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Actors and Resources, Interest and Control

In the preceding chapter I presented a general orientation to social theory. This involved explaining behavior of a social system by means of three components: the effects of properties of the system on the constraints or orientations of actors; the actions of actors who are within the system; and the combination or interaction of those actions, bringing about the systemic behavior.

This general metatheoretical structure can be described as a conceptual framework for social theory. A framework of this sort can serve a useful purpose in evaluating and guiding research, as the examples in Chapter 1 indicated. It would be possible to stop here, before explicit theory construction, and devote the remainder of this book to examining the implications of this conceptual framework for research on various social phenomena. To do so, however, would be to stop short of theory itself. This would provide a less useful basis for the development of knowledge about social systems than will the explicit development of social theory within this conceptual framework.

I will proceed to develop a more explicit theory in two steps. Parts I through IV of this book set forth a verbal and qualitative specification of the theory, and Part V contains a formal specification. This partitioning of the task has two values. First, the usefulness of the theory for research can be partitioned into a portion which does not depend on formal modeling and a portion which does. It appears desirable to separate these two so that the results which do not depend on formal modeling are not obscured by those which do. Second, I have been able to carry the qualitative development of the theory further than I have the formal model, so the formal development of the theory covers only a subset of the phenomena treated in the qualitative development.

An indication of the way the conceptual framework laid out in the preceding chapter will be carried toward a more explicit theory is provided by considering the functioning of an economic market through a system of tentative contracts, as described by Walras (1954). Here the idea of system behavior is something of a reification, because each actor's actions have direct effects only on those with whom that actor has discussed contracts, and each actor's changes of contracts might depend only on comparison of exchange rates with those in the immediate vicinity, unless an institution exists to ensure full communication of information about all tentative contracts. Yet, in this case of a market, the reification be-

comes more and more a reality as the spread of information leads various contracts to converge toward a single set of exchange rates for each pair of goods. The market price is an emergent property of the system that arises from the pairwise interactions.

As this example indicates, it may be more useful in the emergence of at least some system behavior to conceptualize the feedback processes that produce that behavior not as explicit micro-to-macro and macro-to-micro relations but as interdependencies among the actions of different actors. In the various developments of the theory throughout this book, I will sometimes conceptualize these processes in one of these two ways and sometimes in the other, depending on which appears more useful.

In this chapter I will develop the conceptual base for interdependence among actions of individual actors. With this conceptual structure the only *action* takes place at the level of individual actors, and the "system level" exists solely as emergent properties characterizing the system of action as a whole. It is only in this sense that there is behavior of the system. Nevertheless, system-level properties will result, so propositions may be generated at the level of the system.

The Elements

There are two kinds of elements in the minimal system and two ways in which they are related. The elements are actors and things over which they have control and in which they have some interest. I will call these things resources or events, depending on their character. The relations between actors and resources are, as just implied, control and interest.

It is useful to consider briefly the concept of interest, for it has an extensive history in social thought. Hirschman (1986) locates its conceptual origins: "The term was originally pressed into service as a euphemism serving, already in the late Middle Ages, to make respectable an activity, the taking of interest on loans, that had long been considered contrary to divine law and known as the sin of usury" (p. 35). As Hirschman points out, the concept of interest, or self-interest, had an extraordinary growth in the sixteenth, seventeenth, and eighteenth centuries. It encouraged, beginning with Machiavelli's counsel to the prince, the emergence of the practice of statecraft unfettered by moral constraint; it aided the insights of the emerging discipline of economics in the work of Adam Smith and others; and it played a role in the conceptual revolution in ideas about the relation of self to society that was part of the French Revolution.

In the eighteenth century some saw interest as *the* central concept for the social world. The French philosopher Helvetius expressed this view: "As the physical world is ruled by the laws of movement so is the moral universe ruled by the laws of interest" (quoted by Hirschman, 1986, p. 45). The concept has had a checkered history since that time, both in its social-scientific role and in the regard in which it is held in society at large. Interest will play a central role in the theory presented in this book. The role it plays is close to that envisioned by

Helvetius in the eighteenth century. In Chapters 19 and 34, however, I will examine the possibility of dissolving this concept through analysis of the internal structure of the actor.[1]

If actors control all those resources that interest them, then their actions are straightforward: They merely exercise their control in a way that satisfies their interests (for example, if the resources are food, control is exercised by consuming the food). What makes a social system, in contrast to a set of individuals independently exercising their control over activities to satisfy their interests, is a simple structural fact: Actors are not fully in control of the activities that can satisfy their interests, but find some of those activities partially or wholly under the control of other actors. Thus pursuit of one's interests in such a structure necessarily requires that one engage in transactions of some type with other actors. Those transactions include not only what is normally thought of as exchange, but also a variety of other actions which fit under a broader conception of exchange. These include bribes, threats, promises, and resource investments. It is through these transactions, or social interactions, that persons are able to use the resources they control that have little interest for them to realize their interests that lie in resources controlled by other actors.

A minimal basis for a social system of action is two actors, each having control over resources of interest to the other.[2] It is each one's interest in resources under the other's control that leads the two, as purposive actors, to engage in actions that involve each other. A diagram of that minimal basis, shown in Figure 2.1, gives a sense of why it can be regarded as a system of action, rather than merely a pair of independent actors. It is this structure, together with the fact that the actors are purposive, each having the goal of maximizing the realization of his interests, that gives the interdependence, or systemic character, to their actions.

Forms of Interdependence

Friedman (1977) characterizes three kinds of interdependence among actors. The first he terms structural interdependence, in which each actor assumes the others' actions are independent of his own. In this form of interdependence each

1. In the formal theory developed in Part V, interest is defined in terms of a specific utility function, known in economics as the Cobb-Douglas utility function. This specification is introduced there to facilitate quantitative research utilizing the theory. In using the term "interest," I acknowledge its long and controversial history in social science, in particular, the continuing debate since Marx over the concept of objective interests as perceived by an outside observer. In other theories, such as theories of political pluralism, the notion of subjective interest, from the point of view of the actor, has played an important part. I will not pursue the controversy here, but interests are discussed in some detail elsewhere in this book, especially in Chapter 19.

2. This statement will have to be modified slightly for a special case to be treated later, involving an actor's unilateral transfer of control over his actions to another actor, but to do so here would constitute an unnecessary complication.

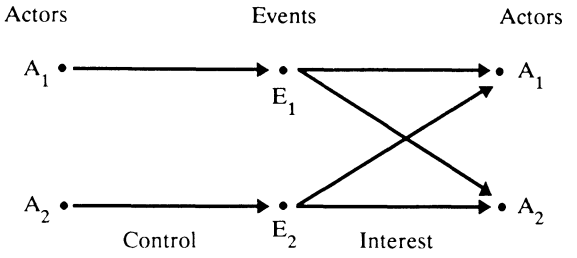


Figure 2.1 A minimal system of actors in control of and affected by events.

actor, in deciding on a course of action, can take the environment as fixed rather than reactive. A buyer's action in a market where prices can be regarded as fixed (that is, if that buyer is sufficiently small relative to others in the market that his actions do not affect prices) exemplifies structural interdependence. When a system involves only structural interdependence, rationality is well defined. Since the social environment is noncontingent, either rationality under certainty (when the outcome follows the action with certainty) or rationality under risk (when the outcome follows only with a certain probability less than 1.0) provides the appropriate model for rational action.[3]

The second form of interdependence Friedman terms behavioral interdependence. In behavioral interdependence the actions of each actor are conditional on those of others at an earlier point in time. This implies that an actor must base his action on more complex considerations than apply in structural interdependence. He must recognize that his action may have consequences for him not only directly but indirectly through another whose action may be affected by his own. Furthermore, because of this effect on the other's action, his own subsequent action may be affected, which can lead to an effect on him that constitutes a second-order indirect effect of the current action. This sequence of indirect effects can continue into the indefinite future. In such a setting, the question of what is rational for the actor depends on his information, both about the number and character of future choices and about the kinds of strategies that will be pursued by others. In this form of interdependence the definition of what strategy is rational for an actor is not independent of the strategies used by others with whom he is interdependent.

3. The form of interdependence that exists in a single-play game is formally structural interdependence, though action is based on consideration of what one player believes the other will do, which in turn is based on what the second player believes the first will do. For example, one player may carry out a strategic analysis as follows: If, in a two-person zero-sum game which involves only a single play, I can find the action which maximizes my gain under that action of the other which is the other's best reply to my action, then this is the action I should take, assuming that the other will act rationally. (This is the minimax strategy, which is the solution to a zero-sum game, proved by von Neumann and Morgenstern, 1947.) Even though there is no sequence of actions, the rational player will base his action on consideration of such "best replies," because he knows that the other player, acting rationally, will do the same.

An example of behavioral interdependence is bargaining between two or more actors, a process in which one's strategy depends on knowing not only the other's interests but also the other's strategy (which ordinarily will include assumptions about one's own strategy). Another example is the development of expectations and obligations between two persons over time, a process which depends on what each assumes about (or learns about) not only the other's interests but also the other's strategies.

A third form of interdependence identified by Friedman is evolutionary interdependence. In evolutionary interdependence there is behavioral interdependence over a sufficiently long period of time that, through selective survival, the mix of strategies in a population changes toward some "equilibrium of strategies"—which need not be a unique equilibrium point. Ideas of evolutionary biology, in particular the concept of evolutionarily stable strategies as developed by Maynard Smith (1974), have been introduced to aid in the analysis of evolutionary interdependence.

Most of the work in this book (as well as, I conjecture, the most important parts of social theory) is limited to the first and simplest form of interdependence, structural interdependence. Chapters 9 and 33, in which actors make unilateral transfers of control in an environment where actions of others are contingent on their own (for example, in a panic), are concerned with behavioral interdependence. Chapters 30 and 31, which treat the evolution of stable reallocations of rights, are concerned with evolutionary interdependence.

A Note about Self-Interests of Purposive Actors

For some social scientists (depending in part on the norms and assumptions of their discipline) my insistence on beginning a theory of action using as elements persons who are assumed to be not only rational but also unconstrained by norms and purely self-interested may appear to be a serious error. Certainly norms do exist, persons do obey them (though not uniformly), and persons do often act in the interests of others or of a collectivity, "unselfishly" as we would say.

Because of all this, it is useful to clarify the sense in which I begin with norm-free, self-interested persons as elements of the theory. My intent is not to suggest that everywhere and always persons act without regard to norms and with purely selfish interests. It is, rather, to indicate that at some point in the theory I take as problematic genesis and maintenance of norms, adherence of persons to norms, development of a moral code, identification of one's own interest with the fortunes of others, and identification with collectivities. To begin with normative systems would preclude the construction of theory about how normative systems develop and are maintained. Chapter 11 of this book would be pointless. To assume adherence to norms would impose a determinism that would reduce the theory to a description of automata, not persons engaged in voluntary action. To assume that persons come equipped with a moral code would exclude all

processes of socialization from theoretical examination. And to assume altruism or unselfishness would prevent the construction of theory about how persons come to act on behalf of others or on behalf of a collectivity when it goes against their private interests.

To begin with persons not endowed with altruism or unselfishness and lacking a shared normative system does not mean that in every part of the theory the persons who are actors are assumed to be without these added components of the self. To the contrary, most parts of the theory will assume that actors possess some of these components, although the assumptions are largely implicit. In general, the more universally held a norm or the more widespread a moral precept, the more likely I will be to overlook it, to take it always and everywhere as given, thus necessarily diminishing the scope of the theory. Some norms are not so widely shared and are therefore more readily recognized.

Actions and Transactions

In the parsimonious conception of a system of action that I want to establish, the types of action available to the actor are severely limited. All are carried out with a single purpose—to increase the actor's realization of interests. There are, of course, different types of action, which depend on the situational constraints. It is useful to describe these types here.

The first type of action is the simple one of exercising control over those resources one is interested in and has control over, in order to satisfy one's interest. This action, however, is socially trivial (unless it has effects on others) and can be ignored, since it involves no other actors.

The second type of action is the major action that accounts for much of social behavior—an actor's gaining control of those things that are of greatest interest to him. This is ordinarily accomplished by using those resources he has, by exchanging control over resources that are of little interest to him in return for control over those that are of greater interest. This process follows the overall purpose of increasing one's realization of interests under the assumption that those interests can be better realized if one controls something than if one does not. Ordinarily, it may be assumed that control of a resource by an actor makes it possible to realize whatever interests that actor has in it.

A third type of action that can be and is widely carried out in social systems is unilateral transfer of control over resources one is interested in. Such transfer is carried out when the assumption on which the second type of action is predicated (that one can best satisfy one's interests by gaining control of resources one is interested in) no longer holds. That is, an actor transfers control over resources unilaterally when he believes that another's exercise of control over those resources will better satisfy his interests than will his own exercise of control. The conditions under which unilateral transfer is carried out are discussed at length in other chapters, and I will not go into them here, except to

emphasize that the transfer is made, just as are all other actions, purposively—in the expectation that the actor will better satisfy his interests by so doing.

Types of Resources

The resources each actor has which are of interest to others include a wide variety of things. The most obvious of these are what economists call private goods. Neoclassical economic theory describes the functioning of systems in which each actor has control of certain private divisible goods that are of interest to other actors in the system. But private divisible goods are only one of several kinds of things over which actors have control and in which they are interested.

Actors may have control over events that have consequences for a number of other actors (that is, events in which other actors are interested). In the case in which control over such an event is partitioned among two or more actors, as when a collective decision is made by taking a vote, each actor has only partial control over the event.

Actors may have control over their own actions, and if the actors have certain attributes, such as skills or beauty, in which others are interested, they may give up rights to control certain of their own actions. Note that in this case I have used the phrase "give up rights to control" rather than "give up control." The reason is that direct control over one's own actions cannot be given up; it is inalienable. What can, however, be given up is a *right* to control the action. Physical inalienability from one's self is not the only kind of inalienability. Legal rules may also dictate inalienability of rights of control over physically alienable things. For example, for many collective decisions votes are made inalienable by rules of the system, but in some systems votes are alienable through the use of proxies.[4]

Actors may also have control over resources which are not of direct interest to others but are effective in determining, or partially determining, the outcomes of events in which others are interested. There are further variations in the resources that actors control. For example, some resources, as part of a transaction with another actor, can be delivered only in the future or over a period of time in the future, whereas others can be delivered in the present. Another variation is that some resources exhibit the property of conservation; there is a fixed quantity of the resource. If one individual controls (or consumes) one portion of the resource, the total available for others to control (or consume) is diminished by just this portion. The property of conservation is usually possessed by those things we think of as goods, but the general class of resources that individuals control include many without this property. For example, infor-

4. Although the vote is alienable in voting systems that allow proxy voting, often the right to transfer the vote is not alienable. That is, the proxy must be voted by the individual to whom it has been first transferred.

mation, as a resource over which actors have control, ordinarily does not exhibit conservation. Information which is passed on to another continues to be held by the original possessor as well. Still another property of certain resources is that their consumption or use has no consequences for actors other than the actor who consumes or uses them. Resources that are not like this but instead have inseparable consequences for more than the one actor are said to have external effects, or externalities.

That there is this wide variety of resources over which actors may have control and in which actors are interested (or which affect events or resources in which actors are interested) creates a terminological difficulty. I will ordinarily refer to the general class as resources, using the term to include what I have referred to above as goods, resources, and events.

As is evident in the above, there are several properties that distinguish types of resources, properties that have important consequences for the kinds of systems of action that emerge. These properties are divisibility, alienability, conservation, time of delivery, and absence of externalities. Economists, who ordinarily conceive of economic systems as involving goods, have employed a distinction between private goods and public goods. In terms of these properties a private good has no externalities and exhibits conservation. A public good does not exhibit conservation and is at the extreme of possessing externalities in that it has consequences for all (or, to use economists' terminology, is a good that cannot be supplied to one without being supplied to all).[5] The prototypical private good also is divisible, alienable, and currently deliverable; that is, it has each of the properties described.

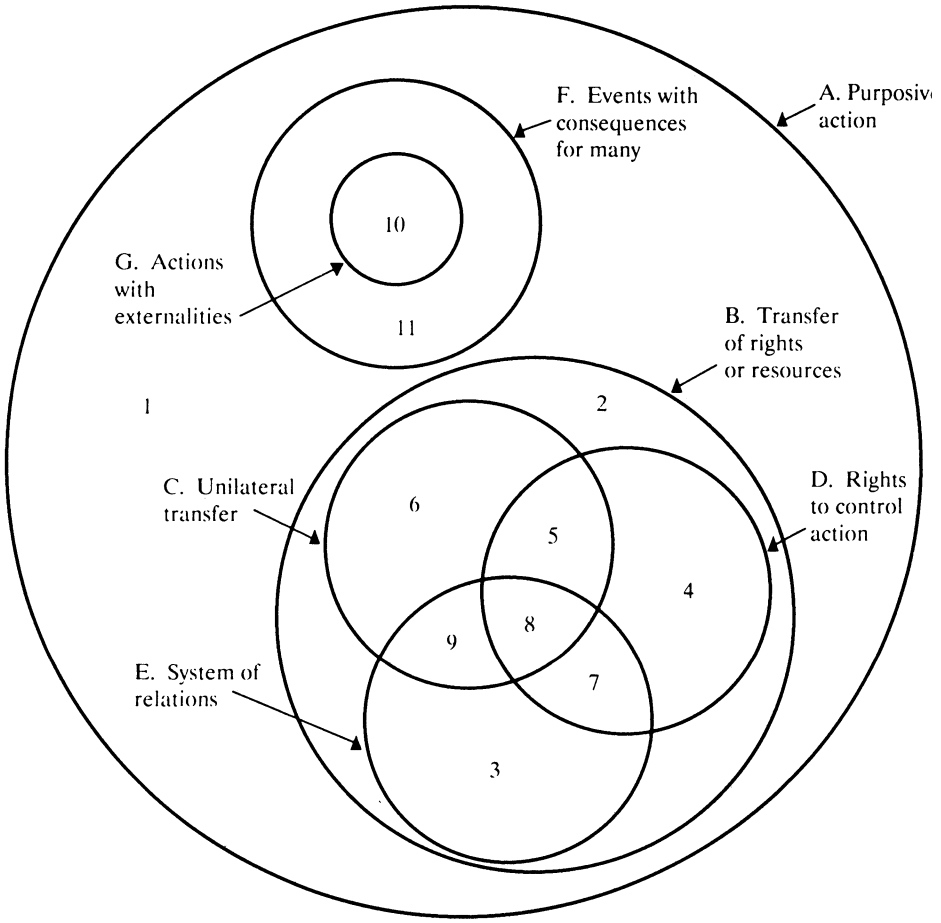
Structures of Action

Differing kinds of structures of action are found in society, depending on the kinds of resources involved in actions, the kinds of actions taken, and the contexts within which those actions are taken. Most of the chapters of Parts I through III of this book are directed at examination of the properties of one of these structures of action. Here I will characterize these different structures as a way of locating each of the chapters of Parts I through III in the map of the structures of social action (Figure 2.2).

The matters treated in these chapters are all contained within the domain of purposive action. This is represented by the area in the map that is enclosed by the largest circle, labeled A. Many, though not all, of the actions treated can be described as transfers of control of resources or of rights to control resources. This is the area in Figure 2.2 that is enclosed by the second largest circle, labeled B. Some, but not all, of these transfers are made in exchange, whereas

5. See Samuelson (1954) for the classic definition of a public good in terms of the two properties of nonconservation and nonexcludability. The word "all" as used here may refer only to all within a given domain defined by geography, citizenship, organization membership, and the like.

others are made unilaterally. Those made unilaterally are enclosed by a circle labeled C, and those made in exchange lie outside that circle but within circle B. One particular transfer is a transfer of rights to control one's own actions, represented by the area enclosed by circle D. This area is wholly within B, partly within C (that is, unilateral transfers), and partly outside it (that is, transfers made in exchange). In all of these, transfers of control or of rights to control are



1. Private actions
2. Exchange relations
3. Market
4. Disjoint authority relations
5. Conjoint authority relations
6. Relations of trust
7. Disjoint authority systems
8. Conjoint authority systems
9. Systems of trust, collective behavior
10. Norm-generating structures
11. Collective-decision structures

Figure 2.2 Map of the structures of social action.

sometimes made as isolated transactions, sometimes as part of a system of relations (for example, in a market or proximate in space or time, as in collective behavior). The area enclosed by circle E represents those transfers made as part of a system of relations.

The region of Figure 2.2 labeled 1 is purposive action that is scarcely social. It does not involve transfer of rights or resources either unilaterally or in exchange, nor does it have consequences for others. Because it is so minimally social, it is only treated implicitly in Chapter 3 of this book, which treats rights to act quite generally, but is not examined separately. The problems for social science in this region are those treated by cognitive psychologists in studies of deviations from rationality. Chapter 19 has a brief discussion of this work.

Region 2 of the figure is transfer of rights or resources that is exchange but is not within a market or other system of exchange. This is what most of so-called exchange theory in sociology deals with. It is discussed in this chapter and is treated formally in the first half of Chapter 25. It is, however, the least interesting part of social action theory, because little can be said about it which has deductive power.

Region 3 is exchange relations within a system of exchange but not involving a transfer of rights to control one's actions. This is the defining criterion for a market not involving authority relations and encompasses not only economic markets, but also systems of exchange of resources that are less tangible and that are not exchanged for money. The exchange of intangibles that takes place in social groups is included in this region. Such systems are discussed in Chapter 6 and, formally, in the second half of Chapter 25 and in Chapters 26 and 27.

Region 4 is exchange in which one actor gives up rights to control his actions, the kind of exchange that creates an authority relation. Another kind of authority relation, of which the best example is a charismatic authority relation, is represented by region 5, in which one actor unilaterally gives up to another the right to control his actions. The relations represented by regions 4 and 5 are examined in Chapter 4, which treats authority relations generally. Chapter 5, on relations of trust, also examines the kind of unilateral transfers of authority that are represented by region 5.

Region 6 is relations that involve a unilateral transfer of resources, tangible or intangible. Such a transfer ordinarily involves trust and, insofar as it does, is treated in Chapter 5. These trust relations are treated formally in Chapter 28.

Region 7 and region 8 involve systems of action in which authority over one's action is one of the resources involved in the exchange. The distinction between these regions (and between regions 4 and 5) is that in region 7 actors give up authority over certain actions in return for some extrinsic compensation, whereas in region 8 authority over one's actions is given up unilaterally. Region 8 is exemplified by charismatic authority systems, and region 7 is exemplified by Weber's rational authority and traditional authority. Both are treated in Chapter 7, which discusses authority systems. Region 8, however, includes phenomena that are also covered in Chapter 8, on systems of trust, and in Chapter 9, on

collective behavior. The material in these two chapters is also treated formally in Chapters 28 and 33.

Region 9 is systems of relations that arise through unilateral transfer of resources. These are also discussed in Chapters 8 and 9, along with the phenomena in region 8.

Region 10, which represents actions with externalities, is the class of actions for which norms tend to arise. Chapter 10 examines these kinds of actions, and Chapter 11 examines the social conditions under which this tendency for norms to arise becomes a reality. Chapter 30 extends this work formally.

Finally, region 11 covers events with consequences for many actors, which is the class of phenomena that gives rise to collective decisions and to the formation of corporate actors to carry out combined action. This important class of phenomena is treated in many places in this book. Chapter 13 examines the conditions under which rights will be vested in a corporate actor to carry out a unitary action for the collectivity as a whole. Chapters 14 and 15 examine the problems of collective decision making when rights to decide on such actions are not held dictatorially by one actor. Chapters 16, 17, and 18 examine special problems that arise for corporate actors. Some of these problems are discussed formally in Chapter 31 and some in Chapter 34.

Social Exchange

One property of the theoretical system developed here is parsimony. Actors are connected to resources (and thus indirectly to one another) through only two relations: their control over resources and their interest in resources. Actors have a single principle of action, that of acting so as to maximize their realization of interests. Such action can be simply consummatory, to realize the actor's interest; if it is not, the maximization principle leads most often to a single kind of action—exchange of control (or rights to control) over resources or events. Under some circumstances, however, it may lead to unilateral transfer of control (or right to control) to another. (Later in the book, in Chapter 19, I discuss another possible form of action, changing one's interests, but this is unnecessary for much of the theoretical development.)

The simplest system of action using the concepts described is a pairwise exchange of resources that have all the properties of private goods. Although such exchanges may occur in competition with others, as they do in a barter market, they need not. Social exchange is pervasive throughout social life. Indeed, some social theorists, such as Homans (1958) and Blau (1964), have constructed social theories based principally on exchange processes of this sort. In social exchanges of resources other than economic goods, the resources exchanged may not have all the properties of private goods, but this will not matter for certain qualitative deductions. In this section I will discuss the behavior of such systems and point to some of the qualitative deductions that can be made.

Exchange in social life can become complicated, for in many areas of social

life institutions to facilitate exchanges of control (especially those exchanges that require more than two parties) are not as well developed as are institutions for the exchange of economic resources.[6] Nevertheless, in this first and simplest system of action that I will outline, I make the assumption that such exchanges can be made.

The restriction to an exchange process is not as constraining as it initially appears, once the exchanges are no longer limited to economic goods. In an exchange of economic goods, each actor, in offering an exchange, can only improve the lot of the other actor, which is why we usually think of such exchanges as both voluntary and mutually beneficial. But when events of other types are included, exchange can also be used to characterize phenomena that are ordinarily conceived of as coercion; threats are included along with promises. When a parent threatens a child with a spanking if the child disobeys, the parent is giving up temporarily the right to strike the child (which the parent continuously holds by virtue of the parent's physical and legal control of the child) in return for the child's satisfying the parent's interest.

In addition, many phenomena that are ordinarily viewed not as exchange but as deployment of resources are predictable by a rather simple form of the theory. For example, Dahl (1961) notes in his study of New Haven, and other political scientists have noted elsewhere, that many potentially powerful actors in a community do not exercise their power in community decision making. The end result is often that decisions are made without the influence of the most powerful actors in the community, a somewhat puzzling phenomenon. But because political resources are often capable of being used on any of a number of events and are partially consumed in use (for example, popular support for a corporation having a plant in a town will be reduced if the corporation uses its power in opposition to a popular policy), selective deployment may be the way for an actor to maximize realization of interests.

The idea of a system within which exchanges arise spontaneously can be illustrated by Figure 2.1. In the system represented there, actor A_2 is interested in resource E_1 but has no control over it. The action principle for each actor in the system is one which leads him to gain control over the resources that interest him by giving up resources he has. The resource held by A_2 is control over E_2. Actor A_1 is interested in E_2, so A_2 should be able to gain some control over E_1 by giving up some control over E_2.

Social Equilibrium

Through exchanges such as those described above, there is a reduction in the discrepancy between interest and control, to the point where an equilibrium

6. There are, of course, institutions of various sorts which aid this. Ostrogorski (1964 [1902]) describes the functioning of the political machine in American politics in the 1890s to bring about a three-way exchange among legislators (who got constituents' votes), business firms (who got legislators' votes) and constituents (who got money and services the machine could purchase with money).

occurs—a point at which there are no exchanges that can increase the expected realization of interests for both actors. At this point each actor will have maximized his expected realization of interests to the degree allowed by the resources with which he began.

Under certain conditions, such as in a system with a small number of actors, there may not be a *single* equilibrium point. For example, in the case of two actors, each with control over a set of things of some interest to himself and of some interest to the other, there will be a whole set of equilibrium points, each of which would be better for both actors than the initial point (and better than any point outside this set) but none of which would be better for both actors than any other point in the set. There are a number of different exchange rates that would make both parties better off than before the exchange, and in the absence of a market it is indeterminate which of these will occur.[7] The equilibrium point that is achieved in such a small system of exchange can be described as a property of the system, that is, a macro-level property, just as price is in market exchange. For example, Blau's (1963) study of the exchange of deference for advice in a government agency suggests that the amount of deference paid for a particular quantity and quality of advice constituted a property of the social system of the agency.[8]

The end result of the exchange process is a redistribution of control over events, a redistribution that will give outcomes which are in a certain sense optimal. After an exchange each actor is in control of those events that most interest him, subject to the power of his initial resources, and since he will exercise that control toward achieving the outcome he prefers, there is no way that greater satisfaction can be achieved, given the initial distribution of control and of interests. In this sense the outcome is optimal.

To make such a statement as the last one appears to engage in a fallacy that has dogged welfare economics since the utilitarians, the fallacy of assuming some common metric which allows interpersonal comparison of utility. That is, making a statement about aggregate satisfaction, as is done above, implies a comparison which balances different persons' satisfactions so that satisfaction can be aggregated over those persons. As has been shown over and over again in the economic literature, such a comparison, carried out by an analyst, is meaningless. What is not meaningless, however, is the comparison that is carried out by social processes themselves. It is this kind of comparison that is intrinsic to social systems and to the model described above. The comparison which gives a common metric to the satisfactions of different persons is that which derives from the resources with which they begin. Thus, considering a

7. In the mathematical model presented in Chapter 25, a determinate equilibrium point is found as part of the deductions. This is a simplification based on the assumption that there is a perfect market for the exchange process, an assumption which comes increasingly close to being met as the number of actors with interests in each event increases.

8. Because there was not a perfect market, the "price" of advice may have varied within the agency, making the system-level property a distribution of rates around a central tendency rather than a precise rate of exchange.

patriarchal family as a system, what is meant by maximum aggregate satisfaction is an aggregate that weights the satisfactions of the male head of the household more heavily than those of his wife, because of his greater control over resources. In a matriarchal household the wife's satisfactions are weighted more heavily than the husband's in arriving at the maximum aggregate satisfaction, because of her greater power. Such maximizations cannot be normatively justified, except *within the set of values implied by the initial distribution of control among the actors in the system.*

A first implication of the theory to be developed in this book, then, is that systems of exchange mirrored by the theory do achieve a maximum overall satisfaction, but one that is specific to the initial control. I will call this control the constitutional control regardless of whether there is a formal constitution among the actors. This control expresses the constitution of the social system, whether implicit or explicit, through its expression of the rights and resources held by each of the actors.[9] Such an aggregation of the various actors' interests might be a very different one from that which an outside observer would wish to see. For example, the aggregate satisfaction that is being maximized in a patriarchal household might not accord with that judged desirable by an outside observer. But it is the only aggregation that will be maximized in that system, because the aggregation is given by the distribution of constitutional control among the different actors in the system.

In fact, a confusion between the values that the observer would wish to place on each person's interests (for example, equality), on the one hand, and the internal functioning of the system (which because of constitutional control sets values on different persons' interests), on the other hand, has led to confusion about interpersonal comparisons of utility in welfare economics. There is no meaning to interpersonal comparisons carried out by an observer (except that they satisfy the observer), but there is a meaning to those carried out internally in a system of action. Those comparisons occur in the actual transactions that take place.

The idea of a social equilibrium introduced in this section has led to another term, a social optimum. Because this term will be important in the theory to be developed and because the concept of a social optimum differs in the various regions of the map of the structures of action, it is important to examine briefly what is meant by a social optimum in these different regions.

The Social Optimum

Adam Smith expressed the principle that an individual, intending only his own gain, is "led by an invisible hand to promote an end which was no part of his intention" (1937 [1776], p. 423). Although Smith did not imply that this leads to a

9. Constitutions of actual social systems do, of course, contain more than an expression of the distribution of control among existing actors in the system. See Chapter 13.

social optimum, he did go on to say, "By pursuing his own interest he frequently promotes that of the society more effectively than when he really intends to promote it" (p. 423). Neoclassical economists went further and showed that when certain highly restrictive conditions were met (costless exchange of goods that have no consumption externalities), pursuit of one's interest in exchange leads to an improvement for all those involved in the exchange with no loss to others. When no more voluntary exchanges are possible, a social optimum has been achieved. In this way, the grounding of economic theory on a principle of individual maximization of utility subject to resource constraints has made possible normative statements based on the theory. Some work in moral and political philosophy (Rawls, 1971; Nozick, 1974; Gauthier, 1986) has taken the same foundation from which to derive normative theory.

Sociological theorists have not followed this path. The absence of an explicit normative principle at the level of the individual, such as the principle of maximization of utility, has thus denied sociological theory the possibility of making normative statements. A property of the theoretical structure on which this book is based is that it contains the potential for making such statements. Yet to do so requires recognition that the conception of when a system is "better off" and the notion of a social optimum differ depending on which region of the map of the structures of action (Figure 2.2) the system is in. It is useful to describe the concepts of social optima that are relevant to different regions.

1. *Regions 2 and 4: voluntary exchanges outside a competitive market.* When voluntary exchanges of resources without externalities take place, both parties improve their lot and no one is hurt. When these exchanges occur outside a competitive structure, the exchange rate is indeterminate within a certain range. In such a setting an optimum exists when no other feasible exchanges are of interest to the two actors that would be parties to them. Such an optimal point is a Pareto optimum; and because the exchange rates are indeterminate (because of lack of competition), many Pareto optima are possible.

2. *Regions 3 and 7: voluntary exchanges of resources without externalities and within a competitive market.* When voluntary exchanges take place within the context of a competitive market, the number of mutually acceptable exchange rates shrinks to a single rate, so each resource can be said to have a particular value in the system. The multiple social optima possible outside a competitive market are reduced to a single point, which economists call the competitive equilibrium. As the preceding section indicated, this social optimum depends, as do all social optima, on the initial resource distribution. Thus each resource distribution is associated with a particular equilibrium point.

3. *Region 10: actions with externalities in a closed system.* Here the external effects (positive or negative) imposed by actions on others who have no control over those actions mean that voluntary choice no longer naturally achieves a social optimum. There is an intrinsic conflict of interest, created by the external effects. The social optimum depends on which interest is stronger, in the sense

discussed in the preceding section. If the interests opposing those of an actor are stronger than the actor's, a social optimum is achieved when there is an effective norm or law, with rights to control the action held by those other than the actor. Achievement of the social optimum in this region when the action is unobserved and thus cannot be policed by external sanctions requires internalization of the rights of others, or socialization. This internalization is commonly achieved within institutions such as the family and religious organizations.

4. *Region 11: events with consequences for many in a closed system.* This region of the map of the structures of action is another one in which there is conflict of interests. A social optimum is achieved when the outcome of the event is that favored by the stronger set of interests. This may be achieved when rights to control the action are distributed among all those with interests in the action (though, as Chapter 15 indicates, the achievement of a social optimum through collective decision making is not easily assured through allocations of rights). In this region there are often potential gains from action that is coordinated among two or more actors. The social optimum is achieved when the gains resulting from an additional unit of output are just compensated by the additional cost of bringing about that additional output. The structures within which this social optimum is achieved are ordinarily formal organizations having positions (occupied by actors) among which components of the action are distributed. The sanctions applied to actors occupying the positions either result from external policing of the action or are internal sanctions depending on the product of the action (see Chapters 7 and 16).

The importance of the concept of a social optimum to a social theory lies in the capability it brings for evaluating different social arrangements. No such evaluation is possible without a way of assessing when a system is "better off" or "worse off." The way in which this can be done is, of course, not evident in the brief descriptions given above, but will be addressed in subsequent chapters.

The Absence of a Social Equilibrium

In certain cases actions designed to bring about an individual equilibrium do not lead toward a social equilibrium. A social equilibrium results from exchanges of control of resources among actors; but when actors transfer control of resources to others unilaterally, in attempting to achieve individual equilibrium (utility maximization), the result may not lead toward a social equilibrium but away from it. (In Figure 2.2 this is represented by circle C, enclosing regions 5, 6, 8, and 9.) Unilateral transfer of control by one actor may lead, for example, to unilateral transfers of control to the same actor by others. There is nothing about unilateral transfers of control, even when they are voluntary and rational, which necessarily leads toward a social equilibrium. There may, for example, be increased concentration of power or dispersion of power.

Unilateral transfers of control over resources or events lead to structures of

action that are ordinarily characterized as collective behavior. Collective behavior includes such phenomena as mob behavior, systems of trust, public opinion, social movements, emergent charismatic authority, audience behavior, fads, and fashion. It is a major source of social change.

Simple and Complex Relations

There is one additional distinction to be made before examining in detail the structures of action shown in Figure 2.2. This is the distinction between simple and complex relations among actors.

Social relations between two persons are, of course, the building blocks of social organization. But matters are not so straightforward as this might seem to imply. Certain social relations are self-sustaining in the sense that incentives to both parties to continue the relation are intrinsic to the relation. The incentives are generated by the relation itself, and continuation of the relation depends on its generating sufficient incentives for both parties. Many of what we think of as social relations are like this: primordial social ties, relations of friendship, "informal" social relations of all sorts, and authority relations such as those of master and servant or father and son. These relations can be seen as building blocks for much of social organization. Social organization that grows, as in a community or a sprawling social network, is an amalgam of such relations. These may be called simple relations to distinguish them from a second class of relations.

The second class of social relations are those that are not self-sustaining but depend on a third party for their continuation. Incentives to one or both of the two parties to continue the relation are not intrinsic to the relation but must be supplied from the outside. This is the kind of relation on which formal organizations are built. Social organization consisting of such relations does not just "grow," because one (or both) of each pair of parties has no incentive to establish such a relation. This kind of organization must be built, because it is based on more complex structures of incentives, involving three or more parties for each two-actor relation. The organization is a structure of relations made up of obligations and expectations, but there is not the requirement, as there is in a social organization composed of simple relations, that each person's obligations and expectations bring about a positive account balance in each of the person's relations. Each person need have only one positive account balance covering the total set of actors involved in this complex structure of incentives. This form of social relation I will call a complex relation.

The social environment can be viewed as consisting of two parts. One is the "natural" social environment, growing autonomously as simple social relations develop and expand the structure. A second portion is what may be described as the built, or constructed, social environment, organizations composed of complex social relations. The constructed social environment does not grow naturally through the interests of actors who are parties to relations. Each relation