion of capital itself, which we will see later in this text is already somewhat metaphorical. It refers to assets that have the property of being productive and therefore enabling a return to their owner(s). Normally we think of capital as taking the form of either goods used in production or the money invested in such goods. (These, as we will see, are not the same thing.) From an economic standpoint, however, it could be imagined that anything which is productive, whether or not it is an asset in the conventional sense, could be regarded as capital, and this is the kernel that gives us social networks as a form of capital.

One type of social capital has already been encountered, the role of social networks in facilitating collective action. Since, in a wide range of situations, collective action is more productive than the independent efforts of separate individuals (cooperation is superior to defection), anything that makes collective action easier to attain is itself productive. The implication, of course, is that the community whose social capital is being assessed actually faces Prisoner's Dilemmas and has a stake in overcoming them. Among those who have taken up the study of social capital, this view is widely held.

A second type of social capital is closely related to the first. Many researchers, following the lead of political scientist Robert Putnam (and before him Alexis de Tocqueville), contend that government is more effective in societies that have a large number of voluntary organizations embracing most of the population. Such organizations promote trust and cooperative behavior, on which governments can draw to provide services more consensually and efficiently. This is of interest to economists, of course, since government services are themselves economic goods, and also because of the role, positive or negative, that government plays in setting the rules that other institutions, such as markets and firms, are obliged to follow. In addition, businesses themselves benefit directly from greater trust between workers and employers, suppliers and purchasers, and firms and their regulators.

The third type operates at the individual level. We have already considered some of the evidence that indicates that social networks, such as family ties, can channel resources to individuals for purposes like starting a business; the same logic applies to other opportunities like getting an education or finding a job. This implies that the lack of such networks may be partly responsible for people ending up in poverty, and that building up networks in low-income communities may serve as an anti-poverty strategy. Attaching the term social capital to this perception essentially re-lables an insight that derives from sociological research dating back to the early years of the twentieth century.

Table 10.2 Varieties of social capital

Type	Effect
I	Promotes further collective action in civil society
II	Improves the efficiency of government and business through cooperation and trust
III	Increases resources individuals can draw on for education, employment and business formation

To sum up, the three forms of social capital all have the same basis but transmit their effects through different channels. All look to social networks as the essential raw material: richer, more encompassing networks mean more social capital. Where they differ is in the realm of society where the effects show up. In the first type, it is the facilitation of collective action, in the second improvement of government, and in the third individual opportunity. These are summarized in Table 10.2.

The Main Points

1. The realm of civil society includes many types of social organizations and groups that have a large impact on the economy, such as unions and professional associations, clubs, and families. They produce goods and services directly, facilitate the development of markets, and play a role in regulating them.
2. Voluntary collective action is a prisoner's dilemma. Fortunately, the pessimistic prediction of the one-time prisoner's dilemma (the logic of joint defection) can be mitigated in real-world situations. Often the interactions are repeated, and participants have a greater incentive to cooperate in order to induce more cooperation from other players in the future. Factors that favor cooperative outcomes in the repeated prisoner's dilemma include high payoffs to cooperation, the likelihood of retaliation against defectors, low payoffs to those who defect when others cooperate, fewer losses to those who cooperate when others defect, and a low discount rate (less devaluation of the future) by participants.
3. If there are a large number of individuals playing a prisoner's dilemma, the tipping point for cooperation (the level of cooperation at which collective action is a stabile outcome) is usually less than 100 %; a dedicated minority can often keep voluntary organization in healthy shape. This depends on the extent to which the costs and benefits of individual cooperation vary with the number of cooperators.
4. Other real-world factors may promote voluntary cooperation. These include the possibility for organizations to provide extra benefits to those who cooperate, the presence of social norms that lead individuals to cooperate even when it is not in their immediate personal interest, the creation of reference points (in prospect theory) that increase the perceived benefits of collective action, and the piggybacking of collective action organizations on pre-existing social networks.
5. Families are productive units within society: their members engage in caring labor, which is responsible for many of the essential services all of us depend on, like child-rearing, household maintenance and food preparation. This labor may

be invisible to many of the statistics by which we measure our economy, but it is no less significant for the economy than work performed for wages. In addition, family networks often facilitate job search, entrepreneurship and credit provision.

6. Social capital has become a major frontier of economic research during recent years. Three types of social capital have been identified: social and culture resources that favor collective action, the foundation of trust on which political and business organizations depend, and the social and cultural support that give individuals more skill and self-confidence in their various economic roles.

► Terms to Define

Altruism
Caring labor
Civil society
Collective action problem
Discount rate
Heuristic
Prospect theory
Reference point
Side payments
Social capital (types I, II and III)
Tit for tat

Questions to Consider

1. Create a list of five voluntary organizations you are familiar with whose purpose is to promote a particular cause or point of view. What effects, if any, do they have on how the economy operates? Do any of them also provide goods or services, either to their members or society at large, as well?
2. Take another look at the list you created for Question 1. How significant, in your opinion, is the collective action problem for these five groups? Do you know any of the strategies they have adopted to encourage cooperation?
3. Do you practice tit for tat in some aspects of your life? Does it "work" to evoke the cooperation in others you would like to receive?
4. It is sometimes said that people in a collective action situation have an *obligation* to perform the punishment part of the tit for tat strategy; that is, if they see others failing to cooperate, they should punish them in some way. That will benefit the whole group, it is claimed, by increasing the likelihood that cooperation will become more widespread in the future. Do you agree? For instance, do you think that someone who observes an act of littering (failure to cooperate in keeping the environment clean) has an obligation to confront them or report them to the police or other authorities?
5. Can you explain in your own words why, in a many-sided Prisoner's Dilemma situation, cooperation will be more widespread if people who are considering it

refrain from comparing themselves to non-cooperators? Can you give an example of this principle in practice?

6. Consider a voluntary collective action group that you belong to or participate in. Is this group's appeal to you and others based primarily on altruism or self-interest? Do you think there is a tradeoff between these two types of appeals in this case?
7. When you think about whether you are satisfied attending your current college or university, what is your reference point? When you talk to other students, do you find that differences in reference points explain some of the differences in your levels of satisfaction?
8. How equally were (are) resources and opportunities distributed in your family? How was this distribution determined? Did your share depend on whether you were earning an outside income? If so, why?
9. Based on the experience you have had in your own family (or families), how prevalent is the "double day" problem for women today? What, if anything, should be done to alleviate it?
10. For many people, according to current sociological research, work provides most of the social contact outside of family life. Does this mean that there is less scope for social capital? Or can social networks in the workplace fulfill the same functions as those created by truly voluntary organizations? In answering this question, you may find it helpful to think about your own social experiences at work and the extent to which they promoted cooperation and trust, or better access to non-work opportunities.