

AFTER HEGEMONY

Cooperation and Discord in the
World Political Economy

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CONTENTS

PREFACE	vii
I • Questions and Concepts	
1 • Realism, Institutionalism, and Cooperation	5
2 • Politics, Economics, and the International System	18
3 • Hegemony in the World Political Economy	31
II • Theories of Cooperation and International Regimes	
4 • Cooperation and International Regimes	49
5 • Rational-Choice and Functional Explanations	65
6 • A Functional Theory of International Regimes	85
7 • Bounded Rationality and Redefinitions of Self-interest	110
III • Hegemony and Cooperation in Practice	
8 • Hegemonic Cooperation in the Postwar Era	135
9 • The Incomplete Decline of Hegemonic Regimes	182
10 • The Consumers' Oil Regime, 1974-81	217
IV • Conclusion	
11 • The Value of Institutions and the Costs of Flexibility	243
BIBLIOGRAPHY	260
INDEX	281



COOPERATION AND INTERNATIONAL REGIMES

Hegemonic leadership can help to create a pattern of order. Cooperation is not antithetical to hegemony; on the contrary, hegemony depends on a certain kind of asymmetrical cooperation, which successful hegemons support and maintain. As we will see in more detail in chapter 8, contemporary international economic regimes were constructed under the aegis of the United States after World War II. In accounting for the creation of international regimes, hegemony often plays an important role, even a crucial one.

Yet the relevance of hegemonic cooperation for the future is questionable. Chapter 9 shows that the United States is less preponderant in material resources now than it was in the 1950s and early 1960s. Equally important, the United States is less willing than formerly to define its interests in terms complementary to those of Europe and Japan. The Europeans, in particular, are less inclined to defer to American initiatives, nor do they believe so strongly that they must do so in order to obtain essential military protection against the Soviet Union. Thus the subjective elements of American hegemony have been eroded as much as the tangible power resources upon which hegemonic systems rest. But neither the Europeans nor the Japanese are likely to have the capacity to become hegemonic powers themselves in the foreseeable future.¹

This prospect raises the issue of cooperation "after hegemony," which is the central theme of this book and especially of the theories developed in Part II. It also leads back to a crucial tension between economics and politics: international coordination of policy seems highly beneficial in an interdependent world economy, but cooperation in world politics is particularly difficult. One way to relax this tension would be to deny the premise that international economic policy co-

¹ Historically, as noted in chapter 1, hegemonies have usually arisen only after major wars. The two principal modern powers that could be considered hegemonic leaders—Britain after 1815 and the United States after 1945—both emerged victorious from world conflicts. I am assuming, in regarding hegemony as unlikely in the foreseeable future, that any world war would have such disastrous consequences that no country would emerge as hegemonic over a world economy resembling that of the present. For a discussion of the cycle of hegemony, see Gilpin (1981) and Modelski (1978 and 1982),

ordination is valuable by assuming that international markets will automatically yield optimal results (Corden, 1981). The decisive objection to this argument is that, in the absence of cooperation, governments will interfere in markets unilaterally in pursuit of what they regard as their own interests, whatever liberal economists may say. They will intervene in foreign exchange markets, impose various restrictions on imports, subsidize favored domestic industries, and set prices for commodities such as petroleum (Strange, 1979). Even if one accepted cooperation to maintain free markets, but no other form of policy coordination, the further objection could be raised that economic market failure would be likely to occur (Cooper, 1983, pp. 45-46). Suboptimal outcomes of transactions could result, for a variety of reasons including problems of collective action. It would take an ideological leap of faith to believe that free markets lead necessarily to optimal results.

Rejecting the illusion that cooperation is never valuable in the world political economy, we have to cope with the fact that it is very difficult to organize. One recourse would be to lapse into fatalism—acceptance of destructive economic conflict as a result of political fragmentation. Although this is a logically tenable position for those who believe in the theory of hegemonic stability, even its most powerful theoretical advocate shies away from its bleak normative implications (Gilpin, 1981). A fatalistic view is not taken here. Without ignoring the difficulties that beset attempts to coordinate policy in the absence of hegemony, this book contends that nonhegemonic cooperation is possible, and that it can be facilitated by international regimes.

In making this argument, I will draw a distinction between the creation of international regimes and their maintenance. Chapter 5 seeks to show that when shared interests are sufficiently important and other key conditions are met, cooperation can emerge and regimes can be created without hegemony. Yet this does not imply that regimes can be created easily, much less that contemporary international economic regimes actually came about in this way. In chapter 6 I argue that international regimes are easier to maintain than to create, and that recognition of this fact is crucial to understanding why they are valued by governments. Regimes may be maintained, and may continue to foster cooperation, even under conditions that would not be sufficiently benign to bring about their creation. Cooperation is possible after hegemony not only because shared interests can lead to the creation of regimes, but also because the conditions for maintaining existing international regimes are less demanding than those required for creating them. Although hegemony helps to explain the creation

of contemporary international regimes, the decline of hegemony does not necessarily lead symmetrically to their decay.

This chapter analyzes the meaning of two key terms: "cooperation" and "international regimes." It distinguishes cooperation from harmony as well as from discord, and it argues for the value of the concept of international regimes as a way of understanding both cooperation and discord. Together the concepts of cooperation and international regimes help us clarify what we want to explain: how do patterns of rule-guided policy coordination emerge, maintain themselves, and decay in world politics?

HARMONY, COOPERATION, AND DISCORD

Cooperation must be distinguished from harmony. Harmony refers to a situation in which actors' policies (pursued in their own self-interest without regard for others) *automatically* facilitate the attainment of others' goals. The classic example of harmony is the hypothetical competitive-market world of the classical economists, in which the Invisible Hand ensures that the pursuit of self-interest by each contributes to the interest of all. In this idealized, unreal world, no one's actions damage anyone else; there are no "negative externalities," in the economists' jargon. Where harmony reigns, cooperation is unnecessary. It may even be injurious, if it means that certain individuals conspire to exploit others. Adam Smith, for one, was very critical of guilds and other conspiracies against freedom of trade (1776/1976). Cooperation and harmony are by no means identical and ought not to be confused with one another.

Cooperation requires that the actions of separate individuals or organizations—which are not in pre-existent harmony—be brought into conformity with one another through a process of negotiation, which is often referred to as "policy coordination." Charles E. Lindblom has defined policy coordination as follows (1965, p. 227):

A set of decisions is coordinated if adjustments have been made in them, such that the adverse consequences of any one decision for other decisions are to a degree and in some frequency avoided, reduced, or counterbalanced or outweighed.

Cooperation occurs when actors adjust their behavior to the actual or anticipated preferences of others, through a process of policy coordination. To summarize more formally, *intergovernmental cooperation takes place when the policies actually followed by one gov-*

ernment are regarded by its partners as facilitating realization of their own objectives, as the result of a process of policy coordination.

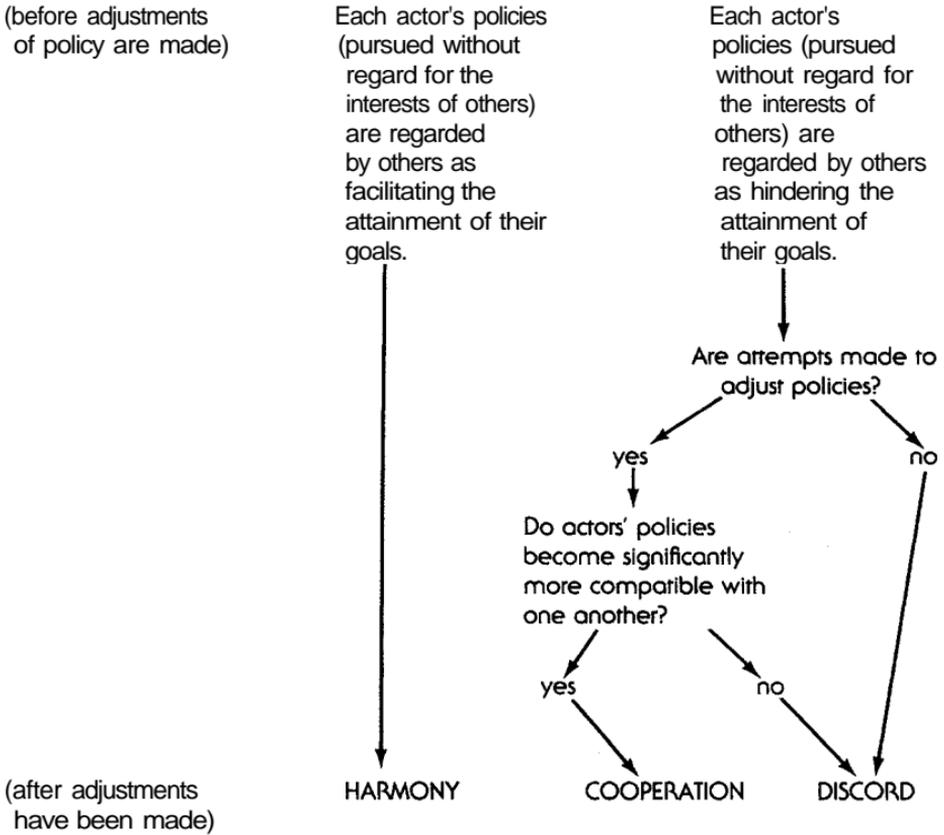
With this definition in mind, we can differentiate among cooperation, harmony, and discord, as illustrated by figure 4.1. First, we ask whether actors' policies automatically facilitate the attainment of others' goals. If so, there is harmony: no adjustments need to take place. Yet harmony is rare in world politics. Rousseau sought to account for this rarity when he declared that even two countries guided by the General Will in their internal affairs would come into conflict if they had extensive contact with one another, since the General Will of each would not be general for both. Each would have a partial, self-interested perspective on their mutual interactions. Even for Adam Smith, efforts to ensure state security took precedence over measures to increase national prosperity. In defending the Navigation Acts, Smith declared: "As defence is of much more importance than opulence, the act of navigation is, perhaps, the wisest of all the commercial regulations of England" (1776/1976, p. 487). Waltz summarizes the point by saying that "in anarchy there is no automatic harmony" (1959, p. 182).

Yet this insight tells us nothing definitive about the prospects for cooperation. For this we need to ask a further question about situations in which harmony does not exist. Are attempts made by actors (governmental or nongovernmental) to adjust their policies to each others' objectives? If no such attempts are made, the result is discord: a situation in which governments regard each others' policies as hindering the attainment of their goals, and hold each other responsible for these constraints.

Discord often leads to efforts to induce others to change their policies; when these attempts meet resistance, policy conflict results. Insofar as these attempts at policy adjustment succeed in making policies more compatible, however, cooperation ensues. The policy coordination that leads to cooperation need not involve bargaining or negotiation at all. What Lindblom calls "adaptive" as opposed to "manipulative" adjustment can take place: one country may shift its policy in the direction of another's preferences without regard for the effect of its action on the other state, defer to the other country, or partially shift its policy in order to avoid adverse consequences for its partner. Or nonbargained manipulation—such as one actor confronting another with a *fait accompli*—may occur (Lindblom, 1965, pp. 33-34 and ch. 4). Frequently, of course, negotiation and bargaining indeed take place, often accompanied by other actions that are designed to induce others to adjust their policies to one's own. Each government

COOPERATION AND REGIMES

Figure 4.1. Harmony, Cooperation, and Discord



pursues what it perceives as its self-interest, but looks for bargains that can benefit all parties to the deal, though not necessarily equally.

Harmony and cooperation are not usually distinguished from one another so clearly. Yet, in the study of world politics, they should be. Harmony is apolitical. No communication is necessary, and no influence need be exercised. Cooperation, by contrast, is highly political: somehow, patterns of behavior must be altered. This change may be accomplished through negative as well as positive inducements. Indeed, studies of international crises, as well as game-theoretic experiments and simulations, have shown that under a variety of conditions strategies that involve threats and punishments as well as promises and rewards are more effective in attaining cooperative outcomes than those that rely entirely on persuasion and the force of good example (Axelrod, 1981, 1984; Lebow, 1981; Snyder and Diesing, 1977).

Cooperation therefore does not imply an absence of conflict. On

the contrary, it is typically mixed with conflict and reflects partially successful efforts to overcome conflict, real or potential. Cooperation takes place only in situations in which actors perceive that their policies are actually or potentially in conflict, not where there is harmony. Cooperation should not be viewed as the absence of conflict, but rather as a reaction to conflict or potential conflict. Without the specter of conflict, there is no need to cooperate.

The example of trade relations among friendly countries in a liberal international political economy may help to illustrate this crucial point. A naive observer, trained only to appreciate the overall welfare benefits of trade, might assume that trade relations would be harmonious: consumers in importing countries benefit from cheap foreign goods and increased competition, and producers can increasingly take advantage of the division of labor as their export markets expand. But harmony does not normally ensue. Discord on trade issues may prevail because governments do not even seek to reduce the adverse consequences of their own policies for others, but rather strive in certain respects to increase the severity of those effects. Mercantilist governments have sought in the twentieth century as well as the seventeenth to manipulate foreign trade, in conjunction with warfare, to damage each other economically and to gain productive resources themselves (Wilson, 1957; Hirschman, 1945/1980). Governments may desire "positional goods," such as high status (Hirsch, 1976), and may therefore resist even mutually beneficial cooperation if it helps others more than themselves. Yet even when neither power nor positional motivations are present, and when all participants would benefit in the aggregate from liberal trade, discord tends to predominate over harmony as the initial result of independent governmental action.

This occurs even under otherwise benign conditions because some groups or industries are forced to incur adjustment costs as changes in comparative advantage take place. Governments often respond to the ensuing demands for protection by attempting, more or less effectively, to cushion the burdens of adjustment for groups and industries that are politically influential at home. Yet unilateral measures to this effect almost always impose adjustment costs abroad, and discord continually threatens. Governments enter into international negotiations in order to reduce the conflict that would otherwise result. Even substantial potential common benefits do not create harmony when state power can be exercised on behalf of certain interests and against others. In world politics, harmony tends to vanish: attainment of the gains from pursuing complementary policies depends on cooperation.

Observers of world politics who take power and conflict seriously should be attracted to this way of defining cooperation, since my definition does not relegate cooperation to the mythological world of relations among equals in power. Hegemonic cooperation is not a contradiction in terms. Defining cooperation in contrast to harmony should, I hope, lead readers with a Realist orientation to take cooperation in world politics seriously rather than to dismiss it out of hand. To Marxists who also believe in hegemonic power theories, however, even this definition of cooperation may not seem to make it relevant to the contemporary world political economy. From this perspective, mutual policy adjustments cannot possibly resolve the contradictions besetting the system because they are attributable to capitalism rather than to problems of coordination among egoistic actors lacking common government. Attempts to resolve these contradictions through international cooperation will merely transfer issues to a deeper and even more intractable level. Thus it is not surprising that Marxian analyses of the international political economy have, with few exceptions, avoided sustained examinations of the conditions under which cooperation among major capitalist countries can take place. Marxists see it as more important to expose relationships of exploitation and conflict between major capitalist powers on the one hand and the masses of people in the periphery of world capitalism on the other. And, from a Leninist standpoint, to examine the conditions for international cooperation without first analyzing the contradictions of capitalism, and recognizing the irreconcilability of conflicts among capitalist countries, is a bourgeois error.

This is less an argument than a statement of faith. Since sustained international coordination of macroeconomic policies has never been tried, the statement that it would merely worsen the contradictions facing the system is speculative. In view of the lack of evidence for it, such a claim could even be considered rash. Indeed, one of the most perceptive Marxian writers of recent years, Stephen Hymer (1972), recognized explicitly that capitalists face problems of collective action and argued that they were seeking, with at least temporary prospects of success, to overcome them. As he recognized, any success in internationalizing capital could pose grave threats to socialist aspirations and, at the very least, would shift contradictions to new points of tension. Thus even were we to agree that the fundamental issue is posed by the contradictions of capitalism rather than the tensions inherent in a state system, it would be worthwhile to study the conditions under which cooperation is likely to occur.

INTERNATIONAL REGIMES AND COOPERATION

One way to study cooperation and discord would be to focus on particular actions as the units of analysis. This would require the systematic compilation of a data set composed of acts that could be regarded as comparable and coded according to the degree of cooperation that they reflect. Such a strategy has some attractive features. The problem with it, however, is that instances of cooperation and discord could all too easily be isolated from the context of beliefs and behavior within which they are embedded. This book does not view cooperation atomistically as a set of discrete, isolated acts, but rather seeks to understand patterns of cooperation in the world political economy. Accordingly, we need to examine actors' expectations about future patterns of interaction, their assumptions about the proper nature of economic arrangements, and the kinds of political activities they regard as legitimate. That is, we need to analyze cooperation within the context of international institutions, broadly defined, as in chapter 1, in terms of practices and expectations. Each act of cooperation or discord affects the beliefs, rules, and practices that form the context for future actions. Each act must therefore be interpreted as embedded within a chain of such acts and their successive cognitive and institutional residues.

This argument parallels Clifford Geertz's discussion of how anthropologists should use the concept of culture to interpret the societies they investigate. Geertz sees culture as the "webs of significance" that people have created for themselves. On their surface, they are enigmatic; the observer has to interpret them so that they make sense. Culture, for Geertz, "is a context, something within which [social events] can be intelligibly described" (1973, p. 14). It makes little sense to describe naturalistically what goes on at a Balinese cock-fight unless one understands the meaning of the event for Balinese culture. There is not a world culture in the fullest sense, but even in world politics, human beings spin webs of significance. They develop implicit standards for behavior, some of which emphasize the principle of sovereignty and legitimize the pursuit of self-interest, while others rely on quite different principles. Any act of cooperation or apparent cooperation needs to be interpreted within the context of related actions, and of prevailing expectations and shared beliefs, before its meaning can be properly understood. Fragments of political behavior become comprehensible when viewed as part of a larger mosaic.

The concept of international regime not only enables us to describe patterns of cooperation; it also helps to account for both cooperation

and discord. Although regimes themselves depend on conditions that are conducive to interstate agreements, they may also facilitate further efforts to coordinate policies. The next two chapters develop an argument about the functions of international regimes that shows how they can affect the propensity even of egoistic governments to cooperate. To understand international cooperation, it is necessary to comprehend how institutions and rules not only reflect, but also affect, the facts of world politics.

Defining and Identifying Regimes

When John Ruggie introduced the concept of international regimes into the international politics literature in 1975, he defined a regime as "a set of mutual expectations, rules and regulations, plans, organizational energies and financial commitments, which have been accepted by a group of states" (p. 570). More recently, a collective definition, worked out at a conference on the subject, defined international regimes as "sets of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations. Principles are beliefs of fact, causation, and rectitude. Norms are standards of behavior defined in terms of rights and obligations. Rules are specific prescriptions or proscriptions for action. Decision-making procedures are prevailing practices for making and implementing collective choice" (Krasner, 1983, p. 2).

This definition provides a useful starting-point for analysis, since it begins with the general conception of regimes as social institutions and explicates it further. The concept of norms, however, is ambiguous. It is important that we understand norms in this definition simply as standards of behavior defined in terms of rights and obligations. Another usage would distinguish norms from rules and principles by stipulating that participants in a social system regard norms, but not rules and principles, as morally binding regardless of considerations of narrowly defined self-interest. But to include norms, thus defined, in a definition of necessary regime characteristics would be to make the conception of regimes based strictly on self-interest a contradiction in terms. Since this book regards regimes as largely based on self-interest, I will maintain a definition of norms simply as standards of behavior, whether adopted on grounds of self-interest or otherwise. Only in chapter 7 will the possibility again be taken seriously that some regimes may contain norms and principles justified on the basis

of values extending beyond self-interest, and regarded as obligatory on moral grounds by governments.

The principles of regimes define, in general, the purposes that their members are expected to pursue. For instance, the principles of the postwar trade and monetary regimes have emphasized the value of open, nondiscriminatory patterns of international economic transactions; the fundamental principle of the nonproliferation regime is that the spread of nuclear weapons is dangerous. Norms contain somewhat clearer injunctions to members about legitimate and illegitimate behavior, still defining responsibilities and obligations in relatively general terms. For instance, the norms of the General Agreement on Tariffs and Trade (GATT) do not require that members resort to free trade immediately, but incorporate injunctions to members to practice non-discrimination and reciprocity and to move toward increased liberalization. Fundamental to the nonproliferation regime is the norm that members of the regime should not act in ways that facilitate nuclear proliferation.

The rules of a regime are difficult to distinguish from its norms; at the margin, they merge into one another. Rules are, however, more specific: they indicate in more detail the specific rights and obligations of members. Rules can be altered more easily than principles or norms, since there may be more than one set of rules that can attain a given set of purposes. Finally, at the same level of specificity as rules, but referring to procedures rather than substances, the decisionmaking procedures of regimes provide ways of implementing their principles and altering their rules.

An example from the field of international monetary relations may be helpful. The most important principle of the international balance-of-payments regime since the end of World War II has been that of liberalization of trade and payments. A key norm of the regime has been the injunction to states not to manipulate their exchange rates unilaterally for national advantage. Between 1958 and 1971 this norm was realized through pegged exchange rates and procedures for consultation in the event of change, supplemented with a variety of devices to help governments avoid exchange-rate changes through a combination of borrowing and internal adjustment. After 1973 governments have subscribed to the same norm, although it has been implemented more informally and probably less effectively under a system of floating exchange rates. Ruggie (1983b) has argued that the abstract principle of liberalization, subject to constraints imposed by the acceptance of the welfare state, has been maintained throughout the postwar period: "embedded liberalism" continues, reflecting a fundamental element of

continuity in the international balance-of-payments regime. The norm of nonmanipulation has also been maintained, even though the specific rules of the 1958-71 system having to do with adjustment have been swept away.

The concept of international regime is complex because it is defined in terms of four distinct components: principles, norms, rules, and decisionmaking procedures. It is tempting to select one of these levels of specificity—particularly, principles and norms or rules and procedures—as *the* defining characteristic of regimes (Krasner, 1983; Ruggie, 1983b). Such an approach, however, creates a false dichotomy between principles on the one hand and rules and procedures on the other. As we have noted, at the margin norms and rules cannot be sharply distinguished from each other. It is difficult if not impossible to tell the difference between an "implicit rule" of broad significance and a well-understood, relatively specific operating principle. Both rules and principles may affect expectations and even values. In a strong international regime, the linkages between principles and rules are likely to be tight. Indeed, it is precisely the linkages among principles, norms, and rules that give regimes their legitimacy. Since rules, norms, and principles are so closely intertwined, judgments about whether changes in rules constitute changes of regime or merely changes *within* regimes necessarily contain arbitrary elements.

Principles, norms, rules, and procedures all contain injunctions about behavior: they prescribe certain actions and proscribe others. They imply obligations, even though these obligations are not enforceable through a hierarchical legal system. It clarifies the definition of regime, therefore, to think of it in terms of injunctions of greater or lesser specificity. Some are far-reaching and extremely important. They may change only rarely. At the other extreme, injunctions may be merely technical, matters of convenience that can be altered without great political or economic impact. In-between are injunctions that are both specific enough that violations of them are in principle identifiable and that changes in them can be observed, and sufficiently significant that changes in them make a difference for the behavior of actors and the nature of the international political economy. It is these intermediate injunctions—politically consequential but specific enough that violations and changes can be identified—that I take as the essence of international regimes.²

² Some authors have defined "regime" as equivalent to the conventional concept of international system. For instance, Puchala and Hopkins (1983) claim that "a regime

A brief examination of international oil regimes, and their injunctions, may help us clarify this point. The pre-1939 international oil regime was dominated by a small number of international firms and contained explicit injunctions about where and under what conditions companies could produce oil, and where and how they should market it. The rules of the Red Line and Achnacarry or "As-Is" agreements of 1928 reflected an "anti-competitive ethos": that is, the basic principle that competition was destructive to the system and the norm that firms should not engage in it (Turner, 1978, p. 30). This principle and this norm both persisted after World War II, although an intergovernmental regime with explicit rules was not established, owing to the failure of the Anglo-American Petroleum Agreement (discussed in chapter 8). Injunctions against price-cutting were reflected more in the practices of companies than in formal rules. Yet expectations and practices of major actors were strongly affected by these injunctions, and in this sense the criteria for a regime—albeit a weak one—were met. As governments of producing countries became more assertive, however, and as formerly domestic independent companies entered international markets, these arrangements collapsed; after the mid-to-late 1960s, there was no regime for the issue-area as a whole, since no injunctions could be said to be accepted as obligatory by all influential actors. Rather, there was a "tug of war" (Hirschman, 1981) in which all sides resorted to self-help. The Organization of Petroleum Exporting Countries (OPEC) sought to create a producers' regime based on rules for prorationing oil production, and consumers established an emergency oil-sharing system in the new International Energy Agency to counteract the threat of selective embargoes.

If we were to have paid attention only to the principle of avoiding competition, we would have seen continuity: whatever the dominant actors, they have always sought to cartelize the industry one way or another. But to do so would be to miss the main point, which is that momentous changes have occurred. At the other extreme, we could have fixed our attention on very specific particular arrangements, such

exists in every substantive issue-area in international relations where there is discernibly patterned behavior" (p. 63). To adopt this definition would be to make either "system" or "regime" a redundant term. At the opposite extreme, the concept of regime could be limited to situations with genuine normative content, in which governments followed regime rules *instead of* pursuing their own self-interests when the two conflicted. If this course were chosen, the concept of regime would be just another way of expressing ancient "idealist" sentiments in international relations. The category of regime would become virtually empty. This dichotomy poses a false choice between using "regime" as a new label for old patterns and defining regimes as Utopias. Either strategy would make the term irrelevant.

as the various joint ventures of the 1950s and 1960s or the specific provisions for controlling output tried by OPEC after 1973, in which case we would have observed a pattern of continual flux. The significance of the most important events—the demise of old cartel arrangements, the undermining of the international majors' positions in the 1960s, and the rise of producing governments to a position of influence in the 1970s—could have been missed. Only by focusing on the intermediate level of relatively specific but politically consequential injunctions, whether we call them rules, norms, or principles, does the concept of regime help us identify major changes that require explanation.

As our examples of money and oil suggest, we regard the scope of international regimes as corresponding, in general, to the boundaries of issue-areas, since governments establish regimes to deal with problems that they regard as so closely linked that they should be dealt with together. Issue-areas are best defined as sets of issues that are in fact dealt with in common negotiations and by the same, or closely coordinated, bureaucracies, as opposed to issues that are dealt with separately and in uncoordinated fashion. Since issue-areas depend on actors' perceptions and behavior rather than on inherent qualities of the subject-matters, their boundaries change gradually over time. Fifty years ago, for instance, there was no oceans issue-area, since particular questions now grouped under that heading were dealt with separately; but there was an international monetary issue-area even then (Keohane and Nye, 1977, ch. 4). Twenty years ago trade in cotton textiles had an international regime of its own—the Long-Term Agreement on Cotton Textiles—and was treated separately from trade in synthetic fibers (Aggarwal, 1981). Issue-areas are defined and redefined by changing patterns of human intervention; so are international regimes.

Self-Help and International Regimes

The injunctions of international regimes rarely affect economic transactions directly: state institutions, rather than international organizations, impose tariffs and quotas, intervene in foreign exchange markets, and manipulate oil prices through taxes and subsidies. If we think about the impact of the principles, norms, rules, and decision-making procedures of regimes, it becomes clear that insofar as they have any effect at all, it must be exerted on national controls, and especially on the specific interstate agreements that affect the exercise of national controls (Aggarwal, 1981). International regimes must be distinguished from these specific agreements; as we will see in chapter

6, a major function of regimes is to facilitate the making of specific cooperative agreements among governments.

Superficially, it could seem that since international regimes affect national controls, the regimes are of superior importance—just as federal laws in the United States frequently override state and local legislation. Yet this would be a fundamentally misleading conclusion. In a well-ordered society, the units of action—individuals in classic liberal thought—live together within a framework of constitutional principles that define property rights, establish who may control the state, and specify the conditions under which subjects must obey governmental regulations. In the United States, these principles establish the supremacy of the federal government in a number of policy areas, though not in all. But world politics is decentralized rather than hierarchic: the prevailing principle of sovereignty means that states are subject to no superior government (Ruggie, 1983a). The resulting system is sometimes referred to as one of "self-help" (Waltz, 1979).

Sovereignty and self-help mean that the principles and rules of international regimes will necessarily be weaker than in domestic society. In a civil society, these rules "specify terms of exchange" within the framework of constitutional principles (North, 1981, p. 203). In world politics, the principles, norms, and rules of regimes are necessarily fragile because they risk coming into conflict with the principle of sovereignty and the associated norm of self-help. They may promote cooperation, but the fundamental basis of order on which they would rest in a well-ordered society does not exist. They drift around without being tied to the solid anchor of the state.

Yet even if the principles of sovereignty and self-help limit the degree of confidence to be placed in international agreements, they do not render cooperation impossible. Orthodox theory itself relies on mutual interests to explain forms of cooperation that are used by states as instruments of competition. According to balance-of-power theory, cooperative endeavors such as political-military alliances necessarily form in self-help systems (Waltz, 1979). Acts of cooperation are accounted for on the grounds that mutual interests are sufficient to enable states to overcome their suspicions of one another. But since even orthodox theory relies on mutual interests, its advocates are on weak ground in objecting to interpretations of system-wide cooperation along these lines. There is no logical or empirical reason why mutual interests in world politics should be limited to interests in combining forces against adversaries. As economists emphasize, there can also be mutual interests in securing efficiency gains from voluntary exchange or oli-

gopolistic rewards from the creation and division of rents resulting from the control and manipulation of markets.

International regimes should not be interpreted as elements of a new international order "beyond the nation-state." They should be comprehended chiefly as arrangements motivated by self-interest: as components of systems in which sovereignty remains a constitutive principle. This means that, as Realists emphasize, they will be shaped largely by their most powerful members, pursuing their own interests. But regimes can also affect state interests, for the notion of self-interest is itself elastic and largely subjective. Perceptions of self-interest depend both on actors' expectations of the likely consequences that will follow from particular actions and on their fundamental values. Regimes can certainly affect expectations and may affect values as well. Far from being contradicted by the view that international behavior is shaped largely by power and interests, the concept of international regime is consistent both with the importance of differential power and with a sophisticated view of self-interest. Theories of regimes can incorporate Realist insights about the role of power and interest, while also indicating the inadequacy of theories that define interests so narrowly that they fail to take the role of institutions into account.

Regimes not only are consistent with self-interest but may under some conditions even be necessary to its effective pursuit. They facilitate the smooth operation of decentralized international political systems and therefore perform an important function for states. In a world political economy characterized by growing interdependence, they may become increasingly useful for governments that wish to solve common problems and pursue complementary purposes without subordinating themselves to hierarchical systems of control.

CONCLUSIONS

In this chapter international cooperation has been defined as a process through which policies actually followed by governments come to be regarded by their partners as facilitating realization of their own objectives, as the result of policy coordination. Cooperation involves mutual adjustment and can only arise from conflict or potential conflict. It must therefore be distinguished from harmony. Discord, which is the opposite of harmony, stimulates demands for policy adjustments, which can either lead to cooperation or to continued, perhaps intensified, discord.

Since international regimes reflect patterns of cooperation and discord over time, focusing on them leads us to examine long-term pat-

terns of behavior, rather than treating acts of cooperation as isolated events. Regimes consist of injunctions at various levels of generality, ranging from principles to norms to highly specific rules and decisionmaking procedures. By investigating the evolution of the norms and rules of a regime over time, we can use the concept of international regime both to explore continuity and to investigate change in the world political economy.

From a theoretical standpoint, regimes can be viewed as intermediate factors, or "intervening variables," between fundamental characteristics of world politics such as the international distribution of power on the one hand and the behavior of states and nonstate actors such as multinational corporations on the other. The concept of international regime helps us account for cooperation and discord. To understand the impact of regimes, it is not necessary to posit idealism on the part of actors in world politics. On the contrary, the norms and rules of regimes can exert an effect on behavior even if they do not embody common ideals but are used by self-interested states and corporations engaging in a process of mutual adjustment.

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RATIONAL-CHOICE AND FUNCTIONAL EXPLANATIONS

A simple explanation for the failure of a given attempt at cooperation in world politics is always available: that the interests of the states involved were incompatible with one another. This would imply that discord was a natural, if not inevitable, result of the characteristics of the actors and their positions relative to one another. Indeed, on this account, low levels of cooperation might still be Pareto-optimal; that is, given the interests of the actors, there might be no more cooperative solution that would make all of them better off.

This is one possible account of discord. But it reminds one uncomfortably of Voltaire's *Candide*, whose hero keeps proclaiming, in the wake of terrible disasters, that all is for the best in this, the "best of all possible worlds." It is difficult to prove that the frequent disasters of international politics are not inherent in the interests of the actors; but if we believed they were, we would be forced into the fatalistic and ultimately absurd position that such events as World War I were in the interests of the Austrian, German, and Russian empires, all of which disappeared as a result of the conflict. More generally, this view would have us believe, implausibly, that objective interests determine world events regardless of the information available to governments and transnational actors, their perceptions of likely consequences of action, or the sequence of interactions in which they engage.

The implausibility of this view is reinforced by recent deductive theories based on assumptions of rationality. Game theory and discussions of collective action emphasize that rational individuals who would all benefit from cooperating may nevertheless be unable to do so. For one reason or another, they may fail to coordinate their actions to reach the desired position. Even if they are rational as individuals, the group of which they are part will not necessarily behave as a rational actor. To infer conflicting interests from discord, without obtaining direct evidence on those alleged conflicts of interest, is therefore to run the risk of serious error (Hardin, 1982, p. 1). Actors may fail to cooperate even when their interests are entirely identical. In Shakespeare's *Romeo and Juliet*, for instance, Romeo and Juliet have the same interest—to marry one another—but the inability of Friar

John to deliver a message from Friar Laurence to Romeo leads to the failure of Friar Laurence's plan and the death of both lovers.

The fact that attempts at cooperation may fail despite mutual interests recalls our discussion of Institutional thought in chapter 1. Institutional writers have always stressed that cooperation can be fostered by institutions. This implies that actual cooperation, in the absence of institutions, is often less than potential cooperation. It does not, however, mean that cooperation is inevitable, or that it must continue to increase.

Institutionalists have sometimes been inclined to proclaim the growth of cooperation or even supranational authority, only to find their theory apparently falsified as their hopes are dashed. Even when they avoid excessive optimism, they have been bedeviled by ambiguity about actors' motivations. Realists are at least clear about their assumptions: states, the principal actors in world politics, are rational egoists. As we saw in chapter 2, the assumption of egoism implies that the preferences of actors in world politics are based on their assessments of their own welfare, not that of others. The rationality assumption states that they "seek to maximize value across a set of consistently ordered objectives" (Snyder and Diesing, 1977, p. 81). These assumptions permit Realist analysts to generate predictions about state behavior on the basis of relatively sparse information about their environments. Knowledge of the structure of the situation facing decisionmakers provides the analyst with clues to state action, since leaders, being rational egoists, will respond to the incentives and constraints provided by the environment in ways calculated to increase the wealth, security, and power of their states. Instead of having to do research on what leaders are actually thinking, we can obtain the necessary information merely by conducting thought-experiments in our own offices. As Hans J. Morgenthau expressed it some years ago (1948/1966, p. 5):

[To understand foreign policy] we put ourselves in the position of a statesman who must meet a certain problem of foreign policy under certain circumstances, and we ask ourselves what the rational alternatives are from which a statesman may choose ... and which of these rational alternatives this particular statesman, acting under these circumstances, is likely to choose. It is the testing of this rational hypothesis against the actual facts and their consequences that gives meaning to the facts of international politics and makes a theory of politics possible.

Institutionalists are less explicit about their models of actor behavior, since they have more complex ideas about "self-interest" and how it can change. This ambiguity has led, unfortunately, to the common

belief that because they believe in the possibility of cooperation, they must "smuggle in" idealistic assumptions about motivations. Critics can point to idealistic premises or to ambiguity in the works of some writers who emphasize the role of institutions in promoting cooperation, and dismiss their theory as based on illusions about people and states.

My argument anticipates this objection by adopting the Realist model of rational egoism. In this chapter and the next one I assume, with the Realists, that actors are rational egoists. I propose to show, on the basis of their own assumptions, that the characteristic pessimism of Realism does not necessarily follow. I seek to demonstrate that Realist assumptions about world politics are consistent with the formation of institutionalized arrangements, containing rules and principles, which promote cooperation. Once the argument has been established in this way, it can be modified (as in chapter 7) by relaxing the key assumptions of rationality and egoism to allow for the impacts of bounded rationality, changes in preferences, and empathy on state behavior.

SINGLE-PLAY PRISONERS' DILEMMA AND THE PROBLEM OF COLLECTIVE ACTION

The difficulties of cooperating are illustrated best not by either purely conflictual games (in which discord appears to be determined by the structure of interests) or fundamentally cooperative ones (in which only melodramatic bad luck or its equivalent can prevent cooperation), but by what Thomas Schelling has called "mixed-motive games": games characterized by a combination of "mutual dependence and conflict, of partnership and competition" (1960/1980, p. 89). In these games, both players can benefit from mutual cooperation, but each can gain more from double-crossing the other one—that is, from "defection."¹

Several mixed-motive games have been identified as relevant to world politics (Snyder and Diesing, 1977; Snidal, 1981; Oye, 1983b; Stein,

¹ For purposes of exposition, this discussion uses game-theoretic terminology and matrices to discuss the problem of collective action. It is important, however, to recognize that what Oran Young calls "manipulative" models of bargaining are equally important for an exploration of this issue from the actors' standpoint. Manipulative models emphasize "the presence of both strategic interaction and imperfect information." As we will see later in this chapter, both of these conditions are highly relevant to the problem of the functions performed by international regimes. On manipulative models of bargaining, see Young, 1975, especially pp. 303-18, and Schelling, 1960/1980 and 1978.

1983). Of particular interest is the well-known game of "Prisoners' Dilemma," since it demonstrates that under certain conditions rational actors find themselves unable to reach a Pareto-optimal solution, despite a certain degree of convergence of interests between them. Not all situations in world politics or the international political economy take the form of Prisoners' Dilemma, but many do, and the issues posed by Prisoners' Dilemma are central to the problems of discord and cooperation discussed in this book (Taylor, 1976).

Prisoners' Dilemma is based on the fable of two guilty partners in crime who are being questioned separately by the District Attorney. Each prisoner knows that if neither confesses, the DA will only have sufficient evidence to convict them for misdemeanors, leading to thirty-day prison terms for each. If both confess, however, they will each be sentenced to a year in the penitentiary. This prospect might seem to give both an incentive not to confess, except that the clever DA has promised that if either confesses while the other refuses, the confessor will not be prosecuted at all, while his recalcitrant partner is punished severely with a five-year sentence.

Under these conditions, each prisoner recognizes that on grounds of narrow self-interest he should confess *whatever his partner does*. If his partner also confesses, his own confession at least saves him from the punitive five-year sentence, and if his partner refuses to confess, his own confession lets him go free (at his partner's expense) rather than being convicted of a misdemeanor. As a result of these calculations, we are urged to conclude that two rational, self-interested individuals in such a situation will both confess and will receive prison sentences that they could have avoided by cooperating with each other and "stonewalling" the District Attorney. That is, to "defect" from cooperating with one's partner (to confess to the DA) seems to be the dominant strategy for both players.

A familiar game-theory matrix for Prisoners' Dilemma, with a numerical example included, is provided below. If both players cooperate with each other (not confessing to the DA), they receive the reward, R. If they defect (both confess), they are punished, P. If one defects while the other cooperates, the defector receives the benefit, T, of succumbing to temptation and tricking his partner, while the cooperator receives the sucker payoff, S. To insure that an even chance of exploiting or being exploited is worse than mutual cooperation, the standard definition of Prisoners' Dilemma includes the provision that the reward for cooperation is greater than twice the sum of the payoffs for tricking the other actor and being the sucker.

The logic of collective action, as explained by Mancur Olson, Jr. (1965), is similar in its essentials to this logic of Prisoners' Dilemma

Prisoners' Dilemma

		Column's Choice	
		COOPERATE	DEFECT
Row's choice:	COOPERATE	R, R (3, 3)	S, T (1, 4)
	DEFECT	T, S (4, 1)	P, P (2, 2)
Payoff ordering:	T > R > P > S	Condition: R > (S + T)/2	

(Hardin, 1982, ch. 2). In situations calling for collective action, cooperation is necessary to obtain a good that (insofar as it is produced at all) will be enjoyed by all members of a set of actors, whether they have contributed to its provision or not. When each member's contribution to the cost of the good is small as a proportion of its total cost, self-interested individuals are likely to calculate that they are better off by not contributing, since their contribution is costly to them but has an imperceptible effect on whether the good is produced. Thus, as in Prisoners' Dilemma, the dominant strategy for an egoistic individualist is to defect, by not contributing to the production of the good. Generalizing this calculation yields the conclusion that the collective good will not be produced, or will be underproduced, despite the fact that its value to the group is greater than its cost.

Both Prisoners' Dilemma and the problem of collective action have great heuristic value. They warn us against the fallacy of composition, which in world politics would lead us to believe that the sources of discord must lie in the nature of the actors rather than in their patterns of interaction. Prisoners' Dilemma and the logic of collective action both suggest, on the contrary, the power of "third image" explanations, which attribute causality to the nature of the international system rather than the nature of states (Waltz, 1959). Both Prisoners' Dilemma and collective action arguments focus attention on issues of enforcement, commitment, and strategic interaction, all of which are significant for world politics. Perhaps even more important, these models, especially Prisoners' Dilemma, draw our attention to ways in which barriers to information and communication in world politics can impede cooperation and create discord even when common interests exist.

LIMITATIONS OF RATIONAL-CHOICE MODELS:
CHOICE, ANOMIE, AND ETHICS

Single-play Prisoners' Dilemma is often taken as a paradigm for international politics, showing why discord is prevalent and cooperation rare. It is sometimes used also to support arguments that international

institutions are doomed to futility. Such is not my argument. I seek to show, in this chapter and the next, that if we use rational-choice theory properly, we should expect a substantial amount of cooperation in the international relations of the advanced market-economy countries, and that rational-choice theory and the theory of collective goods help to show why institutions are significant in world politics, and even crucial to successful cooperation. Before developing this argument, however, it is important to examine some objections to the use of rational-choice theory in the first place.

The assumption of rational egoism creates an abstract, unreal world for analysis. It can mislead us if we take premises for reality and seek to apply our conclusion in a simple-minded way to the world that we observe. Yet it is valuable as a simplifying assumption with which to build theory, since it provides a baseline premised on a relatively uncomplicated situation characterized by purely self-interested and rational behavior. That is, rational-choice theory provides us with a set of hypothetical expectations that we can then test against experience. Max Weber (1905/1949, pp. 166, 185-86) discussed such an approach to "the logical analysis of history" when he argued that, "in order to penetrate to the real causal interrelationships, *we construct unreal ones.*" We build what he called "ideal types." The construction of unreal expectations based on assumptions of rational egoism contributes to a causal analysis without committing us to the view that the assumptions of the theory are necessarily true.

Thus rational-choice models have great value, but they cannot be applied mechanically to world politics. Their assumptions can easily be distorted in such a way as to do violence to reality. Insofar as this is the case, their conclusions will not be compelling and may even be profoundly misleading. Three important potential distortions of these models are worth mentioning. First, we may assume too easily that actors' decisions are in some meaningful sense voluntary, thus running the risk of ignoring inequalities of power among actors. A second pitfall is to equate the premise of egoism with an atomistic assumption about the role of the individual in society. Finally, rationality may be confused with egoism. All three of these potential distortions suggest the need to be very careful in applying rational-choice theory to world politics.

Choice and Constraint

Using rational-choice theory for the study of international cooperation implies that the relevant decisions of governments, and other

actors, about whether to cooperate can be treated as if they were voluntary. But the notion of "voluntary" action in a world in which both military and economic instruments of coercion are available seems problematical at best. Anyone who has thought about Hobbes's tendentious discussion of "voluntary" agreements in *Leviathan* realizes the dangers of casuistry entailed in applying voluntaristic analysis to politics. Hobbes holds that, in the state of nature, covenants entered into out of fear are obligatory; indeed, "even in commonwealths, if I be forced to redeem myself from a thief by promising him money, I am bound to pay it till the civil law discharge me" (1651/1958, ch. 14, p. 117). Thus in a state of nature (which Hobbes asserts is the condition of sovereigns relative to one another) I am bound by promises made under duress—with a gun at my head—since I have rationally chosen to make these pledges rather than to be shot.

This odd notion that such severely constrained choices create moral and political obligations is not inherent in rational-choice theory used for positive analysis. But the focus of this theory on choice rather than on prior constraints can be highly misleading if we are not careful; we could assume that since our mode of analysis is voluntaristic, the process is genuinely voluntaristic as well. My response to this problem in analyzing international cooperation is to distinguish two aspects of the process by which international regimes come into being: imposition of constraints, and decisionmaking. Constraints are dictated both by environmental factors such as geography and by powerful actors. Regimes can be more or less "imposed"; that is, decisions to join them can be more or less constrained by powerful actors (Young, 1983).

In formal terms, we could regard any regime as having been created or maintained voluntarily in the Hobbesian sense: independent actors with the ability to refuse consented to join it. But if these actors were weak, acting under fear of invasion or economic collapse, most people would not regard their accession as purely voluntary. In such a situation, we should focus first on the constraints unequally imposed on actors before examining their choices. More generally, we need to be aware that any agreement resulting from bargaining will be affected by the different opportunity costs of alternatives faced by the various actors—that is, by which party has the greater need for agreement with the other (Harsanyi, 1962/1971; Hirschman, 1945/1980). Relationships of power and dependence in world politics will therefore be important determinants of the characteristics of international regimes. Actors' choices will be constrained in such a way that the preferences of the most powerful actors will be accorded the greatest weight. Thus, in applying rational-choice theory to the formation and

maintenance of international regimes, we have to be continually sensitive to the structural context within which agreements are made. Voluntary choice does not imply equality of situation; in explaining outcomes, prior constraints may be more important than the process of choice itself.

If we keep these prior restrictions on choice in mind, we can employ rational-choice analysis in a sophisticated way without implying either that actors are equal in power or that their actions are necessarily voluntary in the sense of being unconstrained. We can use rational-choice analysis to understand decisions to construct international regimes while keeping in mind that a crucial part of the whole process—the establishment of a context of power relations involving different opportunity costs for different actors—has to be considered separately. Indeed, used in a sophisticated way, rational-choice analysis should draw our attention to constraints, since choices must be made within a context of power as well as values. A constraint-choice approach draws attention to the question of why disadvantaged actors join international regimes even though they may receive fewer benefits than other members—an issue ignored by arguments that regard certain regimes as simply imposed. Weak actors as well as powerful actors make choices that we need to understand, even if they make them within more severe constraints.

In a voluntaristic rational-choice analysis, each actor is assumed to have calculated that it will be at least as well off as a member of an international regime as outside of it—given the prior structure of constraints. Otherwise, it would not have joined. Yet the importance of prior constraints, and of the inequalities of power that lie behind them, reminds us that the results of voluntary bargaining will not necessarily be entirely benign. There is no guarantee that the formation of international regimes will yield overall welfare benefits. To strengthen their bargaining positions, powerful actors may impose constraints on weaker ones prior to formation of a new regime, or may threaten adverse results if the weaker countries refuse to go along with a hegemonic scheme. For instance, we will see in chapter 8 that during World War II and in the immediate postwar years the United States controlled the level of British financial reserves and tightened its grip on Middle Eastern oil. Both of these measures made Britain more dependent on American good will than otherwise, thus increasing the opportunity costs of British resistance to American plans. From a liberal economic standpoint, construction of a stable international monetary regime, centered on the dollar, and of a nondiscriminatory trade regime provided welfare benefits for everyone; but elements of British society

that sought maintenance of the Imperial Preference system (whether for reasons of Empire or a desire to construct socialism) did not share that view. Even some of those who agreed to the American terms regarded adherence to these regimes as a lamentable and costly necessity rather than a beneficial opportunity (Block, 1977; Gardner, 1956/1980).

Even if the members of an international regime are content with its arrangements, outsiders may suffer from its creation. Indeed, some regimes (such as alliances or cartel-type regimes) are specifically designed to impose costs on nonmembers. Although it would be difficult or perhaps impossible to compare these costs with the benefits to members, there is no reason necessarily to assume that the benefits would be greater than the costs. Since the point is often missed, it should be underlined: although international regimes may be valuable to their creators, *they do not necessarily improve world welfare*. They are not *ipso facto* "good."

Egoism and Anomie

The second major pitfall in using rational-choice analysis to study cooperation and discord in the contemporary world economy lies in the danger that the assumption of rational egoism will be equated with the assumption that actors are anomic individuals, outside of human society. This premise, which as we will see is not intrinsically necessary for rational-choice theory, is also Hobbesian. The players exist in a state of nature with respect to one another. An obvious aspect of this situation is that they are unable to enforce commitments. But in a larger sense they are profoundly separate from one another, not linked by shared experiences, ethical precepts, or expectations of future interactions with identifiable individuals.

The apparently compelling conclusion of single-play Prisoners' Dilemma—that defecting is a dominant strategy—depends on this atomistic assumption. Players are assumed to be "possessive individualists" (Macpherson, 1962; Ruggie, 1983a, p. 277). They are rational in the calculating sense: they seek to maximize their expected utility, uninfluenced by ethical principles or standards of fairness. Yet egoistic players linked by a common society, with expectations of interaction, may act as if they shared ethical standards. Suppose, for instance, that the two prisoners in our example were members of a society of criminals such as the Mafia. Under these conditions, we would expect them *not* to confess. This behavior would not necessarily reflect any irrationality on their part, or any ethical principles, but rather result from

COOPERATION IN THEORY

the effects of their common membership in an ongoing organization on their payoff matrices. To confess would be equivalent to signing one's own death warrant: a confessor could expect to be murdered on leaving prison, if not before. Thus the subjective game matrix for these prisoners would be as follows:

		<i>Column</i>	
		COOPERATE	DEFECT
Row	COOPERATE	R, R (4, 4)	S, T (3, 2)
	DEFECT	T, S (2, 3)	P, P (1, 1)

This game is, of course, not Prisoners' Dilemma, despite the District Attorney's attempt to make it such. Mutual cooperation—not confessing—is the dominant strategy for both players, and the equilibrium is therefore found in the upper-left cell at R, R.

Rationality and Ethics

Even when social ties are less cohesive and coercive than those of the Mafia, apparent Prisoners' Dilemma games may have quite different payoff matrices if at least one player holds ethical views that value cooperation and censure actions harmful to others. If Row is a strongly ethical person who would be tormented by guilt for defecting in response to an experimenter's temptation, while Column is the anomic self-interested individual of game theory, the subjective matrix of a supposedly Prisoners' Dilemma game would look like this:

		<i>Column</i>	
		COOPERATE	DEFECT
Row	COOPERATE	R, R (4, 3)	S, T (3, 4)
	DEFECT	T, S (2, 1)	P, P (1, 2)

In this game, Row's dominant strategy is to cooperate, Column's is to defect, and the outcome S, T is a stable equilibrium that neither player has an incentive to alter. Row prefers being the "sucker" to doing wrong.

By itself, this difference between players' ethics does not pose a difficulty for rational-choice theory. We can understand Row's behavior as rational, since she tries to maximize her expected utility, although she is not egotistical, since she incorporates others' preferences into her own utility function. Altruists and saints can be as

rational as the crassest materialist or most resolute bully. It is the assumption of egoism, not that of rationality, that their behavior violates. Theorists of rational choice sometimes fail to recognize this fact, assuming on the contrary that such behavior must be the result of irrationality rather than of a nonegoistic preference function. Hardin (1982, pp. 117-24), for instance, labels as "extrarational" such activities as contributing, on Kantian moral grounds, to organizations promoting one's view of the common good.

Rational-choice analysis does not necessarily imply that people are egoists. But to use rational-choice logic one needs to make *some* assumptions about the values and interests of the actors, precisely because the logic alone is empirically empty. Any rational-choice analysis has to assume a prior context of power, expectations, values, and conventions, which affect how interests are determined as well as what calculations, given interests, are made (Field, 1981). We can just as well assume that the actors are imbued with values transmitted by society, or that they follow principles of fairness, as that they are pure possessive individualists.

ITERATED PRISONERS' DILEMMA AND COLLECTIVE ACTION IN SMALL GROUPS

With these limitations of rational-choice theory in mind, we can consider once again the game of Prisoners' Dilemma. The apparently compelling conclusion referred to above—that defecting is a dominant strategy—depends on the assumption that the game is only played once, or at most a small number of times. If the game is played repeatedly by the same players—that is, in "iterated" Prisoners' Dilemma—"it is generally agreed that players may rationally cooperate" (Hardin, 1982, p. 145; see also Taylor, 1976, ch. 5).² The essential reason for this difference is that, in multiple-play Prisoners' Dilemma, defection is in the long run unrewarding, since the short-run gains thereby obtained will normally be outweighed by the mutual punishment that will ensue over the long run. For cooperation to take place, of course, future rewards must be valued; if, on the contrary, the

² It is often held that any Prisoners' Dilemma game with a very large but finite number of plays, known in advance, will lead to the same noncooperative solution as the single-play game. But Russell Hardin (1982, pp. 145-50) has given strong reasons to believe that rational players would not go through the contorted calculations necessary for this perverse and self-defeating result to obtain; and it is certainly difficult to believe that ordinary players, outside of the theorist's office, would do so.

players emphasize with Keynes that "in the long run we're all dead," they may prefer to defect to obtain better results in the present. Incentives to cooperate also depend on the willingness of one's opponent to retaliate against defection. When playing against a saint or a patsy, it may pay to be a bully. Robert Axelrod (1981, 1984) has shown that when future rewards are sufficiently valued, a strategy of "tit for tat" does well in a variety of situations—in technical terms, it is robust and collectively stable. A player following this strategy begins by cooperating, then does whatever her opponent did on the last move, retaliating for defection and reciprocating for acts of cooperation. When both players use this strategy, complete mutual cooperation results. Axelrod shows that, even among pure egoists, cooperation can "emerge" if a large enough initial cluster of potential cooperators exists.

As we noted in chapter 4, such cooperation need not involve any negotiation at all, since mutual adjustment can take place without direct communication between the participants. In this book, however, we focus on coordination achieved through bargaining. Such bargaining typically occurs not only in one bargaining episode but in several, over a period of time. Negotiations on international monetary arrangements, trade, and energy take place continuously and are expected to continue indefinitely into the future. Furthermore, the fact that many closely related negotiations take place simultaneously increases the "multiple-play" rather than "single-play" character of the game. Usually, unlike the actors in Prisoners' Dilemma, governments can reverse decisions to cooperate if they discover that their partners are renegeing on their own agreements. This possibility has an effect similar to that of iteration of the game, since it reduces the incentives to defect. Thus even insofar as international negotiations can be modeled in the simple form of Prisoners' Dilemma—and we will see later that to do so requires a number of questionable simplifying assumptions—the pessimistic standard conclusion of single-play Prisoners' Dilemma does not follow (Wagner, 1983).

The theory of collective action can also help to account for cooperation. Olson concluded from his analysis that large groups seeking to provide collective (public) goods should be extremely difficult to form, since each member would have an incentive not to contribute to provision of the good. He argued, however, that small groups might be "privileged"; that is, they might be able to provide such goods, either because it was in the interests of a single actor to do so unilaterally or because a small number of individuals, who were able to monitor each other's behavior and react strategically to one another,

could do so. The latter situation is similar to that of iterated Prisoners' Dilemma: when decisions to contribute are not made only once, but are taken frequently over time, it may pay to cooperate because otherwise one's partners may defect, leaving oneself worse off. Strategic interaction, in a situation involving collective goods as well as in Prisoners' Dilemma, can foster cooperation.

Contemporary international relations are beset by dilemmas of collective action, but these dilemmas are rendered less intractable by the small number of states involved. Even in global negotiations, the number of states does not exceed about one hundred and fifty, many of which do not play significant roles. Among the advanced industrialized countries, negotiations rarely depend on more than a few crucial participants. For example, the institutionalized economic summits involve only seven leaders, and the entire Organization of Economic Cooperation and Development (the umbrella organization for the advanced industrialized countries) has only twenty-four members, of very unequal size and influence. Rather than having so many actors that the contributions of each exert no effects on the propensity of others to contribute, international political-economic bargaining among the advanced industrialized countries involves a small number of governments intensely interacting with one another and carefully monitoring each other's behavior. Even if no hegemon exists, a small number of strong actors may be able to accomplish this task together. As we saw in chapter 3, there is nothing in Olson's theory that precludes effective oligopolistic collaboration among a few actors, each of which monitors and reacts to the behavior of each of the others.

Olson also argued that the success of certain large groups relying on a diffuse membership to provide public goods was explained by their provision of private goods as a by-product of membership. Farmers joining the Farm Bureau, for instance, might not only contribute to the collective good of lobbying for governmental benefits, but they might also thereby gain access to cheap insurance or a farmers' cooperative. Thus the logic of collective action would lead organizations to seek to privatize some of what they provide.

International regimes frequently do the same thing (Oye, 1983b). Duncan Snidal (1979) has pointed out that the benefits provided by international regimes rarely meet the classic criteria for a public good: impossibility of excluding noncontributors and jointness of supply (additional consumption of the good by new consumers does not affect others' consumption of it). For instance, only members of the International Energy Agency are entitled to receive oil under the emergency sharing arrangements, although other consumers may benefit if the

IEA succeeds in deterring another producer embargo coupled with a rapid rise in world petroleum prices. Only members of the International Monetary Fund (IMF) can borrow from the Fund, although nonmembers may also be the beneficiaries of IMF action to stabilize exchange rates or avoid a debt collapse. And the trade regime centered on the General Agreement on Tariffs and Trade (GATT) is set up in such a way that countries that refuse to accept the rules can be excluded from benefits, in this case the benefits of most-favored-nation treatment. Thus the theory of collective goods is as valuable in explaining the forms that cooperation must take, to avoid problems of collective action, as it is in accounting for discord.

Rational-choice analysis is used in this book not to reinforce the conventional wisdom that cooperation must be rare in world politics, but to show that it can be pursued even by purely rational, narrowly self-interested governments, unmoved by idealistic concern for the common good or by ideological commitment to a certain pattern of international relations. That is, rational egoists can have incentives to form international regimes. Prisoners' Dilemma and models of collective action help to demonstrate this point. So do less familiar but quite suggestive approaches based on theories of market failure in economics, which will be discussed below. Together these theories based on assumptions of rationality emphasize the significance of actors' reputations and the importance of international institutions within which repeated interactions among the same actors take place over a substantial period of time.

EGOISTIC COOPERATION AND THE CREATION OF INTERNATIONAL REGIMES

We saw in chapter 3 that hegemonic powers may help to create international regimes, although some reasons were given there to doubt that hegemony was necessary for regime formation. The finding in this chapter that cooperation can develop among egoists without a hegemon reinforces those doubts by providing a stronger theoretical basis for them. Whether a hegemon exists or not, international regimes depend on the existence of patterns of common or complementary interests that are perceived or capable of being perceived by political actors. This makes common action to produce joint gains rational. A hegemon may help to create shared interests by providing rewards for cooperation and punishments for defection, but where no hegemon exists, similar rewards and punishments can be provided if conditions are favorable. Outcomes must be determined by a relatively small

number of actors that can monitor each other's compliance with rules and practices and that follow strategies making other governments' welfare dependent on their continued compliance with agreements and understandings.

Thus intensive interaction among a few players helps to substitute for, or to supplement, the actions of a hegemon. As a hegemon's power erodes, a gradual shift may take place from hegemonic to post-hegemonic cooperation. Increasingly, incentives to cooperate will depend not only on the hegemon's responses but on those of other sizable states. Such a transition may be difficult in practice, since expectations may lag behind reality; but nothing in rational-choice analysis renders it impossible.

The ability to create cooperation when it is desired by governments will also depend on existing patterns of regimes. The creation of new international regimes may be facilitated by the mutual confidence created by old ones. Regimes rarely emerge from chaos; on the contrary, they are built on one another. We should therefore think as much about the evolution of regimes as about their creation *ex nihilo*. This intricate connection between the operation of old regimes and the creation of new ones means that a functional analysis of regimes, such as is developed in the rest of this chapter and in chapter 6, is crucial for understanding not only why regimes are created and maintained, but also how they evolve over time.

As we have seen, incentives to form international regimes depend most fundamentally on the existence of shared interests. These interests may reflect the gains to be obtained from exploiting others more effectively—creating and sharing "rents"—as in raw material cartels. But they may also be based on a mutual desire to increase the efficiency of the exchanges in which they engage. In the latter case, it will matter how dense is the "policy space": that is, how closely linked different issues are to one another. The incentives to form international regimes will be greater in dense policy spaces than in areas with lower issue density, owing to the fact that *ad hoc* agreements in a dense policy space will tend to interfere with one another, unless they are based on a common set of principles and rules. Where issue density is low, *ad hoc* agreements may well be sufficient; but where it is high, regimes will reduce the costs of continually taking into account the effect of one set of agreements on others. Each new agreement can be compared more efficiently with a given set of rules and procedures than with each other agreement; the existence of the regime establishes standards for consistency. For this reason there is likely to be increasing demand

for international regimes as interdependence grows and policy spaces become more dense.

FUNCTIONAL EXPLANATIONS AND THEORIES OF MARKET FAILURE

Taking a rational-choice approach to studying behavior directs our attention in the first instance to the incentives facing actors. If we assume rationality, asking why an actor behaved in a certain way is equivalent to asking what its incentives were: that is, what were the opportunity costs of its various alternative courses of action?³

Opportunity costs are determined by the nature of the environment as well as by the characteristics of the actor. Institutions, interpreted within a rational-choice framework, affect the context of choice and therefore the opportunity costs of alternatives. In using rational-choice analysis to study institutions, therefore, we are immediately led toward a functional argument. According to this line of analysis, "institutions are functional if reasonable men might create and maintain them in order to meet social needs or achieve social goals" (Simon, 1978, p. 3). Economic reasoning, as Simon argues, can readily be "translated" into the language of functional analysis and vice versa.

In general, functional explanations account for causes in terms of their effects. That is, "the character of what is explained is determined by its effect on what explains it" (Cohen, 1978, p. 278). So, for example, investment is explained by profit, as in the statement "The increased profitability of oil drilling has increased investment in the oil industry." Of course, in a temporal sense investment is the cause of profit, since profits follow successful investment. But in this functional formulation the causal path is reversed: effect explains cause. In our example, this inverse link between effect and cause is provided by the rationality assumption; *anticipated* profits lead to investment.

Functional explanations in social theory, like the functional explanations of international regimes developed in this chapter, are generally *post hoc* in nature. We observe such institutions and then rationalize their existence. Rational-choice theory, as applied to social institutions, assumes that institutions can be accounted for by examining the incentives facing the actors who created and maintain them. Institutions exist because they could have reasonably been expected to increase the welfare of their creators.

³ I follow the definition of opportunity costs provided in the *International Encyclopedia of the Social Sciences* (1968) by Alchian: the value of "the highest-valued opportunity necessarily forsaken" (p. 404).

Nevertheless, functional arguments such as these must be used with caution. Even if the institutions in question perform the functions ascribed to them, they may have emerged for different reasons. For instance, the fact that private property rights help individuals coordinate their behavior under capitalism does not refute the arguments of Marx or Rousseau that they were invented by people who sought to exploit others rather than to cooperate with them (Heymann, 1973, p. 872). Furthermore, functional arguments do not demonstrate either that existing institutions had to emerge or that institutions that failed to emerge would have been inferior. The crucial reason for inconclusiveness on this point is that these arguments do not consider whether hypothetical alternative institutions could have performed just as well or better. We have seen from the theory of collective action that valuable institutions that would benefit a set of individuals will not necessarily be created. Thus it is logically possible that institutions superior to those that exist might have evolved under different conditions. Functional arguments do not, therefore, establish that existing institutions are *uniquely* well adapted to the interests of the actors who maintain them. As Simon indicates, "this kind of argument may demonstrate the sufficiency of a particular pattern for performing an essential function, but cannot demonstrate its necessity—cannot show that there may not be alternative, functionally equivalent, behavior patterns that would satisfy the same need" (1978, p. 4).

Fortunately, functional analysis does not have to show that a given set of institutions was uniquely well adapted to the environment in order to make a causal argument. To demonstrate, for example, that the limited liability corporation was invented to facilitate large-scale economic projects would not require showing that it was the *only* institution that could have done so. But a sound functional argument does have to provide good reasons to believe in a causal connection between the functions that an institution performs on the one hand and its existence on the other. From this standpoint, the most important danger lurking behind functional explanations is the *post hoc ergo propter hoc* fallacy: institutions may be interpreted as having arisen because of the functions they must have served, when they in fact appeared for purely adventitious reasons.

One way of avoiding this fallacy is to show that the actors being investigated are rational, and that the institutions and the social practices to be explained were designed to fulfill anticipated functions. In this way, effects can explain causes. For instance, we could say that the formation of the International Energy Agency is explained by its anticipated effects on the security of consumer governments' oil supplies and the solidity of U.S.-centered alliances. The only other plau-

sible way of guarding against the *post hoc ergo propter hoc* fallacy is to demonstrate that those institutions and practices that fail to fulfill specified functional requirements will disappear as a result. Darwinian theories of natural selection, and economic theories of marginal-cost pricing in a competitive economy, rest on the latter logic. Dysfunctional mutations, and firms that fail to follow marginal-cost pricing, will vanish. In world politics, however, states rarely disappear. Thus the functional argument as applied to our subject-matter must rest on the premise of rational anticipation. Unless actors can be assumed to anticipate the effects of their behavior, effects cannot possibly explain causes, and understanding the functions of international regimes will not help to explain their occurrence.⁴

In developing a functional theory of international regimes, I will rely in part on the logic of Prisoners' Dilemma and theories of collective action, as discussed above. But I will also make use of theories of "market failure" as developed by contemporary economists. As we will see, the concept of market failure will be helpful in building our theory. Yet since this literature is unfamiliar to most students of world politics, it is necessary at this point to explicate a few of its basic ideas.

Market failure refers to situations in which the outcomes of market-mediated interactions are suboptimal, given the utility functions of actors and the resources at their disposal. That is, agreements that would be beneficial to all parties are not made. George Akerlof (1970) has provided a telling example of this phenomenon in discussing the "market for lemons." As Akerlof explains it, owners of defective used cars ("lemons") have a greater incentive to sell their vehicles than do owners of "creampuffs." Since prospective buyers know that they are unable reliably to determine when a used car is a "lemon," they will insist on paying less than the real value of a good-quality used car, in order to adjust for the risk they run of being stuck with a sour one. As a result, owners of good used cars will be unable to sell them for their real value and may therefore be unwilling to sell them at the discounted price that the market will bear. Some mutually profitable

⁴ G. A. Cohen makes it clear that the validity of functional explanations does not depend on the validity of the doctrine of functionalism, as developed in anthropology particularly by Malinowski and Radcliffe-Brown (1978, pp. 283-85). Cohen makes the point that purposive (rational-choice) and Darwinian theory constitute the two major forms of functional explanation, although he also argues, unconvincingly to me, that "Lamarckian" and "self-deception" variants of functional theory can be identified (pp. 287-89). For a useful set of distinctions on functionalism, see Nagel, 1961, especially "Functionalism and social science," pp. 520-35; for an argument justifying rules in society in terms of their functions for coordinating human actions, see Heymann, 1973.

trades will thus not take place: buyers who would purchase a good used car at a given price, and sellers who would sell it at that price, will be unable to consummate the deal because of what Akerlof calls "quality uncertainty."

In situations of market failure, the difficulties are attributed not to inadequacies of the actors themselves (who are presumed to be rational utility-maximizers), but rather to the structure of the system and the institutions, or lack thereof, that characterize it (Arrow, 1974)⁵. Specific attributes of the system impose transaction costs (including information costs) that create barriers to effective cooperation among the actors. Thus institutional defects are responsible for failures of coordination. To correct these defects, conscious institutional innovation may be necessary. For instance, a useful innovation in the used-car market is the institution of automobile dealers who have reputations in the community. Dealers with good reputations will be able to sell cars at prices higher than those obtained by individuals who put advertisements in the newspaper. The effect of dealers' reputations on buyers' confidence may enable exchanges to take place between buyers and sellers, intermediated by the dealers, that could not otherwise have occurred.

The literatures on collective action, Prisoners' Dilemma, and market failure all suggest the plausibility of a functional explanation for the development of institutions. Institutions, according to this argument, are formed as ways to overcome the deficiencies that make it impossible to consummate even mutually beneficial agreements. Their anticipated effects—whether these are welfare gains resulting from the sale of used cars by a reliable dealer or benefits accruing to governments from being able to concert their actions in the world political economy—explain their causes.

CONCLUSIONS

In this chapter we have shown that rational-egoist models do not necessarily predict that discord will prevail in relations among independent actors in a situation of anarchy. On the contrary, it matters a great deal not only whether anyone may be excluded from collectively

⁵ Collective goods theory, as discussed earlier in this chapter, identifies one class of market-failure problems, which arise in part because the nature of the goods being produced and the number of actors involved give rise to problems of transaction costs and information such as those discussed below. As in the "market for lemons" example, however, market failures can also occur without the goods involved being collective at all.

provided benefits, but whether interactions among the same players can be expected to continue over time. If the egoists monitor each other's behavior and if enough of them are willing to cooperate on condition that others cooperate as well, they may be able to adjust their behavior to reduce discord. They may even create and maintain principles, norms, rules, and procedures—institutions referred to in this book as regimes. These regimes facilitate nonnegotiated adjustment by providing guidelines for actors' behavior: in particular, as we will see in chapter 7, regimes may provide "rules of thumb" for actors laboring under the constraints of bounded rationality. But even for classically rational actors engaged in bargaining, regimes can be useful in helping them to achieve mutually beneficial agreements, as chapter 6 shows. Properly designed institutions can help egoists to cooperate even in the absence of a hegemonic power.

Rational-choice analysis therefore helps us criticize, in its own terms, Realism's bleak picture of the inevitability of either hegemony or conflict. By reexamining Realism in the light of rational-choice theory and with sensitivity to the significance of international institutions, we can become aware of its weaknesses as well as its strengths. We can strip away some of the aura of verisimilitude that surrounds Realism and reconsider the logical and empirical foundations of its claims to our intellectual allegiance.

• 6 •

A FUNCTIONAL THEORY OF INTERNATIONAL REGIMES

Chapter 5 discussed how international regimes could be created and emphasized their value for overcoming what could be called "political market failure." Now we turn to a more detailed examination of this argument by exploring why political market failure occurs and how international regimes can help to overcome it. This investigation will help us understand both why states often comply with regime rules and why international regimes can be maintained even after the conditions that facilitated their creation have disappeared. The functional theory developed in this chapter will therefore suggest some reasons to believe that even if U.S. hegemonic leadership may have been a crucial factor in the creation of some contemporary international economic regimes, the continuation of hegemony is not necessarily essential for their continued viability.

POLITICAL MARKET FAILURE AND THE COASE THEOREM

Like imperfect markets, world politics is characterized by institutional deficiencies that inhibit mutually advantageous cooperation. We have noted the prevalence, in this self-help system, of conflicts of interest between actors. In economic terms, these conflicts can be regarded as arising in part from the existence of externalities: actors do not bear the full costs, or receive the full benefits, of their own actions.¹ Yet in a famous article Ronald Coase (1960) argued that the presence of externalities alone does not necessarily prevent effective coordination among independent actors. Under certain conditions, declared Coase, bargaining among these actors could lead to solutions that are Pareto-optimal regardless of the rules of legal liability.

To illustrate the Coase theorem and its counter-intuitive result, suppose that soot emitted by a paint factory is deposited by the wind onto clothing hanging outdoors in the yard of an old-fashioned laundry. Assume that the damage to the laundry is greater than the \$20,000 it would cost the laundry to enclose its yard and install indoor drying

¹ For an elaborated version of this definition, see Davis and North, 1971, p. 16.

equipment; so if no other alternative were available, it would be worthwhile for the laundry to take these actions. Assume also, however, that it would cost the paint factory only \$10,000 to eliminate its emissions of air pollutants. Social welfare would clearly be enhanced by eliminating the pollution rather than by installing indoor drying equipment, but in the absence of either governmental enforcement or bargaining, the egoistic owner of the paint factory would have no incentive to spend anything to achieve this result.

It has frequently been argued that this sort of situation requires centralized governmental authority to provide the public good of clean air. Thus if the laundry had an enforceable legal right to demand compensation, the factory owner would have an incentive to invest \$10,000 in pollution control devices to avoid a \$20,000 court judgment. Coase argued, however, that the pollution would be cleaned up equally efficiently even if the laundry had no such recourse. If the law, or the existence of a decentralized self-help system, gave the factory a right to pollute, the laundry owner could simply pay the factory owner a sum greater than \$10,000, but less than \$20,000, to install anti-soot equipment. Both parties would agree to some such bargain, since both would benefit.

In either case, the externality of pollution would be eliminated. The key difference would not be one of economic efficiency, but of distribution of benefits between the factory and the laundry. In a self-help system, the laundry would have to pay between \$10,000 and \$20,000 and the factory would reap a profit from its capacity to pollute. But if legal liability rules were based on "the polluter pays principle," the laundry would pay nothing and the factory would have to invest \$10,000 without reaping a financial return. Coase did not dispute that rules of liability could be evaluated on grounds of fairness, but insisted that, given his assumptions, efficient arrangements could be consummated even where the rules of liability favored producers of externalities rather than their victims.

The Coase theorem has frequently been used to show the efficacy of bargaining without central authority, and it has occasionally been applied specifically to international relations (Conybeare, 1980). The principle of sovereignty in effect establishes rules of liability that put the burden of externalities on those who suffer from them. The Coase theorem could be interpreted, therefore, as predicting that problems of collective action could easily be overcome in international politics through bargaining and mutual adjustment—that is, through cooperation as we have defined it. The further inference could be drawn that the discord observed must be the result of fundamental conflicts

of interest rather than problems of coordination. The Coase theorem, in other words, could be taken as minimizing the importance of Olson's perverse logic of collective action or of the problems of coordination emphasized by game theory. However, such a conclusion would be incorrect for two compelling sets of reasons.

In the first place, Coase specified three crucial conditions for his conclusion to hold. These were: a legal framework establishing liability for actions, presumably supported by governmental authority; perfect information; and zero transaction costs (including organization costs and the costs of making side-payments). It is absolutely clear that none of these conditions is met in world politics. World government does not exist, making property rights and rules of legal liability fragile; information is extremely costly and often held unequally by different actors; transaction costs, including costs of organization and side-payments, are often very high. Thus an *inversion* of the Coase theorem would seem more appropriate to our subject. In the absence of the conditions that Coase specified, coordination will often be thwarted by dilemmas of collective action.

Second, recent critiques of Coase's argument reinforce the conclusion that it cannot simply be applied to world politics, and suggest further interesting implications about the functions of international regimes. It has been shown on the basis of game theory that, with more than two participants, the Coase theorem cannot necessarily be demonstrated. Under certain conditions, there will be no stable solution: any coalition that forms will be inferior, for at least one of its members, to another possible coalition. The result is an infinite regress. In game-theoretic terminology, the "core" of the game is empty. When the core is empty, the assumption of zero transaction costs means that agreement is hindered rather than facilitated: "in a world of zero transaction costs, the inherent instability of all coalitions could result in endless recontracting among the firms" (Aivazian and Callen, 1981, p. 179; Veljanovski, 1982).

What do Coase and his critics together suggest about the conditions for international cooperation through bargaining? First, it appears that approximating Coase's first two conditions—that is, having a clear legal framework establishing property rights and low-cost information available in a roughly equal way to all parties—will tend to facilitate cooperative solutions. But the implications of reducing transaction costs are more complex. If transaction costs are too high, no bargains will take place; but if they are too low, under certain conditions an infinite series of unstable coalitions may form.

Inverting the Coase theorem allows us to analyze international in-

stitutions largely as responses to problems of property rights, uncertainty, and transaction costs. Without consciously designed institutions, these problems will thwart attempts to cooperate in world politics even when actors' interests are complementary. From the deficiency of the "self-help system" (even from the perspective of purely self-interested national actors) we derive a need for international regimes. Insofar as they fill this need, international regimes perform the functions of establishing patterns of legal liability, providing relatively symmetrical information, and arranging the costs of bargaining so that specific agreements can more easily be made. Regimes are developed in part because actors in world politics believe that with such arrangements they will be able to make mutually beneficial agreements that would otherwise be difficult or impossible to attain.

This is to say that the architects of regimes anticipate that the regimes will facilitate cooperation. Within the functional argument being constructed here, these expectations explain the formation of the regimes: the *anticipated effects* of the regimes account for the actions of governments that establish them. Governments believe that *ad hoc* attempts to construct particular agreements, without a regime framework, will yield inferior results compared to negotiations within the framework of regimes. Following our inversion of the Coase theorem, we can classify the reasons for this belief under the categories of legal liability (property rights), transaction costs, and problems of uncertainty. We will consider these issues in turn.

Legal Liability

Since governments put a high value on the maintenance of their own autonomy, it is usually impossible to establish international institutions that exercise authority over states. This fact is widely recognized by officials of international organizations and their advocates in national governments as well as by scholars. It would therefore be mistaken to regard international regimes, or the organizations that constitute elements of them, as characteristically unsuccessful attempts to institutionalize centralized authority in world politics. They cannot establish patterns of legal liability that are as solid as those developed within well-ordered societies, and their architects are well aware of this limitation.

Of course, the lack of a hierarchical structure of world politics does not prevent regimes from developing bits and pieces of law (Henkin, 1979, pp. 13-22). But the principal significance of international regimes does not lie in their formal legal status, since any patterns of

legal liability and property rights established in world politics are subject to being overturned by the actions of sovereign states. International regimes are more like the "quasi-agreements" that William Fellner (1949) discusses when analyzing the behavior of oligopolistic firms than they are like governments. These quasi-agreements are legally unenforceable but, like contracts, help to organize relationships in mutually beneficial ways (Lowry, 1979, p. 276). Regimes also resemble conventions: practices, regarded as common knowledge in a community, that actors conform to not because they are uniquely best, but because others conform to them as well (Hardin, 1982; Lewis, 1969; Young, 1983). What these arrangements have in common is that they are designed not to implement centralized enforcement of agreements, but rather to establish stable mutual expectations about others' patterns of behavior and to develop working relationships that will allow the parties to adapt their practices to new situations. Contracts, conventions, and quasi-agreements provide information and generate patterns of transaction costs: costs of renegeing on commitments are increased, and the costs of operating within these frameworks are reduced.

Both these arrangements and international regimes are often weak and fragile. Like contracts and quasi-agreements, international regimes are frequently altered: their rules are changed, bent, or broken to meet the exigencies of the moment. They are rarely enforced automatically, and they are not self-executing. Indeed, they are often matters for negotiation and renegotiation. As Puchala has argued, "attempts to enforce EEC regulations open political cleavages up and down the supranational-to-local continuum and spark intense politicking along the cleavage lines" (1975, p. 509).

Transaction Costs

Like oligopolistic quasi-agreements, international regimes alter the relative costs of transactions. Certain agreements are forbidden. Under the provisions of the General Agreement on Tariffs and Trade (GATT), for instance, it is not permitted to make discriminatory trade arrangements except under specific conditions. Since there is no centralized government, states can nevertheless implement such actions, but their lack of legitimacy means that such measures are likely to be costly. Under GATT rules, for instance, retaliation against such behavior is justified. By elevating injunctions to the level of principles and rules, furthermore, regimes construct linkages between issues. No longer does a specific discriminatory agreement constitute merely a particular

act without general significance; on the contrary, it becomes a "violation of GATT" with serious implications for a large number of other issues. In the terms of Prisoners' Dilemma, the situation has been transformed from a single-play to an iterated game. In market-failure terms, the transaction costs of certain possible bargains have been increased, while the costs of others have been reduced. In either case, the result is the same: incentives to violate regime principles are reduced. International regimes reduce transaction costs of legitimate bargains and increase them for illegitimate ones.

International regimes also affect transaction costs in the more mundane sense of making it cheaper for governments to get together to negotiate agreements. It is more convenient to make agreements within a regime than outside of one. International economic regimes usually incorporate international organizations that provide forums for meetings and secretariats that can act as catalysts for agreement. Insofar as their principles and rules can be applied to a wide variety of particular issues, they are efficient: establishing the rules and principles at the outset makes it unnecessary to renegotiate them each time a specific question arises.

International regimes thus allow governments to take advantage of potential economies of scale. Once a regime has been established, the marginal cost of dealing with each additional issue will be lower than it would be without a regime. As we saw in chapter 5, if a policy area is sufficiently dense, establishing a regime will be worthwhile. Up to a point there may even be what economists call "increasing returns to scale." In such a situation, each additional issue could be included under the regime at lower cost than the previous one. As Samuelson notes, in modern economies, "increasing returns is the prime case of deviations from perfect competition" (1967, p. 117). In world politics, we should expect increasing returns to scale to lead to more extensive international regimes.

In view of the benefits of economies of scale, it is not surprising that specific agreements tend to be "nested" within regimes. For instance, an agreement by the United States, Japan, and the European Community in the Multilateral Trade Negotiations to reduce a particular tariff will be affected by the rules and principles of GATT—that is, by the trade regime. The trade regime, in turn, is nested within a set of other arrangements, including those for monetary relations, energy, foreign investment, aid to developing countries, and other issues, which together constitute a complex and interlinked pattern of relations among the advanced market-economy countries. These, in

turn, are related to military-security relations among the major states.²

The nesting patterns of international regimes affect transaction costs by making it easier or more difficult to link particular issues and to arrange side-payments, giving someone something on one issue in return for her help on another.³ Clustering of issues under a regime facilitates side-payments among these issues: more potential *quids* are available for the *quo*. Without international regimes linking clusters of issues to one another, side-payments and linkages would be difficult to arrange in world politics; in the absence of a price system for the exchange of favors, institutional barriers would hinder the construction of mutually beneficial bargains.

Suppose, for instance, that each issue were handled separately from all others, by a different governmental bureau in each country. Since a side-payment or linkage always means that a government must give up something on one dimension to get something on another, there would always be a bureaucratic loser within each government. Bureaus that would lose from proposed side-payments, on issues that matter to them, would be unlikely to bear the costs of these linkages willingly on the basis of other agencies' claims that the national interest required it.

Of course, each issue is not considered separately by a different governmental department or bureau. On the contrary, issues are grouped together, in functionally organized departments such as Treasury, Commerce, and Energy (in the United States). Furthermore, how governments organize themselves to deal with foreign policy is affected by how issues are organized internationally; issues considered by different regimes are often dealt with by different bureaucracies at home. Linkages and side-payments among issues grouped in the same regime thus become easier, since the necessary internal tradeoffs will tend to take place within rather than across bureaus; but linkages among issues falling into different regimes will remain difficult, or even become more so (since the natural linkages on those issues will be with issues within the same regime).

Insofar as issues are dealt with separately from one another on the international level, it is often hard, in simply bureaucratic terms, to arrange for them to be considered together. There are bound to be

² For the idea of "nesting," I am indebted to Aggarwal (1981). Snidal (1981) also relies on this concept, which was used in a similar context some years ago by Barkun (1968), p. 17.

³ On linkage, see especially the work of Kenneth A. Oye (1979, 1983b). See also Stein, 1980, and Tollison and Willett, 1979.

difficulties in coordinating policies of different international organizations—GATT, the IMF, and the IEA all have different memberships and different operating styles—in addition to the resistance that will appear to such a move within member governments. Within regimes, by contrast, side-payments are facilitated by the fact that regimes bring together negotiators to consider sets of issues that may well lie within the negotiators' bureaucratic bailiwicks at home. GATT negotiations, as well as deliberations on the international monetary system, have been characterized by extensive bargaining over side-payments and the politics of issue-linkage (Hutton, 1975). The well-known literature on "spillover" in bargaining, relating to the European Community and other integration schemes, can also be interpreted as concerned with side-payments. According to these writings, expectations that an integration arrangement can be expanded to new issue-areas permit the broadening of potential side-payments, thus facilitating agreement (Haas, 1958).

We conclude that international regimes affect the costs of transactions. The value of a potential agreement to its prospective participants will depend, in part, on how consistent it is with principles of legitimacy embodied in international regimes. Transactions that violate these principles will be costly. Regimes also affect bureaucratic costs of transactions: successful regimes organize issue-areas so that productive linkages (those that facilitate agreements consistent with the principles of the regime) are facilitated, while destructive linkages and bargains that are inconsistent with regime principles are discouraged.

Uncertainty and Information

From the perspective of market-failure theories, the informational functions of regimes are the most important of all. Recall that what Akerlof called "quality uncertainty" was the crucial problem in the "market for lemons" example. Even in games of pure coordination with stable equilibria, this may be a problem. Conventions—commuters meeting under the clock at Grand Central Station, suburban families on a shopping trip "meeting at the car"—become important. But in simple games of coordination, severe information problems are not embedded in the structure of relationships, since actors have incentives to reveal information and their own preferences fully to one another. In these games the problem is to reach some point of agreement; but it may not matter much which of several possible points is chosen (Schelling, 1960/1978). Conventions are important and inge-

nity may be required, but serious systemic impediments to the acquisition and exchange of information are lacking (Lewis, 1969; Young, 1983).

Yet as we have seen in our discussions of collective action and Prisoners' Dilemma, many situations—both in game theory and in world politics—are characterized by conflicts of interest as well as common interests. In such situations, actors have to worry about being deceived and double-crossed, just as the buyer of a used car has to guard against purchasing a "lemon." The literature on market failure elaborates on its most fundamental contention—that, in the absence of appropriate institutions, some mutually advantageous bargains will not be made because of uncertainty—by pointing to three particularly important sources of difficulty: *asymmetrical information*; *moral hazard*; and *irresponsibility*.

ASYMMETRICAL INFORMATION

Some actors may know more about a situation than others. Expecting that the resulting bargains would be unfair, "outsiders" will be reluctant to make agreements with "insiders" (Williamson, 1975, pp. 31-33). This is essentially the problem of "quality uncertainty" as discussed by Akerlof. Recall that this is a problem not merely of insufficient information, but rather of *systematically biased* patterns of information, which are recognized in advance of any agreement both by the holder of more information (the seller of the used car) and by its less well-informed prospective partner (the potential buyer of the "lemon" or "creampuff," as the case may be). Awareness that others have greater knowledge than oneself, and are therefore capable of manipulating a relationship or even engaging successful deception and double-cross, is a barrier to making agreements. When this suspicion is unfounded—that is, the agreement would be mutually beneficial—it is an obstacle to improving welfare through cooperation.

This problem of asymmetrical information only appears when dishonest behavior is possible. In a society of saints, communication would be open and no one would take advantage of superior information. In our imperfect world, however, asymmetries of information are not rectified simply by communication. Not all communication reduces uncertainty, since communication may lead to asymmetrical or unfair bargaining outcomes as a result of deception. Effective communication is not measured well by the amount of talking that used-car salespersons do to customers or that governmental officials do to one another in negotiating international regimes! The information that is required in entering into an international regime is not merely in-

formation about other governments' resources and formal negotiating positions, but also accurate knowledge of their future positions. In part, this is a matter of estimating whether they will keep their commitments. As the "market for lemons" example suggests, and as we will see in more detail below, a government's reputation therefore becomes an important asset in persuading others to enter into agreements with it. International regimes help governments to assess others' reputations by providing standards of behavior against which performance can be measured, by linking these standards to specific issues, and by providing forums, often through international organizations, in which these evaluations can be made.⁴ Regimes may also include international organizations whose secretariats act not only as mediators but as providers of unbiased information that is made available, more or less equally to all members. By reducing asymmetries of information through a process of upgrading the general level of available information, international regimes reduce uncertainty. Agreements based on misapprehension and deception may be avoided; mutually beneficial agreements are more likely to be made.

Regimes provide information to members, thereby reducing risks of making agreements. But the information provided by a regime may be insufficiently detailed. A government may require precise information about its prospective partners' internal evaluations of a particular situation, their intentions, the intensity of their preferences, and their willingness to adhere to an agreement even in adverse future circumstances. Governments also need to know whether other participants will follow the spirit as well as the letter of agreements, whether they will share the burden of adjustment to unexpected adverse change, and whether they are likely to seek to strengthen the regime in the future.

The significance of asymmetrical information and quality uncertainty in theories of market failure therefore calls attention to the importance not only of international regimes but also of variations in the degree of closure of different states' decisionmaking processes. Some governments maintain secrecy much more zealously than others. American officials, for example, often lament that the U.S. government

⁴ This point was suggested to me by reading Elizabeth Colson's account of how stateless societies reach consensus on the character of individuals: through discussions and gossip that allow people to "apply the standards of performance in particular roles in making an overall judgement about the total person; this in turn allows them to predict future behavior" (1974, p. 53).

leaks information "like a sieve" and claim that this openness puts the United States at a disadvantage vis-à-vis its rivals.

Surely there are disadvantages in openness. The real or apparent incoherence in policy that often accompanies it may lead the open government's partners to view it as unreliable because its top leaders, whatever their intentions, are incapable of carrying out their agreements. A cacophony of messages may render all of them uninterpretable. But some reflection on the problem of making agreements in world politics suggests that there are advantages for the open government that cannot be duplicated by countries with more tightly closed bureaucracies. Governments that cannot provide detailed and reliable information about their intentions—for instance, because their decisionmaking processes are closed to the outside world and their officials are prevented from developing frank informal relationships with their foreign counterparts—may be unable convincingly to persuade their potential partners of their commitment to the contemplated arrangements. Observers from other countries will be uncertain about the genuineness of officials' enthusiasm or the depth of their support for the cooperative scheme under consideration. These potential partners will therefore insist on discounting the value of prospective agreements to take account of their uncertainty. As in the "market for lemons," some potential agreements, which would be beneficial to all parties, will not be made because of "quality uncertainty"—about the quality of the closed government's commitment to the accord.⁵

MORAL HAZARD

Agreements may alter incentives in such a way as to encourage less cooperative behavior. Insurance companies face this problem of "moral hazard." Property insurance, for instance, may make people less careful with their property and therefore increase the risk of loss (Arrow, 1974). The problem of moral hazard arises quite sharply in international banking. The solvency of a major country's largest banks may be essential to its financial system, or even to the stability of the entire international banking network. As a result, the country's central bank

⁵ In 1960 Thomas Schelling made a similar argument about the problem of surprise attack. Asking how we would prove that we were not planning a surprise attack if the Russians suspected we were, he observed that "evidently it is not going to be enough just to tell the truth. ... There has to be some way of authenticating certain facts, the facts presumably involving the disposition of forces" (p. 247). To authenticate facts requires becoming more open to external monitoring as a way of alleviating what Akerlof later called "quality uncertainty."

may have to intervene if one of these banks is threatened. The U.S. Federal Reserve, for instance, could hardly stand idly by while the Bank of America or Citibank became unable to meet its liabilities. Yet this responsibility creates a problem of moral hazard, since the largest banks, in effect, have automatic insurance against disastrous consequences of risky but (in the short-run at least) profitable loans. They have incentives to follow risk-seeking rather than risk-averse behavior at the expense of the central bank (Hirsch, 1977).

IRRESPONSIBILITY

Some actors may be irresponsible, making commitments that they may not be able to carry out. Governments or firms may enter into agreements that they intend to keep, assuming that the environment will continue to be benign; if adversity sets in, they may be unable to keep their commitments. Banks regularly face this problem, leading them to devise standards of creditworthiness. Large governments trying to gain adherents to international agreements may face similar difficulties: countries that are enthusiastic about cooperation are likely to be those that expect to gain more, proportionately, than they contribute. This is a problem of self-selection, as discussed in the market-failure literature. For instance, if rates are not properly adjusted, people with high risks of heart attack will seek life insurance more avidly than those with longer life expectancies; people who purchased "lemons" will tend to sell them earlier on the used-car market than people with "creampuffs" (Akerlof, 1970; Arrow, 1974). In international politics, self-selection means that for certain types of activities—such as sharing research and development information—weak states (with much to gain but little to give) may have more incentive to participate than strong ones, but less incentive actually to spend funds on research and development.⁶ Without the strong states, the enterprise as a whole will fail.

From the perspective of the outside observer, irresponsibility is an aspect of the problem of public goods and free-riding; but from the standpoint of the actor trying to determine whether to rely on a potentially irresponsible partner, it is a problem of uncertainty. Either way, informational costs and asymmetries may prevent mutually beneficial agreement.

⁶ Bobrow and Kudrle found evidence of severe problems of collective goods in the IEA's energy research and development program, suggesting that "commercial interests and other national rivalries appear to have blocked extensive international cooperation" (1979, p. 170).

Regimes and Market Failure

International regimes help states to deal with all of these problems. As the principles and rules of a regime reduce the range of expected behavior, uncertainty declines, and as information becomes more widely available, the asymmetry of its distribution is likely to lessen. Arrangements within regimes to monitor actors' behavior—discussed more fully below under the heading of "compliance"—mitigate problems of moral hazard. Linkages among particular issues within the context of regimes raise the costs of deception and irresponsibility, since the consequences of such behavior are likely to extend beyond the issue on which they are manifested. Close ties among officials involved in managing international regimes increase the ability of governments to make mutually beneficial agreements, because intergovernmental relationships characterized by ongoing communication among working-level officials, informal as well as formal, are inherently more conducive to exchange of information than are traditional relationships between closed bureaucracies. In general, regimes make it more sensible to cooperate by lowering the likelihood of being double-crossed. Whether we view this problem through the lens of game theory or that of market failure, the central conclusion is the same: international regimes can facilitate cooperation by reducing uncertainty. Like international law, broadly defined, their function is "to make human actions conform to predictable patterns so that contemplated actions can go forward with some hope of achieving a rational relationship between means and ends" (Barkun, 1968, p. 154).

Thus international regimes are useful to governments. Far from being threats to governments (in which case it would be hard to understand why they exist at all), they permit governments to attain objectives that would otherwise be unattainable. They do so in part by facilitating intergovernmental agreements. Regimes facilitate agreements by raising the anticipated costs of violating others' property rights, by altering transaction costs through the clustering of issues, and by providing reliable information to members. Regimes are relatively efficient institutions, compared with the alternative of having a myriad of unrelated agreements, since their principles, rules, and institutions create linkages among issues that give actors incentives to reach mutually beneficial agreements. They thrive in situations where states have common as well as conflicting interests on multiple, overlapping issues and where externalities are difficult but not impossible to deal with through bargaining. Where these conditions exist, international regimes can be of value to states.

We have seen that it does not follow from this argument that regimes necessarily increase global welfare. They can be used to pursue particularistic and parochial interests as well as more widely shared objectives. Nor should we conclude that all potentially valuable regimes will necessarily be instituted. As we have seen, even regimes that promise substantial overall benefits may be difficult to invent.

COMPLIANCE WITH INTERNATIONAL REGIMES

International regimes are decentralized institutions. Decentralization does not imply an absence of mechanisms for compliance, but it does mean that any sanctions for violation of regime principles or rules have to be enacted by the individual members (Young, 1979, p. 35). The regime provides procedures and rules through which such sanctions can be coordinated. Decentralized enforcement of regime rules and principles is neither swift nor certain. Yet, in many instances, rules are obeyed. Indeed, Louis Henkin goes so far as to say that "almost all nations observe almost all principles of international law and almost all of their obligations almost all of the time" (1979, p. 47). In the world political economy, we observe a good deal of compliance even when governments have incentives, on the basis of myopic self-interest, to violate the rules. Although the United States eventually broke the Bretton Woods arrangements unilaterally on August 15, 1971, for some years before that the U. S. government followed rules that constricted American freedom of action. Japanese fishermen have apparently complied, in general, with prescriptions of the International North Pacific Fisheries Convention (Young, 1979, pp. 79-88). Examples of regime compliance could also be drawn from such issue-areas as commodity trade and air transport (Cahn, 1980; Jonsson, 1981).

The extent of international compliance should not be overstated. As we will see, the trade and monetary regimes both became weaker during the 1970s. American and European policies became more protectionist in textiles, steel, and other threatened sectors (Aggarwal, 1983; Verreydt and Waelbroeck, 1982; Woolcock, 1982). Nevertheless, despite the economic disruptions of the 1970s and 1980s, there has been no headlong rush to reduce trade drastically. Indeed, only in the severe recessions of 1975 and 1982-83 did the volume of industrialized countries' exports fall; in every other year they rose by more than the real gross national product of those countries (IMF, 1983, tables B-1 and B-8, pp. 170,176). The form that protectionism takes, furthermore, is, like hypocrisy, "the tribute that vice pays to virtue": much contemporary protectionism is designed to avoid run-

ning directly afoul of international agreements. For instance, American protectionism in manufactured goods consists largely of "voluntary export restraints" rather than unilaterally imposed import quotas, despite the fact that import quotas do not require laborious international negotiations and capture more rents for the government or private firms in the importing country (Bergsten, 1975b). Voluntary export restraints are often chosen because they bypass GATT restrictions without directly violating explicit GATT prohibitions; yet this advantage is gained at the expense of frequently building in loopholes permitting imports to continue to increase rapidly (Yoffie, 1983). Certainly liberalism in world trade has been under pressure, but the pattern as a whole does not suggest disregard on the part of governments for compliance with international agreements. Although governments sometimes break international rules, they often comply with them.

The puzzle of compliance is why governments, seeking to promote their own interests, ever comply with the rules of international regimes when they view these rules as in conflict with what I will call their "myopic self-interest." Myopic self-interest refers to governments' perception of the relative costs and benefits to them of alternative courses of action with regard to a particular issue, *when that issue is considered in isolation from others*. An action is in a government's myopic self-interest if it has the highest expected value of any alternative, apart from the indirect effects that actions on the specific issue in question would have on other issues. That governments often comply with rules that conflict with their myopic self-interest poses a potential anomaly for theories, such as Realism or the functional theory developed in this chapter, that assume rational, egoistic action in world politics. Why should an egoistic actor behave, on a given issue, in a way that is inconsistent with its self-interest on that issue? If we observe compliance with the rules of international regimes, is this not inconsistent with the assumption of egoism?

The murky language of national interests allows some Realists, such as Hans J. Morgenthau, to avoid this issue. Morgenthau notes the existence of functional organizations such as the specialized agencies of the United Nations system, but contents himself with the observation that when there is a conflict between the national interest and the operation of such agencies, "the national interest wins out over the international objective" (1948/1966, p. 509). This begs the question of whether the national interest is defined myopically, without regard to the effects of one's actions on other issues or other values, or in a more farsighted way, taking into account the impact of violating international rules and norms on other state objectives. Yet the crucial

issues are precisely those of how interests are defined, and how institutions affect states' definitions of their own interests. An understanding of the puzzle of compliance requires an examination of how international regimes affect the calculations of self-interest in which rational, egoistic governments engage.

Such an exploration is pursued below through two distinct but related lines of argument. The first looks at a given regime in isolation, examining its value to governments as opposed to the feasible alternatives. This explanation of the puzzle of compliance emphasizes the difficulty of establishing international regimes in the first place. Because regimes are difficult to construct, it may be rational to obey their rules if the alternative is their breakdown, since even an imperfect regime may be superior to any politically feasible replacement. The second line of argument sets regimes in the context of other regimes in world politics. We view each issue and each regime as part of a larger network of issues and regimes. Much as iterated Prisoners' Dilemma leads to very different results from the single-play version of the game, so does an analysis of a given regime in the context of others produce a different structure of incentives than considering each regime in isolation.

The Value of Existing Regimes

We have seen that it is difficult even for perfectly rational individuals to make agreements with one another in the absence of provisions for central enforcement of contracts. In world politics, international regimes help to facilitate the making of agreements by reducing barriers created by high transaction costs and uncertainty. But these very difficulties make it hard to create the regimes themselves in the first place.

The importance of transaction costs and uncertainty means that regimes are easier to maintain than they are to create. Complementary interests are necessary but not sufficient conditions for their emergence. The construction of international regimes may require active efforts by a hegemonic state, as the IMF and GATT did after World War II; or regime-creation in the absence of hegemony may be spurred on by the pressures of a sudden and severe crisis, such that which led to the IEA. Even with complementary interests, it is difficult to overcome problems of transaction costs and uncertainty.

Once an international regime has been established, however, it begins to benefit from the relatively high and symmetrical level of information that it generates, and from the ways in which it makes regime-supporting bargains easier to consummate. We will see in chapter 9 that the international organizations at the center of the inter-

national monetary and trade regimes have outlived the period of U.S. hegemony that brought them into being. Viewing international regimes as information-providing and transaction cost-reducing entities rather than as quasi-governmental rule-makers helps us to understand such persistence. Effective international regimes facilitate informal contact and communication among officials. Indeed, they may lead to "trans-governmental" networks of acquaintance and friendship: supposedly confidential documents of one government may be seen by officials of another; informal coalitions of like-minded officials develop to achieve common purposes; and critical discussions by professionals probe the assumptions and assertions of state policies (Neustadt, 1970; Keohane and Nye, 1974; Keohane, 1978). These transgovernmental relationships may increase opportunities for cooperation in world politics by providing policymakers with high-quality information about what their counterparts are likely to do.⁷

Appreciating the significance of these information-producing patterns of action that become embedded in international regimes helps us to understand further why the erosion of American hegemony during the 1970s was not accompanied by an immediate collapse of cooperation, as the crude theory of hegemonic stability would have predicted. Since the level of institutionalization of postwar regimes was extremely high by historical standards, with intricate and extensive networks of communication among working-level officials, we should expect the lag between the decline of American hegemony and the disruption of international regimes to be quite long and the "inertia" of the existing regimes relatively great.

This argument about the role of information in maintaining regimes can be reinforced by examining some work on oligopolistic cooperation and competition that has similar analytic concerns. Oliver Williamson (1965, p. 584) argues on the basis of organization theory that communication among members of a group tends to increase cooperation, or what he calls "adherence to group goals." Cooperation among oligopolists will also be fostered by a record of past cooperation. Using these assumptions, Williamson constructs a model that has two points of equilibrium, one at high levels and one at low levels of cooperation. Once a given equilibrium has been reached, substantial changes in the environment are necessary to alter it:

⁷ At the very highest levels of government, however, these transgovernmental interactions are often quite limited (Russell, 1973; Putnam and Bayne, 1984)

If the system is operating at a low level of adherence and communication (i.e., the competitive solution), a substantial improvement in the environment will be necessary before the system will shift to a high level of adherence and communication. *Indeed, the condition of the environment required to drive the system to the collusive solution is much higher than the level required to maintain it once it has achieved this position. Similarly, a much more unfavorable condition of the environment is required to move the system from a high to a low level equilibrium than is required to maintain it there* (p. 592).⁸

Like Williamson's oligopolies, international regimes are easier to maintain than to construct. The principles, rules, institutions, and procedures of international regimes, and the informal patterns of interaction that develop in conjunction with them, become useful to governments as arrangements permitting communication and therefore reducing transaction costs and facilitating the exchange of information. As they prove themselves in this way, the value of the functions they perform increases. Thus even if power becomes more diffused among members, making problems of collective action more severe, this disadvantage may be outweighed by the agreement-facilitating effects of the information provided by the regime.

Arthur Stinchcombe (1968) has made a similar point in discussing "sunk costs."⁹ He writes that "when an action in the past has given rise to a permanently useful resource, we speak of this resource as a 'sunk cost.'" Sunk costs, such as those invested in reputation and good will (or, we might add, in institutions such as international regimes), cannot be recovered and therefore "ought not enter into current calculations of rational policy." But "if these sunk costs make a traditional pattern of action cheaper, and if new patterns are not enough more profitable to justify throwing away the resource, the sunk costs tend to preserve a pattern of action from one year to the next" (pp. 120-21). In these terms, international regimes embody sunk costs, and we can understand why they persist even when all members would prefer somewhat different mixtures of principles, rules, and institutions.

Ironically, if regimes were costless to build, there would be little point in constructing them. In this case, agreements would also be

⁸ I am indebted to Timothy McKeown for introducing me to Williamson's argument and its implications for the study of international relations.

⁹ I am indebted to Stephen D. Krasner for this reference.

costless. Under these circumstances, governments could wait until specific problems arose, then make agreements to deal with them; they would have no need to construct international regimes to facilitate agreements. It is precisely the costliness of agreements, and of regimes themselves, that make them important. The high costs of regime-building help existing regimes to persist.

Networks of Issues and Regimes

In thinking about compliance, we should recall the previous discussion of how regimes facilitate the making of agreements. To some extent, it is governments' anticipation that international regimes will increase compliance that accounts for their willingness to enter into these arrangements in the first place. Insofar as regimes create incentives for compliance, they also make it more attractive for conscientious potential members to join them. We saw that, by linking issues to one another, regimes create situations that are more like iterated, open-ended Prisoners' Dilemma, in which cooperation may be rational, than like single-play Prisoners' Dilemma, in which it is not. Violation of one's commitments on a given issue, in pursuit of myopic self-interest, will affect others' actions on other questions. Pursuit of its farsighted self-interest may therefore lead a government to eschew its myopic self-interest.

As the Prisoners' Dilemma example suggests, social pressure, exercised through linkages among issues, provides the most compelling set of reasons for governments to comply with their commitments. That is, egoistic governments may comply with rules because if they fail to do so, other governments will observe their behavior, evaluate it negatively, and perhaps take retaliatory action. Sometimes retaliation will be specific and authorized under the rules of a regime; sometimes it will be more general and diffuse.

Suppose, for example, that a member of GATT is under pressure from domestic manufacturers of nuts and bolts to enact import quotas on these products. Even if the government perceives that it has a myopic self-interest in doing so, it knows that such an action in violation of the rules would have negative implications for it on other trade questions—let us say, in opening markets for its semiconductors abroad. The principles and rules of the regime, since they facilitate linkage among issues, will in such circumstances render pursuit of myopic self-interest less attractive. Indeed, the prospect of discord as a result of its rule-violation may lead the government to continue to

engage in cooperation, whereas if it could have gotten away with the violation without risking discord, it would have gone ahead.

This hypothetical example helps us understand why governments, having entered into regimes that they find beneficial, comply with the rules even in particular cases where the costs of so doing outweigh the benefits. Yet sometimes governments may find that the regimes to which they belong are no longer beneficial to them. What happens to incentives for compliance when the regime as a whole seems malign?

If there were only one regime in world politics, or each regime existed in isolation, the egoistic government would rationally cease to comply with its rules. Regimes would be abandoned when governments calculated that the opportunity costs of belonging to a regime were higher than those of some feasible alternative course of action. In the contemporary world political economy, however, there are multiple issues and multiple contacts among governments; thus governments belong to many regimes.¹⁰ Disturbing one regime does not merely affect behavior in the issue-area regulated by it, but is likely to affect other regimes in the network as well. For a government rationally to break the rules of a regime, the net benefits of doing so must outweigh the net costs of the effects of this action on other international regimes. Insofar as its partners retaliate in those domains for its actions against the first regime, it may find that it is inhibited from pursuing its myopic self-interest.

All of these incentives for compliance rest on the prospects of retaliatory linkage: as in Axelrod's (1981) simulation of Prisoners' Dilemma, "tit for tat" is a more effective strategy to induce cooperation than submissiveness. We have seen that GAIT contains provisions for retaliation; and the Bretton Woods Agreement of 1944 furnishes another relevant example. Under Article VII (the "scarce currency clause"), a surplus country that declined to replenish the IMF's depleted holdings of its currency could find its exports discriminated against with the sanction of the IMF itself (Hirsch, 1967, p. 433). Yet retaliation for specific violations is not a reliable way to maintain international regimes; indeed, the GATT provisions for retaliation have been in-

¹⁰ Multiple issues and multiple contacts among societies are two aspects of "complex interdependence" (Keohane and Nye, 1977). Both facilitate agreements by multiplying points of interaction among governments and therefore increasing incentives to comply with commitments in a situation characterized by practices of "tit for tat" reciprocity. The third characteristic of complex interdependence—lack of efficacy of resorts to force—has similar effects, since it helps to guarantee that the game will not be truncated by sudden violent acts.

voked only once, and then ineffectively (Jackson, 1983). Individual governments find it costly to retaliate. Familiar problems of collective action arise: if a given state's violation of a particular rule does not have a large effect on any one country, retaliation is unlikely to be severe, even if the aggregate effect of the violation is large. If international regimes depended entirely for compliance on specific retaliations against transgressors, they would be weak indeed.

In the absence of specific retaliation, governments may still have incentives to comply with regime rules and principles if they are concerned about precedent or believe that their reputations are at stake. Governments worry about establishing bad precedents because they fear that their own rule-violations will promote rule-violations by others, even if no specific penalty is imposed on themselves. That is, breaking rules may create an individual benefit, but it produces a "collective bad." The effect of the collective bad on the utility of the individual government may under certain circumstances outweigh the benefit.

Putting the point this way makes it evident that precedent is a weak reed to lean on. No matter how much international lawyers may preach about the adverse consequences of rule-violation, even the most dim-witted egoist can see that, from her standpoint, the proper comparison is not between the benefits from her rule-breaking and its total costs to everyone, but between its benefits and its costs *to her*. The problem of collective action raises its ugly head again.

The dilemmas of collective action are partially solved through the device of reputation. Unlike the costs of establishing bad precedents, the costs of acquiring a bad reputation as a result of rule-violations are imposed specifically on the transgressor. As long as a continuing series of issues is expected to arise in the future, and as long as actors monitor each other's behavior and discount the value of agreements on the basis of past compliance, having a good reputation is valuable even to the egoist whose role in collective activity is so small that she would bear few of the costs of her own malefactions.

Our analysis of uncertainty earlier in this chapter suggests how important reputation can be even to governments not concerned with personal honor and self-respect. Under conditions of uncertainty and decentralization, governments will decide whom to make agreements with, and on what terms, largely on the basis of their expectations about their partners' willingness and ability to keep their commitments. A good reputation makes it easier for a government to enter into advantageous international agreements; tarnishing that reputation

imposes costs by making agreements more difficult to reach.¹¹

The importance of reputation as an incentive to conform to standards of behavior in world politics has an interesting parallel in the practices of stateless societies. "Primitive" societies without centralized patterns of authority develop what one anthropologist has called "rule(s) and standards which define appropriate action" (Colson, 1974, p. 52). Like international regimes, these rules help to limit conflicts of interest by reducing ambiguity—in this case, by providing information about which types of behavior are legitimate. A principal sanction for violating social norms and rules in these societies is the cost to the offending individual's reputation: "The one public crime in such societies was often that of being a bad character" (Colson, 1974, p. 53). As in world politics, the focus of public concern is less on what an actor has done in the past (as in a formal legal system) than on what she is likely to do in the future. That is, systems of social control in primitive societies, as in international relations, are "forward-looking." They depend on intense, continuing interaction among a small number of actors, who deal frequently with each other without formal laws enforced by a common government.

For reasons of reputation, as well as fear of retaliation and concern about the effects of precedents, egoistic governments may follow the rules and principles of international regimes even when myopic self-interest counsels them not to. As we have seen in this section, they could do so strictly on the basis of calculations of costs and benefits. Each time that they seem to have incentives to violate the provisions of regimes, they could calculate whether the benefits of doing so outweigh the costs, taking into account the effects on their reputations as well as the probability of retaliation and the effects of rule-violation on the system as a whole. They might often decide, in light of this cost-benefit calculation, to conform to the rules. Rational egoism can lead governments not only to make agreements, but to keep them even when they turn out poorly.

¹¹ Heymann makes this point succinctly for the general case: "Since coordinated actions to obtain outcomes of benefit to all parties often depend upon trust, each actor who wants to be a participant in, and thus beneficiary of, such cooperative schemes in the long run and on a number of separable occasions has an important stake in creating and preserving a reputation as a trustworthy party" (1973, p. 822). He also points out that the incentive to obey agreed-upon rules for the sake of one's reputation only operates when one's actions are not secret and others retain the capability to retaliate effectively against one's infractions.

CONCLUSIONS

This chapter has used theories of rational choice and of the functions performed by institutions to help us understand the creation, maintenance, and evolution of international regimes. My analysis has assumed that governments calculate their interests minutely on every issue facing them. It has not relied at all on assumptions about the "public interest" or the General Will; no idealism whatsoever is posited. I have tried to show that, even on the restrictive assumptions of Realism and game theory, gloomy conclusions about the inevitability of discord and the impossibility of cooperation do not logically follow. Egoistic governments can rationally seek to form international regimes on the basis of shared interests. Governments may comply with regime rules even if it is not in their myopic self-interest to do so. In a world of many issues, such apparent self-abnegation may actually reflect rational egoism.

In view of the difficulties of constructing international regimes, it is also rational to seek to modify existing ones, where possible, rather than to abandon unsatisfactory ones and attempt to start over. Thus regimes tend to evolve rather than to die. Governments that are in general sympathy with the principles and rules of regimes have incentives to try to maintain them, even when doing so requires sacrifices of myopic self-interest.

International regimes perform the valuable functions of reducing the costs of legitimate transactions, while increasing the costs of illegitimate ones, and of reducing uncertainty. International regimes by no means substitute for bargaining; on the contrary, they authorize certain types of bargaining for certain purposes. Their most important function is to facilitate negotiations leading to mutually beneficial agreements among governments. Regimes also affect incentives for compliance by linking issues together and by being linked together themselves. Behavior on one set of questions necessarily affects others' actions with regard to other matters.

Decisions by governments to join international regimes are made partially behind a "veil of ignorance," to use an analogy from John Rawls's discussion of the social contract (Rawls, 1971; Sandel, 1982). Of course, governments know better than Rawls's shadowy individuals which provisions are likely to benefit them; but they nevertheless cannot predict the future with perfect accuracy. Regimes can be affected in the future by many factors, including alterations in world power relations, changes in interests, perhaps as a result of new patterns of interdependence, and changes in membership, as newly independent

countries join the regimes. Governments adopting the rules and principles of international regimes take on future obligations whose costs they cannot accurately calculate.

These commitments reduce the flexibility of governments and in particular limit their ability to act on the basis of myopic self-interest. To do so is likely to be costly not only to the regime itself but to the state's reputation. Governments of wealthy countries that join international lending networks recognize that once they become active participants in these regimes, they cannot predict how much they may be called upon to lend to their partners. Countries belonging to the IEA agree to provide oil in an emergency to members suffering the most serious shortfalls, according to a pre-arranged formula. Although it may be possible to predict which countries are likely to be creditors and which debtors, or which members of the IEA are likely to have oil to share, the magnitudes involved are unclear in advance. Governments recognize that it will be difficult to renege on their commitments without suffering costly damage to their reputations. Regimes rely not only on decentralized enforcement through retaliation but on governments' desires to maintain their reputations.

A decent respect for the realities of human life and the findings of social science requires us to acknowledge that the assumption of pure maximizing rationality is not fully realistic. Although, as we have seen, the assumption of rationality can be very useful for the construction of theory at the level of the international system, no serious recent study of decisionmaking concludes that modern governments actually behave according to the canons of pure rationality (Snyder and Diesing, 1977). Governments do not act as classical maximizers any more than other large organizations (March and Simon, 1958). In the next chapter, therefore, we will modify the assumption of rationality by introducing concepts such as "bounded rationality" and "satisficing," which have been widely used in the last quarter-century to describe how individuals, and particularly organizations, behave. These concepts do not deny or disparage the intelligence of human beings, nor do they challenge the assumption of egoism. But they do lead to some different ways of thinking about how governments make decisions and about international cooperation.

Up to this point we have assumed, with Realists, that governments are egoistic. This assumption, like that of perfect rationality, is a theoretically useful simplification of reality rather than a true reflection of it. Governments are composed of individuals, some of whom have values that extend beyond their own narrowly conceived self-interest. In view of the hypocrisy that typically characterizes governments'

pronouncements on international relations—proclaiming dedication to principle while pursuing self-interested ends—we will be cautious about relaxing the assumption of egoism. But in chapter 7 we will explore the possibility that empathy could have profound effects on the prospects for international cooperation. Having shown that cooperation is explicable even on narrowly self-interested, egoistic assumptions about the actors in world politics, we can entertain the notion that more generous values may make a difference in the world political economy.