

*Metatheory:  
Explanation in Social Science*

A central problem in social science is that of accounting for the functioning of some kind of social system. Yet in most social research, observations are not made on the system as a whole, but on some part of it. In fact, a natural unit of observation is the individual person; and in the development of quantitative methods of research, the dependence on individual-level data—most often interviews, but sometimes administrative records of behavior, direct observation, or other forms of data—has increased greatly. This has led to a widening gap between theory and research: Social theory continues to be about the functioning of social systems of behavior, but empirical research is often concerned with explaining individual behavior.

This focus on individual behavior as the thing to be explained is not completely misplaced in social science. Much of contemporary social research focuses on explaining individual behavior. Voting behavior, consumer choice, occupational choice, attitudes, and values are all taken as phenomena to be explained. Factors used in explanation include both characteristics of the individuals being studied and characteristics of their social environments, ranging from family to friends to larger social contexts. One method of explanation in sociology is statistical association, used in much quantitative research aimed at explaining individual behavior and ordinarily based on samples of individuals who differ both in the behavior to be explained and in characteristics which are potential sources of explanation of that behavior.

A second method of explanation, used in both qualitative and quantitative research, depends on examining processes internal to the individual. Sometimes knowledge of these processes is arrived at through introspection or sympathetic understanding on the part of the observer; sometimes it is arrived at through quantitative monitoring of changes within the individual, as is done in some branches of psychology. In principle, these observations may be carried out with only a single individual.

These two modes of explanation differ in more than method. The former uses as explanatory factors principally factors external to the individual or factors characterizing the individual as a whole. The latter uses principally factors internal to the individual and focuses on processes through which these internal changes lead to behavior.

I will have more to say about explanation of individual behavior later in this book, for it bears a more complex relation to social theory than is immediately apparent. At this point, however, I want merely to note that the focus on explaining individual behavior, found in much social research, often leads away from the central problems of social theory, which concern the functioning of social systems.

### Explanation of the Behavior of Social Systems

The principal task of the social sciences lies in the explanation of social phenomena, not the behavior of single individuals. In isolated cases the social phenomena may derive directly, through summation, from the behavior of individuals, but more often this is not so. Consequently, the focus must be on the social system whose behavior is to be explained. This may be as small as a dyad or as large as a society or even a world system, but the essential requirement is that the explanatory focus be on the system as a unit, not on the individuals or other components which make it up.

As with the explanation of individual behavior, there are two modes of explanation of the behavior of social systems. One depends on either a sample of cases of system behavior or observation of the behavior of the system as a whole over a period of time. The analytical methods are based on statistical association between the behavior of interest and other characteristics of the social system as the context for that behavior. An example of research involving a sample of cases is factor analysis, sometimes carried out at the level of nations to account for political change or economic development. An example of research involving observation of a system over a period of time is the "natural history" approach in sociology or business cycle analysis applied to aggregate economic data (see, for example, Burns and Mitchell, 1946).

A second mode of explanation of the behavior of social systems entails examining processes internal to the system, involving its component parts, or units at a level below that of the system. The prototypical case is that in which the component parts are individuals who are members of the social system. In other cases the component parts may be institutions within the system or subgroups that are part of the system. In all cases the analysis can be seen as moving to a lower level than that of the system, explaining the behavior of the system by recourse to the behavior of its parts. This mode of explanation is not uniquely quantitative or uniquely qualitative, but may be either.

This second mode of explanation has certain points to recommend it, as well as certain special problems. Because this is the mode of explanation I will use throughout this book, it is useful to list some of the points that favor its use before turning to its major problem. In order to have a label to designate this mode, I call it the internal analysis of system behavior.

### *Points Favoring the Internal Analysis of System Behavior*

1. A major problem of data adequacy exists in confirmation of theories based on system-level data when the systems are large in size and few in number. There are too many alternative hypotheses which cannot be rejected by the data. In part for this reason, research data in the social sciences are often gathered at the level of units below the level of the system whose behavior is of interest. Perhaps the most common point of observation is the individual, whether by interview, direct observation, or another method. Much sociological research is based on sample surveys of individuals, and nearly all demographic research is based on individual-level data. Data used in the study of economic systems are ordinarily gathered from individual firms and individual households, though the data are often aggregated before being used in research.

Because data are so often gathered at the level of individuals or other units below the level of the system whose behavior is to be explained, it is natural to begin the explanation of system behavior by starting at the level at which observations are made, then "composing," or "synthesizing," the systemic behavior from the actions of these units.

2. Just as observations are often most naturally made at levels below that of the system as a whole, interventions must be implemented at these lower levels. Thus a successful explanation of system behavior in terms of the actions or orientations of lower-level units is ordinarily more useful for intervention than is an equally successful explanation which remains at the level of the system itself. Even where an intervention is at the level of the system, such as a policy change made by a nation's government, its implementation must ordinarily occur at lower levels, and that implementation is what determines the consequences for the system. Thus an explanation of system behavior which goes down as far as the actions and orientations of those who will implement the policy is likely to be more useful than one which does not.<sup>1</sup>

3. An explanation based on internal analysis of system behavior in terms of actions and orientations of lower-level units is likely to be more stable and general than an explanation which remains at the system level. Since the system's behavior is in fact a resultant of the actions of its component parts, knowledge of how the actions of these parts combine to produce systemic behavior can be expected to give greater predictability than will explanation based on statistical relations of surface characteristics of the system. This need not be so, of course, if the surface characteristics are quite proximate to the behavior to be explained. In meteorology, for example, predictions based on immediately prior weather conditions in the vicinity may be better than predictions based on interactions among many component parts (various air masses and land and water

1. Schultze (1977) gives a number of examples in which a statutory change at the level of the federal government, not based on a theory or understanding of the orientations of those responsible for implementation of the statute, had consequences quite different from those intended.

surfaces). Similarly, macroeconomic predictions based on leading indicators having known statistical association with subsequent system performance may give better predictions than will economic models based on interactions among parts of the system. These illustrations, however, depend both on the incompleteness of the explanation (or "theory") based on internal processes and on the proximity of the system-level indicators. As the latter become less proximate, their predictive value falls off rapidly.

4. As point 3 suggests, an internal analysis based on actions and orientations of units at a lower level can be regarded as more fundamental, constituting more nearly a theory of system behavior, than an explanation which remains at the system level. It can be said to provide an understanding of the system behavior which a purely system-level explanation does not. Still, this raises the question of what constitutes a sufficiently fundamental explanation. Is it any explanation that goes down to a level of units below that of the system itself? Is it one that goes down to the level of the individual person? Is it one that does not stop at the level of the person but continues below that level?

I will not attempt to answer this question in general, except to say that point 2 provides a satisfactory criterion in practice. That is, an explanation is sufficiently fundamental for the purpose at hand if it provides a basis for knowledgeable intervention which can change system behavior. Later I will suggest that a natural stopping point for the social sciences (although not psychology) is the level of the individual—and that, although an explanation which explains the behavior of a social system by the actions and orientations of some entities between the system level and the individual level may be adequate for the purpose at hand, a more fundamental explanation based on the actions and orientations of individuals is more generally satisfactory. For example, an analysis of the functioning of an economic system based on the actions and orientations of firms and households may be quite satisfactory, but for other purposes those actions and orientations of the firms and households must be explained in terms of the actions and orientations of individual persons who play some part in controlling them.

5. The internal analysis of system behavior is grounded in a humanistically congenial image of man. This cannot be said for much of social theory. For many social theorists social norms are starting points of theory. The image of man demanded by a theory that begins at the level of social systems is *homo sociologicus*, a socialized element of a social system. The questions of moral and political philosophy which address the fundamental strain between man and society cannot be raised. The freedom of individuals to act as they will, and the constraints that social interdependence places on that freedom, nowhere enter the theory. Problems of freedom and equality cannot be studied. Individuals as individuals enter only via their conformity to or deviance from the normative system. With this image of man as a socialized element of a social system, it becomes impossible, within the framework of social theory, to evaluate the actions of a social system or a social organization. Germany under Hitler or

Russia under Stalin is indistinguishable as a nation-state from Switzerland in any evaluative sense, and Charles Manson's and Jim Jones's communes, which were directed toward death, are morally indistinguishable from an Israeli kibbutz, which is directed toward life. This is especially curious, since many sociologists hold values that sharply distinguish among social organizations on the basis of humanitarianism yet are content with social theory that blinds them to these very values—a stance which probably derives more from intellectual superficiality than from any lack of moral righteousness.

There is, of course, a reaction against social theory which begins at the level of a social system and against the image of man it presents, both within social science and outside it. The wide popularity of works by social scientists and others that explicitly open the question of human freedom (*Escape from Freedom* [Fromm, 1941], *The Lonely Crowd* [Riesman, Glazer, and Denney, 1953], and *The Organization Man* [Whyte, 1956]) and the question of human rights and the alienation of those rights (the works of Marx, Engels, and Marcuse) indicates the importance of these questions to persons in society.

The theory presented in this book is, as suggested above, not unique among social theories in taking individuals as its starting point. The problems it addresses are, however, just as close to those raised by the seventeenth- and eighteenth-century political philosophers Hobbes, Locke, and Rousseau as they are to questions dealt with by much of current social theory. More than any other single question, this theory addresses the question of the peaceful coexistence of man and society, as two intersecting systems of action.

#### *A Note on Methodological Individualism*

Those readers familiar with debates and discussions on methodological holism and methodological individualism will recognize that the position taken above on explanation is a variant of methodological individualism. But it is a special variant. No assumption is made that the explanation of systemic behavior consists of nothing more than individual actions and orientations, taken in aggregate. The interaction among individuals is seen to result in emergent phenomena at the system level, that is, phenomena that were neither intended nor predicted by the individuals. Furthermore, there is no implication that for a given purpose an explanation must be taken all the way to the individual level to be satisfactory. The criterion is instead pragmatic: The explanation is satisfactory if it is useful for the particular kinds of intervention for which it is intended. This criterion will ordinarily require an explanation that goes below the level of the system as a whole, but not necessarily one grounded in individual actions and orientations. This variant of methodological individualism is perhaps closest to that used by Karl Popper in *The Open Society and Its Enemies* (1963), although Popper is primarily concerned with explanation of societal-level phenomena, rather than behavior of social systems of any size.

### The Major Problem

The major problem for explanations of system behavior based on actions and orientations at a level below that of the system is that of moving from the lower level to the system level. This has been called the micro-to-macro problem, and it is pervasive throughout the social sciences. In economics, for example, there is microeconomic theory and there is macroeconomic theory; and one of the central deficiencies in economic theory is the weakness of the linkage between them, a weakness papered over with the idea of "aggregation" and with a ubiquitous concept in macroeconomic theory, that of the "representative agent."

In this section I will show some of the problems involved in making a proper micro-to-macro transition, point to some instances where the transition has been correctly made, and indicate steps toward making the transition correctly in some areas where this has not been successfully done.

**MAX WEBER AND THE SPIRIT OF CAPITALISM** To show something about what is involved in making a proper micro-to-macro transition, I will turn first to an instance in which it was not made properly. This example is a classic in sociology, Max Weber's *The Protestant Ethic and the Spirit of Capitalism* (1958 [1904]).

At one degree of detail, Weber is simply expressing a macrosocial proposition: The religious ethic which characterized those societies that became Protestant in the Reformation (and particularly those that were Calvinistic) contained values that facilitated the growth of capitalist economic organization. Diagrammatically, the proposition can be put as shown in Figure 1.1. This proposition, if there were nothing more, would exemplify the first mode of explanation described earlier, which remains at the level of the system. For any degree of confirmation the proposition would require one of two kinds of evidential basis. One would be a systematic comparison of the economic systems of Protestant and non-Protestant societies to determine if the former were more likely to be capitalist. A second basis would be an examination over time of the economic organization of societies which became Protestant, to determine whether capitalism developed shortly after the advent of Protestantism. Weber presents evidence of both these sorts, comparing countries according to their religious composition and the degree and timing of their capitalist development. This evidence, however, is far from conclusive, and Weber does not base most of his effort on it.

The deficiencies of this approach are among the points described earlier as favoring internal analysis. The empirical deficiencies (point 1 given earlier) are probably the most glaring: The societies that can be compared are few in number, and those in which capitalism developed most rapidly differed not only in



Figure 1.1 Macrosocial proposition: Calvinism encourages capitalism.

religion but in many other ways as well. Statistical comparisons would be subject to many different interpretations, *even if* the association between Protestantism and capitalism were high.

But Weber does not remain with this proposition alone. He examines the content of Calvinist doctrine, in particular, the kind of moral prescriptions it imposes on its adherents. Then he examines the "spirit" of modern capitalism and, using a number of other periods and other economic institutions for comparison and contrast, singles out the idea of diligence in performing one's duty in a calling (p. 54) and opposition to traditionalism (pp. 58–63) as the central elements which distinguish it. Finding the same antitraditionalist orientation and the same precept of diligence toward one's calling in Calvinist doctrine, he uses this as evidence that the growth of this religious doctrine provided the value system which allowed capitalism to develop. This second kind of evidence allows further specification of the relation shown in Figure 1.1. The content of the Protestant ethic can be described as values deriving from the religious beliefs of a society, and the content of what Weber calls the spirit of capitalism can be described as values governing the economic activities of the society. These values are two components of the value system of a society, governing activities in two different institutional areas.

When Weber's thesis is seen in this way, some of its vulnerabilities to criticism become apparent. A major criticism, expressed by Tawney (1947) as well as others before and since, is that the shared content of the religious and economic values is not evidence of the effect of the former upon the latter, but may be an indicator of other changes which altered both religious and economic value systems. Alternatively, the shared content could arise from an effect of new values in economic activities in reshaping those religious values that were most susceptible to such an effect, that is, the values of Calvinists.

Part of Weber's discussion in support of his argument goes far beyond comparisons between nations to include comparisons between regions within nations, religious subgroups within regions, and even individuals in families (see especially his footnotes in chapter 1). For example, he quotes extensively from the writings of Benjamin Franklin to express the essence of the spirit of capitalism and points to the religioethical precepts taught to Franklin by his Calvinist father. Weber also compares the taxable wealth of Protestants and Catholics in a region in Germany.

The use of this material raises further questions about just what kind of proposition Weber was attempting to demonstrate and, in particular, what unit or units were involved in the proposition. Did he really mean to specify the proposition at the individual level? It appears, from his use of this individual-level evidence and from some of his statements, that this is exactly what he intended.<sup>2</sup> If so,

2. For example, Weber states that "this peculiar idea . . . of one's duty in a calling is what is most characteristic of the social ethic and capitalist culture, and is in a sense the fundamental basis of it. It is an obligation which the individual is supposed to feel and does feel towards the content of this professional activity" (p. 54). In later chapters Weber shows that this sense of "duty in a calling" was central to Protestant, and particularly Calvinist, doctrine.

then the proposition of Figure 1.1 must be revised. The single proposition breaks into three: one with an independent variable characterizing the society and a dependent variable characterizing the individual; a second with both independent and dependent variables characterizing the individual; and a third with the independent variable characterizing the individual and the dependent variable characterizing the society. Thus the proposition system begins and ends at macro levels, but in between it dips to the level of the individual. The three propositions may be put, somewhat crudely, as follows:

1. Protestant religious doctrine generates certain values in its adherents.
2. Individuals with certain values (referred to in proposition 1) adopt certain kinds of orientations to economic behavior. (The central orientations to economic behavior are characterized by Weber as antitraditionalism and duty to one's calling.)
3. Certain orientations to economic behavior (referred to in proposition 2) on the part of individuals help bring about capitalist economic organization in a society.

Figure 1.2 shows a way of diagramming such multilevel systems of propositions. The upper horizontal arrow represents the macro-level proposition. The three connected arrows—of which the first begins at the same point as the macro-level proposition and goes down to a lower level and the third goes back up to the final point of the macro-level proposition—represent the three linked propositions.

In this set of propositions, the third is of most interest, because it moves back up from the individual level to the societal level. The independent variable characterizes an individual, and the dependent variable characterizes a social unit, in this case the society. Obviously, a proposition of this sort, unless it is

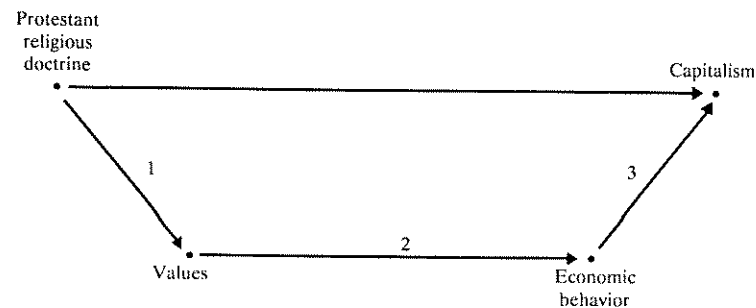


Figure 1.2 Macro- and micro-level propositions: effects of religious doctrine on economic organization.

one of those historical propositions which attribute major social changes to particular individual leaders, is not suggesting that a single individual's attributes are effective in bringing about social change. Rather, some sort of combined or joint or aggregate effect of the economic behavior of many individuals in bringing about capitalistic development is being proposed. It is here, however, that Weber's analysis is almost totally silent.<sup>3</sup> What kind of combination or aggregation brought about the development, even supposing the propositions of Figure 1.2 to be correct?

Whose economic behavior is at issue here—that of prospective workers in capitalist enterprise, that of prospective entrepreneurs, or that of both? And if that of both, is it proposed that the religious values were precisely appropriate for the economic behavior of the workers *and* for that of the entrepreneurs? For some values, particularly the antitraditionalism central to the "spirit of capitalism," it is clear that Weber is arguing that this is so. But the absence of a serious consideration of this question shows a major element to be missing from his theory.<sup>4</sup> What is necessary to account for the growth or occurrence of any social organization, whether capitalist economic organization or something else, is how the structure of positions constituting the organization comes into being, how persons who come to occupy each of the positions in the organization are motivated to do so, and how this interdependent system of incentives is sustainable. These are the central problems of the analysis of social organization. Marx's analysis of the emergence of capitalism from feudalism, polemically marred though it was, came closer to doing this than did Weber's analysis in *The Protestant Ethic*.

A considerable body of theoretical work, which might be called cultural psychology, attempts to explain social change by use of culture or values alone, without reference to social organization. Possibly the work of Abram Kardiner (1945) expresses this orientation most fully, but it can also be found in the work of other cultural anthropologists, such as Margaret Mead and Ruth Benedict. Just as in proposition 3 of Figure 1.2, essential elements of an explanation are

3. This is not to say that Weber said nothing about these matters elsewhere. The example being used here is a particular work, not Weber's total works. Yet the very fact that Weber's thesis has been questioned almost from the beginning indicates that his further work did not lay to rest the doubts raised by this work.

4. It could well be argued, and Weber's text would in many places support the argument, that Weber was concerned in this work only with showing the effects of the content of Protestant religious values on the content of values characteristic of capitalist enterprise. But this interpretation leads to other problems. Showing that two sets of values held by individuals have shared content does not provide evidence that either set affected the other; and the absence of any excursion from the realm of values to mundane activities means no mechanism is provided through which such effects might take place. On the other hand, if the "spirit of capitalism" is to be regarded as not merely a property of individuals but a property of the society, that is, a shared norm, then Weber has failed to show the processes through which the individuals' beliefs give rise to the social norm (as well as to demonstrate the relevance of such a norm to the actual practice of capitalism).

missing—precisely those elements that constitute the analysis of social organization.

**THEORIES OF REVOLUTION** A contemporary instance of the attempt to make the micro-to-macro transition through simple aggregation of individual attitudes or orientations can be found in certain theories of revolution. These are theories which can generally be termed frustration theories.

The problem addressed by frustration theorists of revolution is the puzzling one of why revolutions often seem to occur during periods of social change in which conditions are generally improving. The frustration theorists resolve this problem by arguing that the improving conditions in the society create frustration on the part of individual members of the society, leading to revolution. Like Weber's propositions in *The Protestant Ethic*, there are three linked relations: The first is from the system level to the individual level; the second is wholly at the individual level; and the third is from the individual level to the system level. Figure 1.3 shows these propositions diagrammatically.

The first relation takes several forms, depending on where the theorist sees the frustration arising: from short-term setbacks, relative deprivation, rising expectations induced by rapid change, or some other cause (see Chapter 18). The second relation is merely a frustration-aggression proposition from psychology. The third relation is implicit, a simple aggregation of individual aggression to produce a social product, that is, a revolution. Yet a revolution involves organization and the interplay of actions on the part of a number of actors.

In both the analysis by Weber and that by the frustration theorists of revolution, the micro-to-macro transition is made simply by aggregation of individual orientations, attitudes, or beliefs. If, however, the theoretical problem is one involving the functioning of a social *system*, as it is in explaining the rise of a capitalist economy or the occurrence of a revolution, then it should be obvious that the appropriate transition cannot involve the simple aggregation of individual behavior.

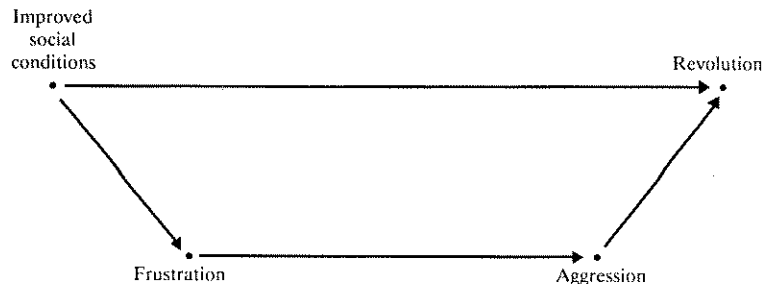


Figure 1.3 Macro- and micro-level propositions: effects of improved social conditions on potential for revolution.

## Components of the Theory

There are three kinds of components to any theory in which system behavior derives from actions of actors who are elements of the system. These correspond to what are shown as relations of types 1, 2, and 3 in Figure 1.2. Relations of types 1 and 3 involve movement from macro to micro and micro to macro, respectively, and relations of type 2 are based on the principle of action describing actions of the actors. This principle of action constitutes a necessary fixed kernel, which gives rise to different systemic behavior—that is, different social phenomena—when located in different social contexts and when different persons' actions combine in different ways.

There is, in fact, a good rationale for arguing that social theory, as distinct from psychological theory, consists of theory about the working out of various rules within which sets of persons act.<sup>5</sup> This view, as well as the character of macro-to-micro and micro-to-macro transitions, can be understood by imagining a social-simulation game of the sort that is sometimes used in education.<sup>6</sup> Such a game is composed of the following:

- A set of roles that players take on, each role defining the interests or goals of the player
- Rules about the kinds of actions that are allowable for players in each role, as well as about the order of play
- Rules specifying the consequences that each player's action has for other players in the game

If the playing out of the game is viewed as simulating the behavior of some aspect of a social system (as it will if the game is well constructed), then there are two naturally separable components: the players and the structure of the game. The players contain within themselves some principle of action (which could hardly be described as other than purposive), and the game comprises the structure which sets in motion these actions and combines them to produce behavior of the system.

It is this structure which corresponds to the two transitions I have described: macro to micro and micro to macro. The first of these transitions is mirrored in the game by all those elements that establish the conditions for a player's action: the player's interests, given by the goal established by the rules; the constraints on action, which are imposed by other rules; the initial conditions, which provide the context within which action is taken; and, after the game is in play, the new context imposed by others' actions. The second transition is mirrored by

5. See Brennan and Buchanan (1985, pp. 1–18) for a discussion of the role played by rules in a social order.

6. It was the development and use of such social-simulation games which led me away from my previous theoretical orientation, of a Durkheimian sort, to one based on purposive action. It seemed clear that both in development of the rules of the game and in observation of the consequences of those rules in play of the game, an enterprise leading in the direction of the development of social theory was taking place.

the consequences of the player's action: how it combines with, interferes with, or in any other way interacts with the actions of others (which in the play of the game as in reality may be simultaneous with or precede or follow the given player's action), thus creating a new context within which the next action takes place.

But if this description of the play of the game is intended to mirror transitions from the macro to the micro level and back again, where is the macro level? Although it is clear that the play of the game can represent the micro level, there is no tangible macro level. The answer is that the macro level, the system behavior, is an abstraction, nevertheless an important one. If, for example, the game is *Diplomacy*<sup>7</sup>, a commercial game in which the players represent the European powers in 1914, the "system behavior" is the alliances and conflicts that develop, the emergence of war, and the changes in the map of Europe as a consequence of the players' actions.

It is useful to interject that in *Diplomacy* the players represent not individual persons but nations, exemplifying the case in which the actors at the micro level are not individuals but corporate actors. In this game the macro level is the level of Europe as a whole, and the micro level is that of the individual nation. One objection to such diplomatic games, in which a nation is represented by a single goal-oriented player, is that they do not mirror reality sufficiently well, that, in reality, actions of nations may express some internal conflict. For example, the point is commonly made that rulers sometimes provoke external conflict to generate internal cohesion.<sup>7</sup> For this reason, in more complex diplomatic games nations are sometimes represented by more than one player, with each player responsible for certain internal activities of the nation, activities which may affect the nation's actions toward the outside. In such a configuration the nation itself is treated as a system of action, which is in effect an actor in the larger system of action.

The system behavior, the macro level in the terminology of this book, sometimes is appropriately conceived as being merely the behavior of a system of actors whose actions are interdependent. In some cases the system behavior can be regarded as the action of a supra-individual actor, for example, the action of a nation resulting from the interdependent actions of actors internal to the nation. Similar to this is the case in which the macro level is a formal organization and the micro level is made up of departments in the organization or persons occupying positions in it.

Somewhere between the case in which the system behavior is purely an abstraction resulting in certain macro-level outcomes (such as changes in the map of Europe) and the case in which the macro level is a formal organization that can be conceived of as an actor is the case in which no unitary actor emerges at the macro level but there are well-defined properties or concepts characterizing

7. See Lederer (1940) for a discussion of Mussolini's venture against Ethiopia prior to World War II as such an action.

that level. The determination of price in an economic market is an example which illustrates this case well. The micro-level actors are the individual traders, and the price of each good gives the exchange rate (relative to some medium of exchange, or numeraire) for that good when there is equilibrium, that is, when no additional trades will take place beyond those already arranged. The relative prices of two goods as a concept characterizing the market as a whole (rather than merely the exchange rate at which a transaction involving those goods takes place between two particular traders) is an abstraction made possible by the fact that market competition compresses the various exchange rates for the same pair of goods among different trading partners toward a single rate, as each trader attempts to get the best exchange possible for the good or goods that trader holds.

#### *The Individual-Level Theory of Action*

The examples introduced earlier do not use the same theory of action. The frustration theorists of revolution use a model of expressive action, with aggressive behavior being the expression of frustration, unmodified by any goal or purpose. The psychological model underlying the study of suicide carried out by Emile Durkheim (1951 [1897]) was similar to that of the frustration theorists. Durkheim's analysis regarded suicide as an expressive act resulting from a psychological state brought about by one's relation to one's social environment. Max Weber's analysis of Protestantism and capitalism, in contrast, implicitly assumed that persons act purposively toward a goal, with the goal (and thus the actions) shaped by values or preferences. For Weber economically productive actions were modified by Calvinism through its effect on values that were relevant to economic actions. The economic actions followed directly as "reasonable" or "understandable" or "rational" actions for persons holding the values embodied in Calvinism.<sup>8</sup>

The individual-level theory of action I will use in this book is the same purposive theory of action used in Weber's study of Protestantism and capitalism. It is the theory of action used implicitly by most social theorists and by most people in the commonsense psychology that underlies their interpretation of their own and others' actions. It is ordinarily the dominant model of action we apply when we say we understand the action of another person: We say that we understand the "reasons" why the person acted in a certain way, implying that we understand the intended goal and how the actions were seen by the actor to contribute to that goal.

For some purposes in the theory of this book, nothing more than this commonsense notion of purposive action is necessary. For much of the theory, however,

8. This statement does not take into account the micro-to-macro problem discussed in the preceding section. The actions of an individual depend not only on preferences or values but also on opportunities and incentives provided by the environment. The growth of capitalism involved changes in these opportunities and incentives.

a more precise notion is required. For this I will use the conception of rationality employed in economics, the conception that forms the basis of the rational actor in economic theory. This conception is based on the notion of different actions (or, in some cases, different goods) having a particular utility for the actor and is accompanied by a principle of action which can be expressed by saying that the actor chooses the action which will maximize utility.

There are a number of points of clarification to be made about the use of this somewhat narrowly conceived version of purposive action as the individual-level component of a social theory. Some of these are in the form of caveats. First, this is clearly a particular specification of the broader idea of purposive action; other specifications are also compatible with that broader idea. For example, Tversky's (1972) theory of elimination by aspects (which appears to correspond better than standard rational choice theory to the way certain choices are made) implies that purposive choice is made in stages, with selection at each stage made according to a particular dimension or aspect on which the objects of choice differ. The standard theory of rational choice has no way for such dimensions to emerge, and no place for hierarchically structured choice.

In other work Kahneman, Tversky, and others (see, for example, Kahneman, Slovic, and Tversky, 1982) have shown conclusively that persons, when intending to act rationally, have systematic biases that lead their actions to be less than rational, according to some objective standard. That is, individuals act systematically to yield outcomes they regard as less good than outcomes that would have been obtained from other actions. One such systematic bias is the overestimation of probabilities of unlikely events.<sup>9</sup> Another is allowing one's perception of a situation in which a choice must be made (and thus the choice made) to be influenced by elements in the description that are irrelevant to the outcome.<sup>10</sup>

Another deviation from rationality lies in the inconsistency between resolving not to carry out some action and then later carrying out that action (in which case it might be said that one has "succumbed to temptation"). Elster (1979) describes such cases, cases in which persons may precommit themselves in order not to succumb. In these cases, as in the cases that can be explained

9. For example, people tend to overplay long shots in betting on races or choose to play a lottery having a larger prize but a lower expected value than another lottery.

10. For example, Tversky and Kahneman (1981) used an experimental situation in which it is stated that the United States is preparing for the outbreak of a rare disease that is expected to kill about 600 persons. Version 1 of the hypothetical situation is stated as follows: If program A is adopted, 200 people will be saved. If program B is adopted, there is a probability of 1/3 that 600 people will be saved and a probability of 2/3 that no one will be saved. Which program would you favor? Version 2 of the hypothetical situation is stated as follows: If program C is adopted, 400 people will die. If program D is adopted, there is a probability of 1/3 that nobody will die and a probability of 2/3 that 600 will die. Which program would you favor? In their experimental work Tversky and Kahneman show that many fewer persons choose program B than choose program A, but many fewer choose C than choose D; yet the situations in versions 1 and 2 are the same.

through a hierarchical structuring of choice, it appears that choice may be better conceived as resulting from an organization of components of the self than from a simple maximization of utility.

Apart from different specifications of how individuals act purposively and deviations from the objectively best action when intending to act rationally, there are other actions which appear to be better described as expressive or impulsive (that is, without a goal in mind), actions which lead to outcomes the actor does not prefer, even actions that can be described as self-defeating. The frustration-aggression hypothesis discussed earlier and Durkheim's theory of the impact of social context on psychic states leading to suicide are attempts to capture this. Although I will argue in Chapter 18 that the frustration-aggression model of action is incorrect as a component of theories of revolution, this does not mean that frustration never leads to aggression. Without commitment to a position for or against the thesis that such actions can be reconceptualized in a way that is compatible with purpose or rationality, one must accept that certain actions are most straightforwardly described in a way that does not involve purpose.

Still another objection to purposive action as a basis for social theory is an objection to the use of teleology in any theory of action. The concept of purpose is explicitly teleological. It explains current states in terms of (desired or intended) future states, rather than in terms of antecedent states. It gives rise to explanations based on final causes rather than on proximate causes. It is antithetical to the usual causal explanations in science. In other disciplines teleological explanations, when they have proved useful at all, have served as way stations, or intermediate points on the way to a theory which eliminates teleology.<sup>11</sup>

Given these and other deviations from, exceptions to, and objections to either the very concept of purposive action or the narrow conception of rationality given by the principle of maximization of utility, what is my rationale in using it as a basic component of social theory? The question can be divided in two: Why use a theory of purposive action at all, rather than a theory that is agnostic concerning individual action? Why use the narrow and especially simple specification of purposive action developed by economists, that is, maximization of utility?

11. An example used by Nagel concerns the question of why the angle of reflection of light from a surface equals the angle of incidence. A teleological explanation is that the reflection occurs in such a way as to minimize the total distance traveled from source to receptor. This obviously is only a superficial explanation, if it can be called an explanation at all. It leaves unanswered the question of why the distance should be minimized (unless the answer is given as a generalization of Le Châtelier's principle of least effort, a teleological principle used in chemistry) and serves, in effect, merely to describe a regularity in the behavior of light. See Nagel (1970) for a more extended discussion of teleological principles in science, their logical character, and their role in scientific theory.



WHY USE A THEORY OF PURPOSIVE ACTION? The objection to the use of teleological principles in scientific theory is in general well taken. There are two reasons, however, why it has much less force in this case.

First, the methodological individualism which characterizes the theory to be presented here vitiates much of the antiteleology case. The action to be explained is at a higher level of social organization than the level at which purpose is specified. If it were not, if the theory were holistic, that is, remaining at the level of the system, then introduction of teleology at that level would explain a component of the system in terms of the function it performs for the system. This assumes what should be problematic for social theory—the integration and organization of the system. Such explanations, or “theories,” are labeled functionalism in social science, and functionalist explanations are subject to all the objections made against teleological explanations.<sup>12</sup>

Psychological theories intended to explain the actions of individuals are subject to the same objections if they are purposive, for in that enterprise purpose is introduced to characterize the action to be explained, not an action at some lower level.<sup>13</sup> Theories in psychology which use the concept of reward are of this sort, since reward is defined in terms of its function, thus yielding an explanation that is at least partly circular in character. When the actions treated as purposive are actions of individuals, however, and the action to be explained is the behavior of a social system, behavior which derives only very indirectly from the actions of the individuals, then the explanation of system behavior is not in terms of final causes but in terms of efficient causes.

A second reason why a purposive theory of action at the level of individuals and based on a teleological principle is not harmful to social science, but desirable, lies in the peculiar relation of social science to its object of study. Social scientists are human beings, and the object of their study is actions of human beings. This means that any other kind of theory of human behavior poses a paradox for the theorists themselves. The paradox can best be seen by supposing a fully developed theory of human behavior which is not based on purposive action but on a causal framework into which individual goals or purposes never enter.

For example, consider approaches to social theory which base social change on technological change or on forces of nature. If such a theory is taken seri-

12. For discussion of functional analysis in social science, see Stinchcombe (1968) and Nagel (1970).

13. Some work in psychology suggests that it is not a difference in levels of action that is crucial but any difference between the action to be explained and the action for which purpose is invoked. Berne (1964), for example, showed that apparently irrational adult behavior can be explained in terms of actions learned at a young age, when they constituted rational responses to the child's social environment. In that explanation teleology is involved in accounting for the early behavior (for example, the child's goal of escaping punishment or gaining a reward), but it is the learning of such actions, and the assumption that they are not easily unlearned, which constitutes the explanation for actions that are not rational in a subsequent and different social context.

ously, this implies a fatalistic view of the future, in which humans are the pawns of natural forces. Still other theories do not have an individualistic base but have their foundation at a macrosocial level, taking as given the very social organization that is problematic in a theory based on purposive action of individuals. In theories of this sort the proposed causes of action are not persons' goals or purposes or intents, but some forces outside them or unconscious impulses within them. As a consequence, these theories can do nothing other than describe an inexorable fate; they are useful only to describe the waves of change that wash over us. At the mercy of these uncontrolled external or internal forces, persons are unable to purposefully shape their destiny.

The paradox arises because such theories imply that the theory itself, a result of purposive action, can have no effect on future action. Any attempt to use the theory purposefully will consequently be, according to the theory, destined to fail. A further paradox lies in the image of man implied by a nonpurposive theory. Since the conception is one into which purpose, goal, and will do not enter, it is incompatible with the very orientation of the theorist, who sets as a goal the development of such a theory. All of this arises because the subjects of the theory are persons, and that includes the theorists and the users of the theory.

There is another closely related value to basing social theory on purposive actions of individuals. In a certain range of scholarly endeavor, including ethics, moral philosophy, political philosophy, economics, and law, theory is based on an image of man as a purposive and responsible actor.<sup>14</sup> Among these fields there exists a degree of fruitful interchange which has been denied to most sociologists, simply because sociologists have not chosen to ground their theoretical work in that same way. Moral philosophers from Kant to Rawls have grounded their work in a conception of purposive responsible individuals, as have political philosophers such as Bentham, Rousseau, Mill, and Locke. Some theorists, such as Bentham and Hayek, have been able to span all these fields because of the common conceptual base. Social theory which uses that base stands to profit from the intellectual discourse this common ground makes possible.

It is also important to answer the objection that individuals do not always act rationally. I will not dispute the point, for it is clear that persons sometimes act self-destructively and at other times act with questionable rationality. I will say this, however: Since social scientists take as their purpose the understanding of

14. Throughout these disciplines there is a terminological problem which should be made explicit here. Often, especially in philosophy, one who acts is termed an “agent,” and indeed is the agent of action. However, the term “agent” is also used in another way in economics and in law. The law of agency concerns principals, agents, and third parties, and the economic analysis of agency concerns the relation between principal and agent. In these branches of law and of economics, an agent is explicitly a person other than a principal, in whose interest the agent acts. Because I treat problems of principal-agent relations in this book, I will restrict use of the term “agent” to this meaning. I will use the term “actor” to refer to the individual (or corporate actor) who takes action. Thus I will be using actor to mean what philosophers refer to as agent.

social organization that is derivative from actions of individuals and since understanding an individual's action ordinarily means seeing the reasons behind the action, then the theoretical aim of social science must be to conceive of that action in a way that makes it rational from the point of view of the actor. Or put another way, much of what is ordinarily described as nonrational or irrational is merely so because the observers have not discovered the point of view of the actor, from which the action *is* rational.

The position I will take in this book, then, is that success of a social theory based on rationality lies in successively diminishing that domain of social activity that cannot be accounted for by the theory. Another way of viewing a theory based on rational actors is to specify that the theory is constructed for a set of abstract rational actors. It then becomes an empirical question whether a theory so constructed can mirror the functioning of actual social systems which involve real persons.

**WHY USE MAXIMIZATION OF UTILITY?** Even if purposive action is accepted as the appropriate principle of individual action for social theory, this does not imply the narrow specification of purpose as maximization of utility. First, I need to say that neither in the qualitative form of the theory (as developed in Parts I through IV of this book) nor in the use of this qualitative theory in research is the idea of maximization of utility explicitly introduced. The assumption of utility maximization is necessary only for the quantitative development of the theory (carried out in Part V), both for mathematical modeling and for the quantitative research which makes use of those models. Nevertheless, it is useful to spell out here the two reasons why such a narrow specification is valuable for social theory.

First, by making precise what is meant by "purposive action," such a specification provides greater power. Any teleological principle which specifies that some quantity is to be maximized or minimized is more powerful than a less specific principle. This is apparent for the teleological principle (see footnote 11) that light will be reflected from a surface in such a way that its total length of path is minimized. This principle allows precise prediction of the angle of reflection of light from any surface: It will equal the angle of incidence since that is the angle which minimizes the total length of path. This predictive power of a minimization or maximization principle is somewhat vitiated when measurement of the quantity to be minimized or maximized is less unequivocal than it is in this physical example, as is the case for utility.<sup>15</sup> Nevertheless, the increased power is not entirely vitiated since utilities are not free to change arbitrarily or capri-

15. There are parallels in natural science. Le Châtelier's principle of least effort, which states that a system will react to any change in such a way as to minimize the effect of the change, was long subject to objections based on equivocation about what was minimized. The principle was nevertheless used in chemistry, because of its heuristic value in suggesting how physical systems react to external actions upon them. (See Glasstone, 1946, for a discussion of Le Châtelier's principle.)

ciously, and the principle thus lends greater predictive power to those theories in which it plays a part.

A second reason favoring the use of this narrow specification of purposive behavior lies in its simplicity. For a social theory made up of three components—a macro-to-micro component, an individual-action component, and a micro-to-macro component—it is especially important that the individual-action component remain simple. This does not imply, of course, that the specification of purposive behavior is the best one of those at the same degree of simplicity. It is true, however, that a trade-off between complexity in the other two components and complexity in this component must be made if the overall theory is to remain manageable. I have chosen to trade off as much psychological complexity as possible in order to allow introduction of greater amounts of complexity in the other two components of the theory, the "social organizational" components. Even so, as Chapter 2 will show, this principle of action, when employed in the context that will be used here, gives rise to several different types of action, and these different types of action constitute building blocks for different kinds of social organization.

#### *The Macro-to-Micro and Micro-to-Macro Transitions*

The two other components of the type of social theory under consideration, through which the transition from macro to micro and the transition back to the macro level occur, can be conceived of as the rules of the game, rules which transmit consequences of an individual's action to other individuals and rules which derive macro-level outcomes from combinations of individuals' actions. How a theory might encompass this can be seen by examining somewhat more deeply the three-part paradigm for explaining macro-level phenomena, which consists of type 1, type 2, and type 3 relations: the macro-to-micro transition, purposive action of individuals, and the micro-to-macro transition.

For many macro-level relations this paradigm provides precisely the appropriate imagery. The relation between improving economic conditions and revolutions, used as an example earlier, illustrates this appropriateness. But in other cases what is to be explained at a macro level is not a relation between one macro-level variable (such as change in economic conditions) and another (such as revolutionary activity). Instead, a macro-level phenomenon is to be explained. The following example will illustrate.

In England in 1720 it appeared that a kind of speculation madness had infected a part of the population. Speculation in the stock of the South Sea Company, which had been formed to engage in trade with islands in the Pacific and the Spanish colonies of Chile, Mexico, and Peru (Mackay, 1932 [1852]), was widespread, and a host of minor stock companies had arisen as well. Slowly, trust in the company's directors and in the ability of the company to succeed was withdrawn, and the bubble of speculation collapsed, despite extensive moves by the Bank of England and the British government to prevent that. In this case what is

to be explained is not a macro-level empirical generalization with independent and dependent variables, but the rise and fall of widespread stock speculation in England around 1720. This is a macro-level phenomenon, and the theoretical task is to account for it by going down to the level of individual actions and coming back up to the macrosocial level, as suggested in the diagrams of Figures 1.2 and 1.3. In this case the explanation might consist of a system involving micro-level actions, their combinations, the feedback from those combinations that affects further micro-level actions, followed by further combinations, and so on, producing the bubble of speculation and then the bursting of the bubble.

This example illustrates a more general situation, in which the theory describes the functioning of a system of action from which the three types of relations are not easily separable. Although such explanatory systems involve both individual-level actions and system-level behavior, they are not appropriately conceived of as the linking together of relations of these three types. Relations of the sort described by Figure 1.1 or Figure 1.2 are ordinarily best thought of as macro-level empirical generalizations which might be predicted as deductions from a theory. The theory which can generate such relations as specific propositions may be thought of as a theory of individual action together with a theory of how these actions combine, under specific rules, to produce systemic behavior.

#### *Interdependence of Actions*

There are various ways in which actions combine to produce macro-level outcomes, and it is useful to discuss some of these briefly. This cataloging of forms of interdependence of actions is not intended to be exhaustive.

A simple case is that in which one actor's independent action imposes externalities (positive or negative) on others and thus changes the structures of incentives confronting them. An example is the classic "tragedy of the commons" (see Hardin, 1968), in which the grazing of each farmer's sheep reduces the availability of pasture for the sheep of other farmers. But there are many very different kinds of examples. Such phenomena as the South Sea bubble or the panics that may be caused by theater fires also illustrate the case.

A second case is that of bilateral exchange, as in union-management bargaining. The resulting "system" is composed of only two actors, but there are systemic outcomes: the exchange agreements or contract arrived at by the two parties.

A third case is the extension of bilateral exchange to a competitive structure in a market. The outcomes of the market, that is, prices and transactions, depend on the particular institutional rules within which the market operates; for these rules govern the form of interactions between actors (for example, closed bids or open bids, presence or absence of recontracting, price-setters and price-takers, barter, exchange with a numeraire, and so on). (See Plott and Smith, 1978, and Smith, 1982, for results with experimental markets.)

A fourth case is that of collective decisions or social choice, in which the systemic outcome is the result of votes or other expressions of preference by individuals, combined by means of an explicit decision rule and resulting in selection of a single alternative.

A fifth case is the structure of interdependent actions that constitutes a formal organization producing a product. The organizational structure consists of a set of rules and incentives, which give rise to asymmetric interdependencies that could not come about through two-party exchange.

A sixth case is the establishment (through some poorly understood process) of a collective right to exercise social control over certain actors' actions, via norms enforced by sanctions. Once established, these norms come to constitute auxiliary "rules of the game," enforced more or less fully by the actors in the system.

These several forms of interdependence of actions show the wide variety of ways in which the micro-to-macro transition occurs. The macro-to-micro transition is in some of these cases implicitly contained in the interdependence of actions. In other cases, however, it is not. For example, in a market there is extensive variation in the flow of information by which offers are communicated throughout the system. The transmission of information from the macro level to individual actors can greatly affect the actions they take and thus affect system behavior. More generally, in any large system information is transmitted via media which are themselves actors in the system, with their own interests. This shapes the quantity and character of the information available to other actors, and different communication structures will alter this information in different ways.

The variation in information transmitted from the macro level to individual actors is just one example of possible variations in the macro-to-micro transition. In general, the environment, or social context, in which a person acts affects the relative benefit of different actions; and it is the macro-to-micro transition which shapes this social context.

#### *Conceptions of the Relations between Micro and Macro Levels*

Before going on, in Chapter 2, to explicit development of the theory itself, I will indicate here just how the proper conception of the relation between individual and systemic levels can be important to social research.

A first observation is that good social history makes the transitions between micro and macro levels successfully. Good social history attempting to establish a causal connection between, for example, the advent of Calvinistic religious doctrine and the rise of a capitalist economy in the West would show not only how the doctrine gets transmitted to individuals and then has an effect on their behavior, but also how that behavior comes to be combined, that is, how the social organization which constitutes capitalist enterprise takes place. After reading such history the reader would not be left in doubt about the character of

the argument—about whether a change in workers' behavior, an increase in entrepreneurial behavior, more diligent behavior on the part of managers, all of these, or something else, was claimed to be the result of Calvinism and to lead to the growth of capitalism.

But it is one thing to be able to trace the development of social organization in a particular instance, as a historian might do, and quite another to develop generalizations about such processes. It is still another to construct models of the macro-to-micro and micro-to-macro processes. Quite clearly, some form of interdependence must be modeled in cases like those I have described, for the phenomena to be explained involve interdependence of individuals' actions, not merely aggregated individual behavior.

One arena which has some similarities to economic markets and in which some work has been done is the so-called marriage market. There is a demographic phenomenon known as the marriage squeeze. When there is a sharp increase in the birth rate, as there was, for example, after World War II, a problem exists for the cohorts of females born about the time of the increase or shortly thereafter—there will not be enough men for them to marry. Men marry women who are, on average, two years younger than themselves. This means that the normal mates for females born in 1946 would be males born in or around 1944. But the 1946 cohort was large, and the 1944 cohort was small. Thus there was a marriage squeeze for women beginning in the mid-1960s, with a larger number never marrying and a larger number marrying younger men or much older men who were divorced or widowed. Something like the reverse occurs if there is a sudden drop in the birth rate—a subsequent marriage squeeze for men.

The problem lies in the fact that when there is a marriage squeeze produced by a sudden birth-rate change, it is not at all clear what will give, that is, how the scarce men will be distributed among the surplus women. (Nor is it clear what other kinds of effects will occur; how the availability of large numbers of marriageable women will affect the divorce rate, for example, or how it will affect standards of sexual morality.)<sup>16</sup> The absence of a model for assortative mating by age when there are fluctuations in cohort size means that demographers have been stymied in their goal of developing what is called a two-sex population model for moving a population forward through generations.

It is clear that marriage can be seen as taking place in a kind of market, but one that is quite special, with each actor having only one commodity—himself or herself—to barter and with exchange rates governed by the constraint of monogamy, which prevents variations in quantity to achieve equal value in exchange. Models for the micro-to-macro transition in marriage markets have been developed, and there are theorems about the stability of particular matching algorithms. (See Gale and Shapley, 1962; Becker, 1973, 1974; Schoen, 1983; and Roth 1984a, 1985a.) Thus a beginning has been made—but only a beginning—

16. In *Too Many Women?* (1983) Guttentag and Secord argue that such periods lead to looser standards of sexual behavior for women.

toward solving the marriage-squeeze problem of demographers, facilitating a two-sex population model.<sup>17</sup>

In this chapter I have examined what I see as the structure theory should have in the social sciences. The chapter constitutes a background to, and a rationale for, the theory to be presented in this book. In Chapter 2 I begin to lay out the theory in qualitative verbal form and will continue that enterprise throughout the remaining chapters of Parts I to IV.

17. An illustration which shows the feasibility of models relating micro and macro levels in matching markets is the procedure by which graduates of medical schools are matched with hospitals for residency training. Hospitals submit lists of first choices, second choices, and so on, for their residency positions, and applicants submit rank-ordered choices of hospitals. A computer algorithm, in use since 1957, matches hospitals and applicants. The algorithm constitutes a matching process, and a stability theorem for this process has been proved, showing that, assuming no changes have occurred in preference orders, no resident and hospital would prefer each other to the hospital and resident, respectively, with which they have been matched (see Roth, 1984b).

« 12 »

*Social Capital*

In preceding chapters I have examined certain kinds of relations among actors in society. Actors are seen as beginning with resources over which they have some (possibly total) control and in which they have interests. Social interdependence and systemic functioning arise from the fact that actors have interests in events that are fully or partially under the control of other actors. The result of the various kinds of exchanges and unilateral transfers of control that actors engage in to achieve their interests is, as shown in preceding chapters, the formation of social relationships having some persistence over time. Authority relations, relations of trust, and consensual allocations of rights which establish norms are the principal ones that have been examined here.

These social relationships which come into existence when individuals attempt to make best use of their individual resources need not only be seen as components of social structures, however. They may also be seen as resources for the individuals. Loury (1977; 1987) introduced the term "social capital" to describe these resources. In Loury's usage social capital is the set of resources that inhere in family relations and in community social organization and that are useful for the cognitive or social development of a child or young person. These resources differ for different persons and can constitute an important advantage for children and adolescents in the development of their human capital. (See also Bourdieu, 1980, and Flap and De Graaf, 1986, who have used this term in a similar fashion.) The relations of authority and of trust and the norms examined in earlier chapters are forms of social capital. This chapter will examine more directly various kinds of social capital and the ways in which it is generated.

There is a broadly perpetrated fiction in modern society, which is compatible with the development of the political philosophy of natural rights, with classical and neoclassical economic theory, and with many of the intellectual developments (and the social changes which generated them) that have occurred since the seventeenth century. This fiction is that society consists of a set of independent individuals, each of whom acts to achieve goals that are independently arrived at, and that the functioning of the social system consists of the combination of these actions of independent individuals. This fiction is expressed in the economic theory of perfect competition in a market, most graphically in Adam Smith's imagery of an "invisible hand."

This fiction derives in part from the fact that the only tangible actors in society are individuals and in part from the extraordinary impact that Adam Smith and other classical economic theorists, as well as political philosophers of the seventeenth and eighteenth centuries, have had on the way we think about social and economic life. It also derives in part from the fact that social changes have moved modern society toward a structure in which individuals act more independently than they did in the past, in which individuals' goals are more independently arrived at than they were in the past, and in which individuals' interests are more self-directed than they were in the past.

Hobbes and his followers, political philosophers of the seventeenth and eighteenth centuries, extolled the virtues of self-interest as an antidote to the passions generated by religious and ethnic identity, as Hirschman (1977) describes.<sup>1</sup> Self-interest was not only seen as a beneficial force that moderated fierce group loyalties; it was justified by a philosophy that natural rights inhered in each person. That philosophical position continues to the present.<sup>2</sup> The philosophical and economic arguments of the seventeenth and eighteenth centuries were followed by extensive social changes in the direction of individualism, and these changes have not abated.

Despite these changes the fiction is just that—for individuals do not act independently, goals are not independently arrived at, and interests are not wholly selfish.

Recognition of this individualist bias in neoclassical economics has led to a number of economists to attempt some modification. As mentioned above, Loury introduced the concept of social capital into economics to identify the social resources useful for the development of human capital. Also, Ben-Porath (1980) has developed ideas concerning the functioning in exchange systems of what he calls the F-connection. The F-connection is composed of families, friends, and firms; and Ben-Porath, drawing on sources in anthropology and sociology as well as economics, shows the way these forms of social organization affect economic exchange. Williamson has, in a number of publications (for example, 1975; 1981), examined the conditions under which economic activity is organized in different institutional forms, that is, within firms or in markets. There is a whole body of work in economics, referred to as the new institutional economics, which attempts to show, within neoclassical theory, both the conditions under which particular economic institutions arise and the effects of these institutions (that is, of social organization) on the functioning of the system.

1. Holmes (1989) extends Hirschman's examination, showing the role these philosophical positions played in transforming the common view of the fundamental nature of man.

2. It is true, of course, that the opposition of the philosophical ideals of self-sufficiency, self-interest, and individualism on the one hand, and social responsibility, benevolence, charity toward others, and humanitarianism on the other goes back to the Greeks. The Epicureans set forth the first set of virtues. The second set were held by the Stoics during the Hellenistic period and were taken over by the Romans during their empire-building period (see Sabine, 1937, pp. 132-153).

There have also been recent attempts by sociologists to examine the way social organization affects the functioning of economic institutions. Baker (1983) has shown how relations among floor traders in the highly rationalized market of the Chicago Mercantile Exchange develop, are maintained, and affect trading activity. More generally, Granovetter (1985) has engaged in a broad attack on the "undersocialized concept of man" that characterizes economists' analyses of economic activity. Granovetter criticizes much of the new institutional economics as crudely functionalist because it often explains the existence of an economic institution merely by the functions it performs for the economic system. He argues that there is a failure even in the new institutional economics to recognize the importance of concrete personal relations and networks of relations—what he calls the embeddedness of economic transactions in social relations—in generating trust, in establishing expectations, and in creating and enforcing norms.

Granovetter's notion of embeddedness may be seen as an attempt to introduce into the analysis of economic systems social and organizational relations, not merely as a structure that springs into place to fulfill an economic function, but as a structure with history and continuity that give it an independent impact on the functioning of the system.

Lin, in a number of papers (Lin and Vaughn, 1981; Lin, 1982; 1988), has built on Granovetter's work showing how persons use social resources in accomplishing their goals, particularly in occupational attainment. Lin has shown that persons act instrumentally, using their social ties (especially more extended, or "weak," ties) to gain occupational mobility beyond that predicted by their structural position. Flap and De Graaf (1986) have extended this work in their comparative examination of the United States, West Germany, and the Netherlands.

I want to incorporate this general set of ideas into the framework presented in earlier chapters. I will conceive of these social-structural resources as a capital asset for the individual, that is, as social capital. Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence. Like physical capital and human capital, social capital is not completely fungible, but is fungible with respect to specific activities. A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others. Unlike other forms of capital, social capital inheres in the structure of relations between persons and among persons. It is lodged neither in individuals nor in physical implements of production.

Defining social capital more precisely will be facilitated by first considering several examples which illustrate some of its different forms.

1. The *International Herald Tribune* for June 21–22, 1986, had a front-page article about radical student activists in South Korea. The article describes the

development of such activism: "Radical thought is passed on in clandestine 'study circles,' groups of students who may come from the same high school or hometown or church. These study circles . . . serve as the basic organizational unit for demonstrations and other protests. To avoid detection, members of different groups never meet, but communicate through an appointed representative." This description of the basis of organization of this activism illustrates social capital of two kinds. The "same high school or hometown or church" provides social relations on which the study circles are later built. The study circles themselves constitute a form of social capital—a cellular form of organization which appears especially valuable for facilitating opposition to a political system that is intolerant of dissent. Any organization which makes possible such oppositional activities is an especially potent form of social capital for the individuals who are members of the organization.

2. Traditionally, the relation between physician and patient has been one in which the patient places trust in the physician, and the physician employs medical skills in the interest of the patient. Recently in the United States that trust has broken down, as evidenced by the great increase in the number of malpractice suits brought by patients against physicians who have treated them. This has led to an increase in the cost of medical care for certain treatments, due to the cost of malpractice insurance, to abandonment of private practice by some physicians, and in at least one town to the refusal of obstetricians to accept female attorneys or wives of male attorneys as patients. This decline in trust and the increased willingness to file suit against a physician after a medical treatment has had a bad outcome result from a lack of those social relations on which trust depends and lead to increased cost and reduced availability of medical care.

3. A mother of six children, who moved with her husband and children from suburban Detroit to Jerusalem, describes as one reason for doing so the greater freedom her young children have in Jerusalem. She feels it is safe to let her eight-year-old take the six-year-old across town to school on the city bus and to let her children play without supervision in a city park, neither of which did she feel able to allow where she lived before. The reason for this difference can be described as a difference in the social capital available in Jerusalem and in suburban Detroit. In Jerusalem the normative structure ensures that unattended children will be looked after by adults in the vicinity, but no such normative structure exists in most metropolitan areas of the United States. One can say that families in Jerusalem have available to them social capital that does not exist in metropolitan areas of the United States.

4. In the central market in Cairo, the boundaries between merchants are difficult for an outsider to discover. The owner of a shop which specializes in leather, when queried about where one can find a certain kind of jewelry, will turn out to sell that as well—or what appears to be nearly the same thing, to have a close associate who sells it, to whom he will immediately take the customer. Or a shopkeeper will instantly become a money changer simply by turning to his colleague a few shops down. For some activities, such as bringing a customer to a friend's store, there are commissions; others, such as money

changing, merely create obligations. Family relations are important in the market, as is the stability of proprietorship. The whole market is so infused with relations of the sort just described that it can be seen as an organization, no less so than a department store. Alternatively, the market can be seen as consisting of a set of individual merchants, each having an extensive body of social capital on which to draw, based on the relationships within the market.

As these examples indicate, social organization constitutes social capital, facilitating the achievement of goals that could not be achieved in its absence or could be achieved only at a higher cost. There are, however, certain properties of social capital that are important for understanding how it comes into being and how it is destroyed or lost. A comparison of social capital with human capital followed by an examination of different forms of social capital will be helpful for seeing these.

### Human Capital and Social Capital

Probably the most important and most original development in the economics of education in the past thirty years has been the idea that the concept of physical capital, as embodied in tools, machines, and other productive equipment, can be extended to include human capital as well (see Schultz, 1961; Becker, 1964). Just as physical capital is created by making changes in materials so as to form tools that facilitate production, human capital is created by changing persons so as to give them skills and capabilities that make them able to act in new ways.

Social capital, in turn, is created when the relations among persons change in ways that facilitate action. Physical capital is wholly tangible, being embodied in observable material form; human capital is less tangible, being embodied in the skills and knowledge acquired by an individual; social capital is even less tangible, for it is embodied in the *relations* among persons. Physical capital and human capital facilitate productive activity, and social capital does so as well. For example, a group whose members manifest trustworthiness and place extensive trust in one another will be able to accomplish much more than a comparable group lacking that trustworthiness and trust.

The distinction between human capital and social capital can be exhibited by a diagram such as Figure 12.1, which represents the relations of three persons (A, B, and C); the human capital resides in the nodes, and the social capital resides in the lines connecting the nodes. Social capital and human capital are often complementary. For example, if B is a child and A is an adult who is a parent of B, then for A to further the cognitive development of B, there must be capital in both the node and the link. There must be human capital held by A and social capital in the relation between A and B.

### Forms of Social Capital

Using the concept of social capital will uncover no processes that are different in fundamental ways from those discussed in other chapters. This concept groups

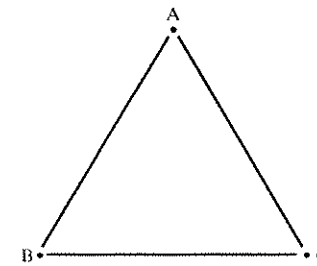


Figure 12.1 Three-person structure: human capital in nodes and social capital in relations.

some of those processes together and blurs distinctions between types of social relations, distinctions that are important for other purposes. The value of the concept lies primarily in the fact that it identifies certain aspects of social structure by their function, just as the concept "chair" identifies certain physical objects by their function, disregarding differences in form, appearance, and construction. The function identified by the concept "social capital" is the value of those aspects of social structure to actors, as resources that can be used by the actors to realize their interests.

By identifying this function of certain aspects of social structure, the concept of social capital aids in both accounting for different outcomes at the level of individual actors and making the micro-to-macro transition without elaborating the social-structural details through which this occurs. For example, characterizing the clandestine study circles of South Korean radical students as constituting social capital that these students can use in their revolutionary activities is an assertion that the groups constitute a resource which aids in moving the students from individual protest to organized revolt. If a resource that accomplishes this task is held to be necessary in a theory of revolt (as it is in Chapter 18), then the study circles can be grouped with other organizational structures, of different origins, which have fulfilled the same function for individuals with revolutionary goals in other contexts, such as the *comités d'action lycéen* of the French student revolt of 1968 or the workers' cells in czarist Russia described and advocated by Lenin (1973 [1902]).

It is true, of course, that for other purposes one wants to investigate the details of such organizational resources, to understand the elements that are critical to their usefulness as resources for a given purpose, and to examine how they came into being in a particular case. But the concept of social capital can allow showing how such resources can be combined with other resources to produce different system-level behavior or, in other cases, different outcomes for individuals. Whether social capital will come to be as useful a quantitative concept in social science as are the concepts of financial capital, physical capital, and human capital remains to be seen; its current value lies primarily in its usefulness for

qualitative analyses of social systems and for those quantitative analyses that employ qualitative indicators.

In other chapters (principally in Part III) the concept of social capital will be left unanalyzed (as it was in the brief descriptions given above as examples). In this chapter, however, I will examine just what it is about social relations that can constitute useful capital resources for individuals.

### *Obligations and Expectations*

As described in Chapter 5, if A does something for B and trusts B to reciprocate in the future, this establishes an expectation in A and an obligation on the part of B to keep the trust. This obligation can be conceived of as a "credit slip" held by A to be redeemed by some performance by B. If A holds a large number of these credit slips from a number of persons with whom he has relations, then the analogy to financial capital is direct: The credit slips constitute a large body of credit on which A can draw if necessary—unless, of course, the placement of trust has been unwise, and the slips represent bad debts that will not be repaid. In some social structures (such as, for example, the neighborhoods discussed by Willmott and Young, 1967) it is said that people are "always doing things for each other." There are a large number of these credit slips outstanding, often on both sides of a relation (for these credit slips often appear to be not fungible across different areas of activity, so credit slips from B held by A and those from A held by B are not fully used to cancel each other out). The market in Cairo described earlier in this chapter constitutes an extreme case of such a social structure. In other social structures where individuals are more self-sufficient, depending on each other less, there are fewer of these credit slips outstanding at any time.

Two elements are critical to this form of social capital: the level of trustworthiness of the social environment, which means that obligations will be repaid, and the actual extent of obligations held. Social structures differ in both of these dimensions, and actors within a particular structure differ in the second.

A case which illustrates the value of trustworthiness is the rotating credit association found in Southeast Asia and elsewhere. These associations are groups of friends and neighbors who typically meet monthly: each person contributes the same amount of money to a central fund, which is then given to one of the members (through bidding or by lot). After  $n$  months each of the  $n$  persons has made  $n$  contributions and received one payout. As Geertz (1962) points out, these associations serve as efficient institutions for amassing savings for small capital expenditures, an important aid to economic development. Without a high degree of trustworthiness among the members of the group, such a credit association could not exist—for a person who received a payout early in the sequence of meetings could abscond, leaving the others with a loss. One could not imagine such a rotating credit association operating successfully in urban areas marked

by a high degree of social disorganization—or, in other words, by a lack of social capital.

Another situation in which extreme trustworthiness facilitates actions that would not otherwise be possible is that of heads of state. Various accounts of the experiences of heads of state suggest that for persons in this position it is extremely valuable to have an extension of one's self, an agent one can trust absolutely to act as one would in a given situation. Many heads of state have such a person, who may not occupy a formal position of power but may be a member of a personal staff. The fact that these persons are often old friends, or cronies, rather than persons who have distinguished themselves in some political activity, is derivative from this: The most important attribute of such a person is that trust can be placed in him, and this requirement often dictates choosing a long-term personal friend. Such persons often come to have enormous power due to their proximity to a head of state and the trust placed in them; and there are many recorded accounts of the use of that power. What is of interest here is the social capital this relation provides for the head of state, assuming that the trust is well placed. The trusted other is virtually an extension of self, allowing the head of state to expand his capacity for action.

Still another case that illustrates the importance of trustworthiness as a form of social capital is a system of mutual trust. The extreme example of such a system is a couple, each of whom places extensive trust in the other, whether they are deeply in love or not. For both members of such a couple, the relation has extraordinary psychological value. Each can confide in the other, can expose inner doubts, can be completely forthright with the other, can raise sensitive issues—all without fear of the other's misuse of the trust.

Differences in social structures with respect to the extent of outstanding obligations arise for a variety of reasons. These include, besides the general level of trustworthiness that leads obligations to be repaid, the actual needs that persons have for help, the existence of other sources of aid (such as government welfare services), the degree of affluence (which reduces the amount of aid needed from others), cultural differences in the tendency to lend aid and ask for aid (see Banfield, 1967), the degree of closure of social networks, the logistics of social contacts (see Festinger, Schachter, and Back, 1963), and other factors. Individuals in social structures with high levels of obligations outstanding at any time, whatever the source of those obligations, have greater social capital on which they can draw. The density of outstanding obligations means, in effect, that the overall usefulness of the tangible resources possessed by actors in that social structure is amplified by their availability to other actors when needed.

In a farming community such as that of the example in Chapter 5, where one farmer got his hay baled by another and where farm tools are extensively borrowed and lent, the social capital allows each farmer to get his work done with less physical capital in the form of tools and equipment. Such a social structure is analogous to an industrial community in which bills of exchange (that is, debts) are passed around, serving as money and effectively reducing the



financial capital necessary to carry out a given level of manufacturing activity. (See Ashton, 1945, for a description of this in Lancashire in the 1790s, before a centralized monetary system was well established in England.)

Individual actors in a social system also differ with respect to the extent of credit slips on which they can draw at any time. For example, in hierarchically structured extended family settings, a patriarch often holds an extraordinarily large set of such credit slips, which he can call in at any time to get done what he wants done. Another clear example occurs in villages in traditional settings that are highly stratified, where certain wealthy families, because of their wealth, have built up extensive credits on which they can call at any time. (It is the existence of such asymmetries that can make some families immune to sanctions that can be used to regulate the actions of others in the community, as occurred in the example about the Sarakatsan nomads of Greece in Chapter 10.)

Similarly, in a political setting such as a legislature, a legislator in a position that brings extra resources (such as the Speaker of the House of Representatives or the Majority Leader of the Senate in the U.S. Congress) can, by effective use of those resources, build up a set of credits from other legislators so that it becomes possible for him to get legislation passed that would otherwise be defeated. This concentration of obligations constitutes social capital that is useful not only for the powerful legislator, but also in increasing the level of action of the legislature. Thus those members of legislatures who have extensive credit slips should be more powerful than those who do not because they can use the credits to produce bloc voting on many issues. It is well recognized, for example, that in the U.S. Senate, some senators are members of what is called the Senate Club, and others are not. This in effect means that some senators are embedded in a system of credits and debts, and others (outside the Club) are not. It is also well recognized that those in the Club are more powerful than those outside it.

Another example showing asymmetry in the sets of obligations and expectations is the one presented earlier about the crisis in medical care in the United States due to liability suits. Traditionally physicians have been in control of events having literally life-and-death importance to patients, who in turn often felt unable to adequately compensate them for the extreme benefits they brought about. Part of a physician's payment was in the form of gratitude, deference, and high occupational prestige. These constituted a felt obligation to the physician, a form of social capital which inhibited patients dissatisfied with the outcome of their medical treatments from taking action against the physician.

But several factors have changed. One is that physicians' monopoly on medical knowledge has been lessened by an expansion of education. A second is a reduction in the likelihood that there is a personal relation between physician and patient, since a patient is less likely to use a family doctor or even a general practitioner and more likely to see specialists for particular medical problems. A third is the high income of many physicians, which reduces the perceived asymmetry between service and compensation. A fourth is the increased use of liabil-

ity insurance, which transfers the financial cost of a lawsuit from physician to insurer. The combination of these and other factors has reduced the social capital that protected the physician from becoming a target when patients experienced undesirable medical outcomes.

**WHY DO RATIONAL ACTORS CREATE OBLIGATIONS?** Although some of the variation in the extent of outstanding obligations arises from social changes of the sort described above, some appears to arise from the intentional creation of obligation by a person who does something for another. For example, Turnbull (1977), who studied the Ik, a poverty-ridden tribe in Africa, describes an occasion when a man arrived home to find his neighbors, unasked, on the roof of his house fixing it. Despite his not wanting this aid, he was unable to induce them to stop. In this case and others there appears to be, not the creation of obligations through necessity, but a purposive creation of obligations. The giving of gifts has been interpreted in this light (see Mauss, 1954), as have the potlatches of the Kwakiutl tribe in the Pacific Northwest. In rural areas persons who do favors for others often seem to prefer that these favors not be repaid immediately, and those for whom a favor is done sometimes seem anxious to relieve themselves of the obligation.

Although the motives for freeing oneself from obligations may be readily understood (especially if the existence of obligations consumes one's attention), the motives for creating obligations toward oneself are less transparent. If there is a nonzero chance that the obligation will not be repaid, it would appear that rational persons would extend such credit only if they expect to receive something greater in return—just as a bank makes a loan only at sufficient interest to realize a profit after allowing for risk. The question then becomes whether there is anything about social obligations to make a rational person interested in establishing and maintaining such obligations on the part of others toward himself.

A possible answer is this: When I do a favor for you, this ordinarily occurs at a time when you have a need and involves no great cost to me. If I am rational and purely self-interested, I see that the importance to you of this favor is sufficiently great that you will be ready to repay me with a favor in my time of need that will benefit me more than this favor costs me—unless, of course, you are also in need at that time. This does not apply when the favor is merely the lending of money, since a unit of money holds about the same interest to a person over time.<sup>3</sup> When the favor involves services, expenditure of time, or some other nonfungible resource, however, or when it is of intrinsically more value to the recipient than to the donor (such as help with a task that can be done by two persons but not by one), this kind of mutually profitable exchange is quite

3. It is interesting that, for persons whose interest in money fluctuates wildly over time, this sort of exchange is possible. In a rural county in West Virginia, the county clerk would lend money to the three town drunks when their need for money was great and then collect from them, with exorbitant interest, when they received their welfare checks, when money was of less interest to them.

possible. The profitability for the donor depends on the recipient's not repaying the favor until the donor is in need.

Thus creating obligations by doing favors can constitute a kind of insurance policy for which the premiums are paid in inexpensive currency and the benefit arrives as valuable currency. There may easily be a positive expected profit.

There is one more point: A rational, self-interested person may attempt to prevent others from doing favors for him or may attempt to relieve himself of an obligation at a time he chooses (that is, when repaying the favor costs him little), rather than when the donor is in need, because the call for his services may come at an inconvenient time (when repaying the obligation would be costly). Thus in principle there can be a struggle between a person wanting to do a favor for another and the other not wanting to have the favor done for him or a struggle between a person attempting to repay a favor and his creditor attempting to prevent repayment.

#### *Information Potential*

An important form of social capital is the potential for information that inheres in social relations. Information is important in providing a basis for action. But acquisition of information is costly. The minimum it requires is attention, which is always in short supply. One means by which information can be acquired is to use social relations that are maintained for other purposes. Katz and Lazarsfeld (1955) show how this operates for women in several areas of life: for example, a woman who has an interest in being in style but not at the leading edge of fashion can use certain friends, who do stay on the leading edge, as sources of information. As another example, a person who is not deeply interested in current events but who is interested in being informed about important developments can save the time required to read a newspaper if he can get the information he wants from a friend who pays attention to such matters. A social scientist who is interested in being up to date on research in related fields can make use of his everyday interactions with colleagues to do so, if he can depend on them to be up to date in their fields.

All these are examples of social relations that constitute a form of social capital in providing information that facilitates action. The relations in this case are valuable for the information they provide, not for the credit slips they provide in the form of obligations that one holds for others' performance.

#### *Norms and Effective Sanctions*

Chapter 10 discussed the problems of establishing and maintaining a norm and the sanctions which give it effectiveness. When an effective norm does exist, it constitutes a powerful, but sometimes fragile, form of social capital. Effective norms that inhibit crime in a city make it possible for women to walk freely outside at night and for old people to leave their homes without fear. Norms in a community that support and provide effective rewards for high achievement in

school greatly facilitate the school's task. A prescriptive norm that constitutes an especially important form of social capital within a collectivity is the norm that one should forgo self-interests to act in the interests of the collectivity. A norm of this sort, reinforced by social support, status, honor, and other rewards, is the social capital which builds young nations (and which dissipates as they grow older), strengthens families by leading members to act selflessly in the family's interest, facilitates the development of nascent social movements from a small group of dedicated, inward-looking, and mutually rewarding persons, and in general leads persons to work for the public good. In some of these cases the norms are internalized; in others they are largely supported through external rewards for selfless actions and disapproval for selfish actions. But whether supported by internal or external sanctions, norms of this sort are important in overcoming the public-good problem that exists in conjoint collectivities.

As all these examples suggest, effective norms can constitute a powerful form of social capital. This social capital, however, like the forms described earlier, not only facilitates certain actions but also constrains others. Strong and effective norms about young persons' behavior in a community can keep them from having a good time. Norms which make it possible for women to walk alone at night also constrain the activities of criminals (and possibly of some noncriminals as well). Even prescriptive norms that reward certain actions, such as a norm which says that a boy who is a good athlete should go out for football, are in effect directing energy away from other activities. Effective norms in an area can reduce innovativeness in that area, can constrain not only deviant actions that harm others but also deviant actions that can benefit everyone. (See Merton, 1968, pp. 195–203, for a discussion of how this can come about.)

#### *Authority Relations*

If actor A has transferred rights of control of certain actions to another actor, B, then B has available social capital in the form of those rights of control. If a number of actors have transferred similar rights of control to B, then B has available an extensive body of social capital, which can be concentrated on certain activities. Of course, this puts extensive power in B's hands. What is not quite so straightforward is that the very concentration of these rights in a single actor increases the total social capital by overcoming (in principle, if not always entirely in fact) the free-rider problem experienced by individuals with similar interests but without a common authority. It appears, in fact, to be precisely the desire to bring into being the social capital needed to solve common problems that leads persons under certain circumstances to vest authority in a charismatic leader (as discussed in Chapter 4 and in Zablocki, 1980, and Scholem, 1973).

#### *Appropriable Social Organization*

Voluntary organizations are brought into being to further some purpose of those who initiate them. In a housing project built during World War II in a city in the

eastern United States, there were many physical problems caused by poor construction, such as faulty plumbing, crumbling sidewalks, and other defects (Mer- ton, n.d.). Residents organized to confront the builders and to address these problems in other ways. Later, when the problems were solved, the residents' organization remained active and constituted available social capital which improved the quality of life in the project. Residents had available to them resources that were seen as unavailable where they had lived before. (For example, despite the fact that there were fewer teenagers in the community, residents were *more* likely to express satisfaction concerning the availability of babysitters.)

Members of the New York Typographical Union who were monotype operators formed a social club called the Monotype Club (Lipset, Trow, and Coleman, 1956). Later, as employers looked for monotype operators and as monotype operators looked for jobs, both found this organization to be an effective employment referral service and utilized it for this purpose. Still later, when the Progressive Party came into power in the New York Typographical Union, the Monotype Club served as an organizational resource for the ousted Independent Party. The Monotype Club subsequently served as an important source of social capital for the Independents, sustaining their party as an organized opposition while they were out of office.

In an example used earlier in this chapter, the study circles of South Korean student radicals were described as being groups of students who came from the same high school or hometown or church. In this case also, organization that was initiated for one purpose is appropriable for other purposes, constituting important social capital for the individuals who have available to them the organizational resources.

These examples illustrate the general point that organization brought into existence for one set of purposes can also aid others, thus constituting social capital that is available for use.<sup>4</sup> It may be that this form of social capital can be dissolved, with nothing left over, into elements that are discussed under other headings in this section, that is, obligations and expectations, information potential, norms, and authority relations. If so, listing this form of social capital is redundant. But the phenomenon of social organization being appropriated as existing social capital for new purposes is such a pervasive one that separate mention appears warranted.

#### *Intentional Organization*

A major use of the concept of social capital depends on its being a by-product of activities engaged in for other purposes. A later section will show why this is so, why there is often little or no direct investment in social capital. There are,

4. A classic instance of this is described by Sills (1957). The March of Dimes was originally dedicated to the elimination of polio. When Salk's vaccine virtually eradicated polio, the March of Dimes organization did not go out of existence but directed its efforts toward other diseases.

however, forms of social capital which are the direct result of investment by actors who have the aim of receiving a return on their investment.

The most prominent example is a business organization created by the owners of financial capital for the purpose of earning income for them. These organizations ordinarily take the form of authority structures composed of positions connected by obligations and expectations and occupied by persons (as described in Chapter 4). In creating such an organization, an entrepreneur or capitalist transforms financial capital into physical capital in the form of buildings and tools, social capital in the form of the organization of positions, and human capital in the form of persons occupying positions. Like the other forms of capital, social capital requires investment in the designing of the structure of obligations and expectations, responsibility and authority, and norms (or rules) and sanctions which will bring about an effectively functioning organization.

Another form of intentional organization is a voluntary association which produces a public good. For example, a group of parents whose children attend a school forms a PTA chapter where one did not exist before. This organization constitutes social capital not only for the organizers but for the school, the students, and other parents. Even if the organization serves only the original purpose for which it is organized and is not appropriated for other purposes, as is the case for organizations described in an earlier section, it serves this purpose, by its very nature, for a wider range of actors than those who initiated it. Such an organization is, concretely, of the same sort as those described earlier. The PTA is the same kind of organization as the Monotype Club, the residents' association formed to deal with faulty plumbing, and the church groups of South Korean youth. All are voluntary associations. As it functions, however, the organization creates two kinds of by-products as social capital. One is the by-product described in the preceding section, the appropriability of the organization for other purposes. A second is the by-product described here: Because the organization produces a public good, its creation by one subset of persons makes its benefits available to others as well, whether or not they participate. For example, the disciplinary standards promulgated by an active PTA change a school in ways that benefit nonparticipants as well as participants.

#### Relative Quantities of Social Capital

It is possible to state more precisely the resources that social capital provides for those who have it. That will be done in Chapter 30, but I will introduce here some of the results of that chapter. In Figure 12.1 the nodes A, B, and C represent persons and the lines connecting them represent relations; human capital is found in the nodes and social capital in the lines. But the "relation between A and B" is to be taken to mean, as indicated in earlier chapters, that A controls some events of interest to B and B controls some events of interest to A. If the events controlled by each actor are seen as credit slips held by that actor, expressing obligations of the other, then this diagram corresponds directly

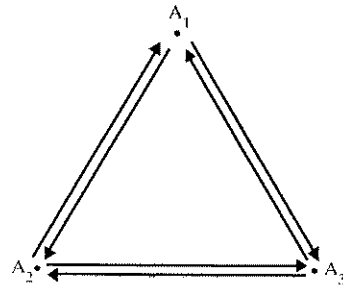


Figure 12.2 A three-actor system with full closure.

to the first form of social capital discussed earlier, obligations and expectations. Other interpretations of events correspond to other forms of social capital, although the correspondence is not perfect.

If an arrow from  $A_1$  and  $A_2$  denotes  $A_2$ 's interest in events controlled by  $A_1$  or  $A_2$ 's dependence on  $A_1$ , a system of three actors with full closure is represented by Figure 12.2.

If there is no relation between  $A_2$  and  $A_3$ , relations among the three can be represented as shown in Figure 12.3.

If  $A_3$  depends on  $A_2$ , but  $A_2$  has no dependence on  $A_3$ , the diagram of Figure 12.3 is modified as shown in Figure 12.4.

For Figure 12.2, if each actor controls events of equal interest to each of the others, then the power of each, as calculated in Chapter 25, will be equal, by symmetry. In Figure 12.3,  $A_2$  and  $A_3$  are in reciprocal relations with  $A_1$  but have no relations with one another. If these relations are thought of as credit slips (that is, expectations and obligations), then the situation diagrammed in Figure 12.3 can be described by saying that the debits and credits of each pair of actors

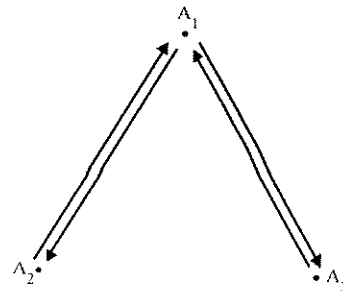


Figure 12.3 A three-actor system without closure.

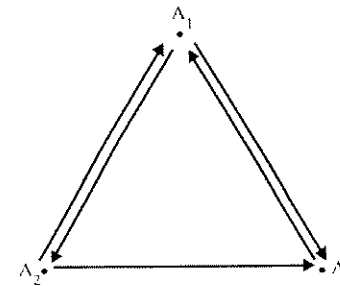


Figure 12.4 A three-actor system with near closure.

are balanced, but  $A_1$  has twice the volume of debits and credits that  $A_2$  and  $A_3$  have. Figure 12.3 represents, then, a situation in which  $A_1$  has more social capital available to him than does either of the other actors. The equilibrium state of the linear system of action is used in Chapter 25 to show that the power of  $A_1$  in the system reflects this. Calculations in that chapter show that if the events that  $A_1$  and  $A_2$  control are of equal interest to each other and similarly for  $A_1$  and  $A_3$ , the power of  $A_2$  or  $A_3$  in this system is only .707 times that of  $A_1$ .

For Figure 12.4, which is like Figure 12.2 except that  $A_2$  has no obligations to  $A_3$ , the calculations of Chapter 25 show that  $A_2$ 's power is equal to  $A_1$ 's— $A_2$  has the same social capital available to him as  $A_1$  does. The absence of any obligations from  $A_2$  and  $A_3$  means that  $A_3$ 's power is reduced to .618 of that held by  $A_1$  or  $A_2$ .<sup>5</sup> Thus the power of an actor in the equilibrium linear system of action is a direct measure of the social capital available to the actor within that system. Examples of the way closure of the system affects the power of actors within it is shown both later in this chapter and in other chapters (see Figure 11.1).

### The Public-Good Aspect of Social Capital

Social capital has certain properties that distinguish it from the private, divisible, alienable goods treated by neoclassical economic theory. One of these, discussed by Loury (1987), is its practical inalienability. Although it is a resource that has value in use, it cannot be easily exchanged. As an attribute of the social structure in which a person is embedded, social capital is not the private property of any of the persons who benefit from it.

Another difference, deriving from the public-good aspect of social capital, can be seen by comparing it with physical capital. Physical capital is ordinarily a private good, and property rights make it possible for the person who invests in

5. Cook et al. (1983) have used similar measures to show the power of actors in different structures of constrained communication.

physical capital to capture the benefits it produces. Thus the incentive to invest in physical capital is not depressed; there is, as an economist might say, not a suboptimal investment in physical capital, because those who invest in it are able to capture the benefits of their investments. For human capital also—at least human capital of the sort that is produced in schools—the person who invests the time and resources in building up this capital reaps the benefits that persons anticipate receiving from schooling: a higher-paying job, more satisfying or higher-status work, or even the pleasure of improved understanding of the surrounding world.

But in most of its forms social capital is not like this. For example, the kinds of social structures which make possible social norms and the sanctions to enforce them do not benefit primarily the persons whose efforts are necessary to bring the norms and sanctions into existence, but all those who are part of the particular structure. For example, where there exists a dense set of associations among some parents of children attending a given school, these involve a small number of persons, ordinarily mothers who do not hold full-time jobs outside the home. Yet these mothers themselves experience only a subset of the benefits of this social capital generated for the school. If one of them decides to abandon these activities, for example, to take a full-time job, this may be an entirely reasonable action from a personal point of view, and even from the point of view of her household and children. The benefits of the new activity for her may far outweigh the losses which arise from the decline in associations with other parents whose children attend the school. But her withdrawal from these activities constitutes a loss to all those other parents whose associations and contacts are dependent on them.

As another example, a family's decision to move away from a community because of a job opportunity elsewhere may be entirely correct from the point of view of that family. But because social capital consists of relations among persons, others may experience extensive losses due to the severance of relations with members of that family, a severance over which they had no control. Such losses may entail the weakening of norms and sanctions that aid law enforcement and of those norms that aid parents and schools in socializing children. The total cost each family experiences as a consequence of the decisions it and other families make may outweigh the benefits that come from those few decisions it has control over. Yet the beneficial consequences to the family of those decisions it does have control over may far outweigh the minor losses it experiences from them alone.

Underinvestment of this sort does not only occur in voluntary associations such as a PTA or a Monotype Club. When an individual asks a favor from another, thus incurring an obligation, he does so because it brings him a needed benefit. He does not consider that the other experiences a benefit as well, from having the chance to add to a drawing fund of social capital available at a future time of need. If the first individual can satisfy his need through self-sufficiency or

through aid from some external source (for example, a government agency), without incurring an obligation, he may do so—and thus fail to add to the social capital outstanding in the community. Similarly, in choosing to keep trust or not (or choosing whether to devote resources to an attempt to keep trust), an actor does so on the basis of costs and benefits he himself will experience. That his trustworthiness will facilitate others' actions or his lack of trustworthiness will inhibit others' actions does not enter into his decision making.

A similar but more qualified statement can be made about information as a form of social capital. An individual who serves as a source of information for another because he is well informed ordinarily acquires that information for his own benefit, not for any other who might make use of him. This is not always true, however. As Katz and Lazarsfeld (1955) show, opinion leaders in an area acquire information in part to maintain their position as such. This is to be expected if the others who use them as information sources pay deference or gratitude for the information they get, even if the opinion leaders initially acquired information solely for their own use.

Norms also suffer only in part from underinvestment in public goods. Norms are intentionally established, as means of reducing externalities, and their benefits are ordinarily captured by those who are responsible for establishing them. But as Chapter 11 showed, the capability of establishing and maintaining effective norms depends on properties of the social structure (such as closure) over which one actor does not have control, yet which may be affected by one actor's action. These properties affect the structure's capacity to sustain effective norms; yet individuals seldom take this fact into account when taking actions that can destroy these structural properties.

Some forms of social capital have the property that their benefits can be captured by those who invest in them; rational actors consequently will not underinvest in these forms of social capital. Organizations that produce a private good constitute the outstanding example, as indicated earlier. The result is that there will be in society an imbalance between the relative investment in organizations that produce private goods for a market and in organizations (often voluntary associations) from which the benefits are not captured—an imbalance in the sense that if the positive externalities created by such social capital could be internalized, it would come to exist in greater quantity.

The public-good aspect of most social capital means that it is in a fundamentally different position with respect to purposive action than are most other forms of capital. Social capital is an important resource for individuals and can greatly affect their ability to act and their perceived quality of life. They have the capability of bringing such capital into being. Yet because many of the benefits of actions that bring social capital into being are experienced by persons other than the person so acting, it is not to that person's interest to bring it into being. The result is that most forms of social capital are created or destroyed as a by-product of other activities. Much social capital arises or disappears without

anyone's willing it into or out of being; such capital is therefore even less recognized and taken into account in social research than its intangible character might warrant.

### The Creation, Maintenance, and Destruction of Social Capital

In this section I will suggest some factors, themselves the consequences of individuals' decisions, which help create or destroy social capital. Because there is some redundancy with earlier chapters, the treatment will be brief.

#### Closure

In Chapter 11 I indicated the importance of closure of social networks for the emergence of norms. Closure is also important if trust is to reach the level that is warranted by the trustworthiness of the potential trustees. This is evident especially in the case of systems of trust that involve intermediaries in trust, as discussed in Chapter 8 and shown in Figure 8.2. A's placement of trust in T's performance is based in part on A's trust in B's judgment. B's placement of trust depends in part on his trust in C's judgment, and C's in turn depends in part on his trust in A's. These closed systems can, of course, lead to inflationary and deflationary spirals in the placement of trust; despite this instability that can result from extreme closure, some degree of closure is a valuable asset to individuals who must decide whether or not to place trust.

In some systems of trust intermediaries can constitute a substitute for closure. If A must decide whether to place trust in T but has no relation with T, then B's relation to T, together with A's trust in B's judgment, can allow A to make a more accurate assessment of T's trustworthiness, and thus to reach a better decision.

The effect of closure can be seen especially well by considering a system involving parents and children. In a community where there is an extensive set of expectations and obligations connecting the adults, each adult can use his drawing account with other adults to help supervise and control his children. If A and B are adults in a community and a and b are, respectively, their children, then closure in the community can be pictured as in Figure 12.5(a), where arrows from one actor to another again represent the dependence of the second on the first through events the first controls. Lack of closure is shown in Figure 12.5(b), where the parents, A and B, have their friends outside this community. In a community like that represented in Figure 12.5(a), A and B can both use their mutual obligations to aid them in raising their children and can develop norms about their children's behavior. Actions of either child, a or b, impose externalities, direct or indirect, on both A and B in both communities; but only in the community represented by Figure 12.5(a) is there the closure which allows A and B to establish norms and reinforce each other's sanctioning of the children.

For Figure 12.5, if all obligations are assumed to be balanced and all interests

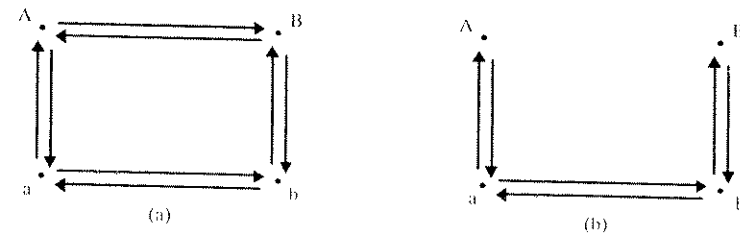


Figure 12.5 Representation of two communities: (a) with and (b) without intergenerational closure.

to be equal, then it is possible, as for Figures 12.2, 12.3, and 12.4, to calculate the relative disadvantage faced by parents in the community without closure. In the community depicted in Figure 12.5(a), each child and each parent have equal power, by symmetry. In the community depicted in Figure 12.5(b), the parents, though continuing to hold just as much direct control of events which interest their respective children, have only .618 of the power their children have, purely because of the relations between those children and the absence of relations between the parents. In other words, the parents in the community without closure have only .618 as much power relative to their children as do the parents in the community with closure—the deficiency is due to the lack of relations between the parents.

The variation in closure exhibited in Figure 12.5 can be generalized to any social structure in which actors can be classified as two different types and have relations both with actors of the other type and with actors of the same type. For example, instead of parents and children, the types may be unmarried men and unmarried women. The men and women will date one another, and, in addition, the men may have extensive networks of relations, and the women may have extensive networks of relations, as shown in Figure 12.5(a). Or it may be that the women, for example, have extensive networks of relations with internal closure, but the men do not, as shown in Figure 12.5(b). In that case the women will have more social capital than the men do. They can give the men reputations (good or bad), establish rules or norms that may strengthen a woman's power relative to a man's on dates, and use their social capital in other ways.

This example, as well as the case of parents and children, suggests that where one type of actor is weaker in a relationship (as children are with respect to parents or women with respect to men or students with respect to faculty), the actors of that type will be likely to develop social networks that have closure, in order to strengthen their position relative to the more powerful type of actor. There are, of course, other factors that facilitate closure in such networks, such as the social proximity that schools provide for children.

One setting in which closure in a network is especially important is in certain

communities of corporate actors. In a case where firms in one industry (represented by A and B in Figure 12.5) are suppliers for firms in a second industry (represented by a and b in Figure 12.5), there are supplier-customer relations (analogous to parent-child relations), possibly relations among firms within the first industry, and possibly relations among firms within the second industry. Relations among supplier firms constitute a potentially valuable form of social capital, sometimes leading to collusion and resulting in price fixing. Relations among customer firms also constitute valuable social capital, sometimes resulting in boycotts or embargoes.

Figure 12.5 illustrates variations in closure in a social structure with role differentiation; Figures 12.2, 12.3, and 12.4 show variation in closure where there is no role differentiation. When there is closure in the latter structures, as in Figure 12.2, norms and reputations can develop that keep the actors in the system from imposing externalities on one another. When closure is not present, as in Figure 12.3, those norms and reputations cannot develop.

#### *Stability*

A second factor which affects the creation and destruction of social capital is the stability of social structure. Every form of social capital, with the exception of that deriving from formal organizations with structures based on positions, depends on stability. Disruptions of social organization or of social relations can be highly destructive to social capital. The social invention of organizations having positions rather than persons as elements of the structure has provided one form of social capital that can maintain stability in the face of instability of individuals. Where individuals are relegated to being simply occupants of positions, only the performance of the occupants, not the structure itself, is disturbed by mobility of individuals. But for every other form of social capital, individual mobility constitutes a potential action that will be destructive of the structure itself—and thus of the social capital dependent on it.

#### *Ideology*

A third factor affecting the creation and destruction of social capital is ideology. An ideology can create social capital by imposing on an individual who holds it the demand that he act in the interests of something or someone other than himself. This is clear in the effects religious ideology has in leading persons to attend to the interests of others. One indirect and somewhat surprising effect has been noted from comparisons of religious and secular schools. Religiously affiliated private schools in the United States, despite their more rigid disciplinary standards, have dropout rates much lower than those of secular private schools or public schools (Coleman and Hoffer, 1987). The apparent cause is a quantity of social capital available to the religiously affiliated school that does not exist for most other schools, private or public. This depends in part on the

social-structural connections between school and parents, through the religious community. In part, however, it depends on the precept derived from religious doctrine that every individual is important in the eyes of God. A consequence of this precept is that youth are much less likely to become administratively “lost” through inattention. The signs of alienation and withdrawal are more quickly responded to, because of the religious ideology held by the school’s principal, members of the staff, and adult members of the religious community associated with the school.

There are also ways in which ideology can negatively affect the creation of social capital. An ideology of self-sufficiency, such as that espoused by the Epicureans in classical Greece, or an ideology emphasizing each individual’s separate relation to God, which is a basis of much Protestant doctrine, can inhibit the creation of social capital. Durkheim (1951 [1897]) examined the factors leading to individualism (roughly what he described as *égoïsme*) and its effects on the tendency to commit suicide.

#### *Other Factors*

Although there are various additional factors which affect the creation and destruction of social capital, only one broad class of these is especially important. This is the class of factors which make persons less dependent on one another. Affluence is one important member of this class; official sources of support in times of need (government aid of various sorts) is another. The presence of these alternatives allows whatever social capital is generated to depreciate and not to be renewed. For despite the public-good aspect of social capital, the more extensively persons call on one another for aid, the greater will be the quantity of social capital generated. When, because of affluence, government aid, or some other factor, persons need each other less, less social capital is generated.

Finally, it is useful to mention that social capital is one of those forms of capital which depreciate over time. Like human capital and physical capital, social capital depreciates if it is not renewed. Social relationships die out if not maintained; expectations and obligations wither over time; and norms depend on regular communication.