

INTERNATIONAL LAW AND INTERNATIONAL RELATIONS

Edited by **Beth A. Simmons**
and **Richard H. Steinberg**

agreements is nil and where the supply of agreements is infinitely elastic and free (so that all conceivable agreements can be made costlessly). But where the demand for agreements is positive at some level of feasible cost, and the supply of agreements is not infinitely elastic and free, there may be a demand for international regimes *if* they actually make possible agreements yielding net benefits that would not be possible on an *ad hoc* basis. In such a situation regimes can be regarded as “efficient.” We can now ask: under what specific conditions will international regimes be efficient?

One way to address this question is to pose its converse. To ask about the conditions under which international regimes will be *worthless* enables us to draw on work in social choice, particularly by Ronald Coase. Coase was able to show that the presence of externalities alone does not necessarily prevent Pareto-optimal coordination among independent actors: under certain conditions, bargaining among these actors could lead to Pareto-optimal solutions. The key conditions isolated by Coase were (a) a legal framework establishing liability for actions, presumably supported by governmental authority; (b) perfect information; and (c) zero transactions costs (including organization costs and costs of making side-payments).²² If all these conditions were met in world politics, *ad hoc* agreements would be costless and regimes unnecessary. *At least one of them must not be fulfilled if international regimes are to be of value, as facilitators of agreement, to independent utility-maximizing actors in world politics.* Inverting the Coase theorem provides us, therefore, with a list of conditions, at least one of which must apply if regimes are to be of value in facilitating agreements among governments:²³

(a) lack of a clear legal framework establishing liability for actions;

²² Ronald Coase, “The Problem of Social Cost,” *Journal of Law and Economics* 3 (October 1960). For a discussion, see James Buchanan and Gordon Tullock, *The Calculus of Consent: Logical Foundations of Constitutional Democracy* (Ann Arbor: University of Michigan Press, 1962), p. 186.

²³ If we were to drop the assumption that actors are strictly self-interested utility-maximizers, regimes could be important in another way: they would help to develop norms that are internalized by actors as part of their own utility functions. This is important in real-world political-economic systems, as works by Schumpeter, Polanyi, and Hirsch on the moral underpinnings of a market system indicate. It is likely to be important in many international systems as well. But it is outside the scope of the analytical approach taken in this article – which is designed to illuminate some issues, but not to provide a comprehensive account of international regime change. See Joseph Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper & Row, 1942), especially Part II, “Can Capitalism Survive?”; Kari Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (1944; Boston: Beacon Press, 1957); and Fred Hirsch, *Social Limits to Growth* (Cambridge: Harvard University Press, 1976).

- (b) information imperfections (information is costly);
- (c) positive transactions costs.²⁴

In world politics, of course, *all* of these conditions are met all of the time: world government does not exist; information is extremely costly and often impossible to obtain; transactions costs, including costs of organization and side-payments, are often very high. Yet the Coase theorem is useful not merely as a way of categorizing these familiar problems, but because it suggests how international regimes can improve actors' abilities to make mutually beneficial agreements. Regimes can make agreement easier if they provide frameworks for establishing legal liability (even if these are not perfect); improve the quantity and quality of information available to actors; or reduce other transactions costs, such as costs of organization or of making side-payments. This typology allows us to specify regime functions – as devices to make agreements possible – more precisely, and therefore to understand demand for international regimes. Insofar as international regimes can correct institutional defects in world politics along any of these three dimensions (liability, information, transactions costs), they may become efficient devices for the achievement of state purposes.

Regimes do not establish binding and enforceable legal liabilities in any strict or ultimately reliable sense, although the lack of a hierarchical structure does not prevent the development of bits and pieces of law.²⁵ Regimes are much more important in providing established negotiating frameworks (reducing transactions costs) and in helping to coordinate actor expectations (improving the quality and quantity of information available to states). An explanation of these two functions of international regimes, with the help of microeconomic analysis, will lead to hypotheses about how the demand for international regimes should be expected to vary with changes in the nature of the international system (in the case of transactions costs) and about effects of characteristics of the international regime itself (in the case of information).

²⁴ Information costs could be considered under the category of transaction costs, but they are so important that I categorize them separately in order to give them special attention.

²⁵ For a discussion of "the varieties of international law," see Louis Henkin, *How Nations Behave: Law and Foreign Policy*, 2d ed. (New York: Columbia University Press for the Council on Foreign Relations, 1979), pp. 13–22.

International Regimes and Transactions Costs

Neither international agreements nor international regimes are created spontaneously. Political entrepreneurs must exist who see a potential profit in organizing collaboration. For entrepreneurship to develop, not only must there be a potential social gain to be derived from the formation of an international arrangement, but the entrepreneur (usually, in world politics, a government) must expect to be able to gain more itself from the regime than it invests in organizing the activity. Thus organizational costs to the entrepreneur must be lower than the net discounted value of the benefits that the entrepreneur expects to capture for itself.²⁶ As a result, international cooperation that would have a positive social payoff may not be initiated unless a potential entrepreneur would profit sufficiently. This leads us back into questions of supply and the theory of hegemonic stability, since such a situation is most likely to exist where no potential entrepreneur is large relative to the whole set of potential beneficiaries, and where “free riders” cannot be prevented from benefiting from cooperation without paying proportionately.

Our attention here, however, is on the demand side: we focus on the efficiency of constructing international regimes, as opposed simply to making *ad hoc* agreements. We only expect regimes to develop where the costs of making *ad hoc* agreements on particular substantive matters are higher than the sum of the costs of making such agreements within a regime framework and the costs of establishing that framework.

With respect to transactions costs, where do we expect these conditions to be met? To answer this question, it is useful to introduce the concept of *issue density* to refer to the number and importance of issues arising within a given policy space. The denser the policy space, the more highly interdependent are the different issues, and therefore the agreements made about them. Where issue density is low, *ad hoc* agreements are quite likely to be adequate: different agreements will not impinge on one another significantly, and there will be few economies of scale associated with establishing international regimes (each of which would encompass only one or a few agreements). Where issue density is high, on the other hand, one substantive objective may well impinge on another and regimes will achieve economies of scale, for instance in establishing

²⁶ Davis and North, *Institutional Change and American Economic Growth*, especially pp. 51–57.

negotiating procedures that are applicable to a variety of potential agreements within similar substantive areas of activity.²⁷

Furthermore, in dense policy spaces, complex linkages will develop among substantive issues. Reducing industrial tariffs without damaging one's own economy may depend on agricultural tariff reductions from others; obtaining passage through straits for one's own warships may depend on wider decisions taken about territorial waters; the sale of food to one country may be more or less advantageous depending on other food-supply contracts being made at the same time. As linkages such as these develop, the organizational costs involved in reconciling distinct objectives will rise and demands for overall frameworks of rules, norms, principles, and procedures to cover certain clusters of issues – that is, for international regimes – will increase.

International regimes therefore seem often to facilitate side-payments among actors within issue-areas covered by comprehensive regimes, since they bring together negotiators to consider a whole complex of issues. Side-payments in general are difficult in world politics and raise serious issues of transaction costs: in the absence of a price system for the exchange of favors, these institutional imperfections will hinder cooperation.²⁸ International regimes may provide a partial corrective.²⁹ The well-known literature on “spillover” in bargaining, relating to the European Community and other integration schemes, can also be interpreted as being concerned with side-payments. In this literature,

²⁷ The concept of issue density bears some relationship to Herbert Simon's notion of “decomposability,” in *The Sciences of the Artificial* (Cambridge: MIT Press, 1969). In both cases, problems that can be conceived of as separate are closely linked to one another functionally, so that it is difficult to affect one without also affecting others. Issue density is difficult to operationalize, since the universe (the “issue-area” or “policy space”) whose area forms the denominator of the term cannot easily be specified precisely. But given a certain definition of the issue-area, it is possible to trace the increasing density of issues within it over time. See, for example, Robert O. Keohane and Joseph S. Nye, *Power and Interdependence: World Politics in Transition* (Boston: Little, Brown, 1977), chap. 4.

²⁸ On questions of linkage, see Arthur A. Stein, “The Politics of Linkage,” *World Politics* 33, 1 (October 1980): 62–81; Kenneth Oye, “The Domain of Choice,” in Oye et al., *Eagle Entangled: U.S. Foreign Policy in a Complex World* (New York: Longmans, 1979), pp. 3–33; and Robert D. Tollison and Thomas D. Willett, “An Economic Theory of Mutually Advantageous Issue Linkage in International Negotiations,” *International Organization* 33, 4 (Autumn 1979).

²⁹ GATT negotiations and deliberations on the international monetary system have been characterized by extensive bargaining over side-payments and complex politics of issue-linkage. For a discussion see Nicholas Hutton, “The Salience of Linkage in International Economic Negotiations,” *Journal of Common Market Studies* 13, 1–2 (1975): 136–60.

expectations that an integration arrangement can be expanded to new issue-areas permit the broadening of potential side-payments, thus facilitating agreement.³⁰

It should be noted, however, that regimes may make it more difficult to link issues that are clustered separately. Governments tend to organize themselves consistently with how issues are treated internationally, as well as vice versa; issues considered by different regimes are often dealt with by different bureaucracies at home. Linkages and side-payments become difficult under these conditions, since they always involve losses as well as gains. Organizational subunits that would lose, on issues that matter to them, from a proposed side-payment are unlikely to support it on the basis of another agency's claim that it is in the national interest. Insofar as the dividing lines between international regimes place related issues in different jurisdictions, they may well make side-payments and linkages between these issues less feasible.

The crucial point about regimes to be derived from this discussion of transactions costs can be stated succinctly: the optimal size of a regime will increase if there are increasing rather than diminishing returns to regime-scale (reflecting the high costs of making separate agreements in a dense policy space), or if the marginal costs of organization decline as regime size grows. The point about increasing returns suggests an analogy with the theory of imperfect competition among firms. As Samuelson notes, "increasing returns is the prime case of deviations from perfect competition."³¹ In world politics, increasing returns to scale lead to more extensive international regimes.

The research hypothesis to be derived from this analysis is that increased issue density will lead to greater demand for international regimes and to more extensive regimes. Since greater issue density is likely to be a feature of situations of high interdependence, this forges a link between interdependence and international regimes: increases in the former can be expected to lead to increases in demand for the latter.³²

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³⁰ Ernst B. Haas, *The Uniting of Europe* (Stanford: Stanford University Press, 1958).

³¹ Paul A. Samuelson, "The Monopolistic Competition Revolution," in R. E. Kuenne, ed., *Monopolistic Competition Theory* (New York: Wiley, 1967), p. 117.

³² Increases in issue density could make it more difficult to supply regimes; the costs of providing regimes could grow, for instance, as a result of multiple linkages across issues. The 1970s Law of the Sea negotiations illustrate this problem. As a result, it will not necessarily be the case that increases in interdependence will lead to increases in the number, extensiveness, and strength of international regimes.

The Demand for Specific Information

The problems of organization costs discussed earlier arise even in situations where actors have entirely consistent interests (pure coordination games with stable equilibria). In such situations, however, 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 agreement point; but it may not matter much which of several is chosen.³³ Conventions are important and ingenuity may be required, but serious systemic impediments to the acquisition and exchange of information are lacking.³⁴

The norm of generalized commitment can be seen as a device for coping with the conflictual implications of uncertainty by imposing favorable assumptions about others' future behavior. The norm of generalized commitment requires that one accept the veil of ignorance but act *as if* one will benefit from others' behavior in the future if one behaves now in a regime-supporting way. Thus it creates a coordination game by ruling out potentially antagonistic calculations.

Yet in many situations in world politics, specific and calculable conflicts of interest exist among the actors. In such situations, they all have an interest in agreement (the situation is not zero-sum), but they prefer different types of agreement or different patterns of behavior (e.g., one may prefer to cheat without the other being allowed to do so). As Stein points out in this volume, these situations are characterized typically by unstable equilibria. Without enforcement, actors have incentives to deviate from the agreement point:

[Each] actor requires assurances that the other will also eschew its rational choice [and will not cheat, and] such collaboration requires a degree of formalization. The regime must specify what constitutes cooperation and what constitutes cheating.³⁵

In such situations of strategic interaction, as in oligopolistic competition and world politics, systemic constraint-choice theory yields no

³³ The classic discussion is in Thomas C. Schelling, *The Strategy of Conflict* (1960; Cambridge: Harvard University Press, 1980), chap. 4, "Toward a Theory of Interdependent Decision." See also Schelling, *Micromotives and Macrobehavior* (New York: Norton, 1978).

³⁴ For an interesting discussion of regimes in these terms, see the paper in this volume by Oran R. Young. On conventions, see David K. Lewis, *Convention: A Philosophical Study* (Cambridge: Cambridge University Press, 1969).

³⁵ Arthur A. Stein, article in this volume, p. 312.

determinate results or stable equilibria. Indeed, discussions of “blackmailing” or games such as “prisoners’ dilemma” indicate that, under certain conditions, suboptimal equilibria are quite likely to appear. Game theory, as Simon has commented, only illustrates the severity of the problem; it does not solve it.³⁶

Under these circumstances, power factors are important. They are particularly relevant to the supply of international regimes: regimes involving enforcement can only be supplied if there is authority backed by coercive resources. As we have seen, regimes themselves do not possess such resources. For the means necessary to uphold sanctions, one has to look to the states belonging to the regime.

Yet even under conditions of strategic interaction and unstable equilibria, regimes may be of value to actors by providing information. Since high-quality information reduces uncertainty, we can expect that there will be a demand for international regimes that provide such information.

Firms that consider relying on the behavior of other firms within a context of strategic interaction – for instance, in oligopolistic competition – face similar information problems. They also do not understand reality fully. Students of market failure have pointed out that risk-averse firms will make fewer and less far-reaching agreements than they would under conditions of perfect information. Indeed, they will eschew agreements that would produce mutual benefits. Three specific problems facing firms in such a context are also serious for governments in world politics and give rise to demands for international regimes to ameliorate them.

(1) *Asymmetric information.* Some actors may have more information about a situation than others. Expecting that the resulting bargains would be unfair, “outsiders” may therefore be reluctant to make agreements with “insiders.”³⁷ One aspect of this in the microeconomic literature is “quality uncertainty,” in which a buyer is uncertain about the real value of goods being offered. In such a situation (typified by the market for used cars when sellers are seen as unscrupulous), no exchange may take place despite the fact that with perfect information, there would be extensive trading.³⁸

³⁶ Herbert Simon, “From Substantive to Procedural Rationality,” in Latsis, ed., *Method and Appraisal in Economics*; Spiro J. Latsis, “A Research Programme in Economics,” in *ibid.*; and on blackmailing, Oye, “The Domain of Choice.”

³⁷ Oliver E. Williamson, *Markets and Hierarchies: Analysis and Anti-Trust Implications* (New York: Free Press, 1975).

³⁸ George A. Akerlof, “The Market for ‘Lemons’: Qualitative Uncertainty and the Market Mechanism,” *Quarterly Journal of Economics* 84, 3 (August 1970).

(2) *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.³⁹

(3) *Deception and irresponsibility*. Some actors may be dishonest, and enter into agreements that they have no intention of fulfilling. Others may be “irresponsible,” and make commitments that they are unlikely to 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 analogous to problems of self-selection 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.”⁴⁰ In international politics, self-selection means that for certain types of activities – for example, sharing research and development information – weak states (with much to gain but little to give) may have greater incentives to participate than strong ones. But 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;⁴¹ but from the standpoint of the actor trying to determine whether to rely on a potentially irresponsible partner, it is a problem of uncertainty and risk. Either way, information costs may prevent mutually beneficial agreement, and the presence of these costs will provide incentives to states to demand international regimes (either new regimes or the maintenance of existing ones) that will ameliorate problems of uncertainty and risk.

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³⁹ Arrow, *Essays in the Theory of Risk-Bearing*.

⁴⁰ Akerlof, “The Market for ‘Lemons’”; Arrow, *Essays in the Theory of Risk-Bearing*.

⁴¹ For an analysis along these lines, see Davis B. Bobrow and Robert T. Kudrle, “Energy R&D: In Tepid Pursuit of Collective Goods,” *International Organization* 33, 2 (Spring 1979): 149–76.

4. CONCLUSIONS

The argument of this paper can be summarized under [five] headings. First, international regimes can be interpreted, in part, as devices to facilitate the making of substantive agreements in world politics, particularly among states. Regimes facilitate agreements by providing rules, norms, principles, and procedures that help actors to overcome barriers to agreement identified by economic theories of market failure. That is, regimes make it easier for actors to realize their interests collectively.

Second, public goods problems affect the supply of international regimes, as the “theory of hegemonic stability” suggests. But they also give rise to demand for international regimes, which can ameliorate problems of transactions costs and information imperfections that hinder effective decentralized responses to problems of providing public goods.

Third, two major research hypotheses are suggested by the demand-side analysis of this article.

- (a) Increased issue density will lead to increased demand for international regimes.
- (b) The demand for international regimes will be in part a function of the effectiveness of the regimes themselves in developing norms of generalized commitment and in providing high-quality information to policymakers.

Fourth, our analysis helps us to interpret certain otherwise puzzling phenomena, since our constraint-choice approach allows us to see how demands for such behavior would be generated. We can better understand transgovernmental relations, as well as the lags observed between structural change and regime change in general, and between the decline of the United States’ hegemony and regime disruption in particular.

Fifth, in the light of our analysis, several assertions of structural theories appear problematic. In particular, it is less clear that hegemony is a necessary condition for stable international regimes under all circumstances. Past patterns of institutionalized cooperation may be able to compensate, to some extent, for increasing fragmentation of power.

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None of these observations implies an underlying harmony of interests in world politics. Regimes can be used to pursue particularistic and parochial interests, as well as more widely shared objectives. They do not necessarily increase overall levels of welfare. Even when they

do, conflicts among units will continue. States will attempt to force the burdens of adapting to change onto one another. Nevertheless, as long as the situations involved are not constant-sum, actors will have incentives to coordinate their behavior, implicitly or explicitly, in order to achieve greater collective benefits without reducing the utility of any unit. When such incentives exist, and when sufficient interdependence exists that *ad hoc* agreements are insufficient, opportunities will arise for the development of international regimes. If international regimes did not exist, they would surely have to be invented.

