

Scott Barrett. 2002. *Environment and Statecraft: The Strategy of Environmental Treaty-Making*. Oxford: Oxford University Press.

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Scott Barrett's new book entitled *Environment and Statecraft* is destined to become a landmark in the pursuit of knowledge regarding the determinants of success and failure in efforts to solve largescale environmental problems through sustained international cooperation. What makes this book outstanding is not the presentation of new findings, though Barrett offers a wide range of interesting arguments about specific factors affecting cooperation. Rather, the book's most striking feature is the effort to pull together "many disparate ideas" associated with the economic/game theoretic approach to international cooperation and "to combine and package them in a coherent fashion" (p. 358). The result is a wide-ranging survey in which the major ideas are presented in a manner that is analytically rigorous yet accessible to any reader prepared to take the time to work through the logic of the key models. Notable as well is the fact that Barrett concentrates throughout on connecting theory and practice. As he puts it, theories of international cooperation should "provide an approach for the conduct of policy," and "practitioners need to think deeply about these problems" (p. 358). The result is a book that is likely to stand for some time as the most important statement of the economic/game theoretic approach to international cooperation in the realm of environmental affairs.

A few simple propositions suffice to characterize the core of this approach. Collective-action problems involving such matters as the use of common property resources and the provision of public goods (e.g. an intact stratospheric ozone layer) are common occurrences at the international level. Actors (and on Barrett's account they are ordinarily states) often enter into international agreements designed to solve these problems. But the absence of an effective public authority at the international level makes it difficult at best and often impossible to enforce the terms of these agreements. To be effective, then, these international agreements must be "self-enforcing" or, in other words, "individually rational, collectively rational, and fair" (p. xiv). In effect, a successful agreement must produce an outcome that is an equilibrium in the sense that individuals cannot improve on the outcome for themselves through unilateral actions and the group has no incentive to renegotiate the agreement (pp. 196, 205). The key to success in this endeavor is to restructure "the relationships among the countries," changing the rules of the game in such a way as to alter the incentives of the member states (p. 196). The specific mechanisms needed to accomplish this restructuring are linked to features of the problem at hand, and much of the book is devoted to identifying factors leading to success or failure in such efforts under a variety of specific circumstances.

Drawing heavily on N-person game theory and analyzing key features of different payoff structures, Barrett generates an array of conclusions about fac-

tors that need to be considered in efforts to transform underlying dilemma games into relationships that allow for self-enforcing agreements. Some of these conclusions reemphasize familiar propositions. Coordination problems are easier to solve than cooperation problems. The difficulties in structuring incentives to produce self-enforcing agreements increase as the number of independent participants rises. There are sometimes opportunities to change incentives by switching from one policy instrument to another (e.g. from discharge standards to equipment standards in the case of oil pollution at sea). But others involve strikingly new insights. Non-participation may emerge as an obstacle that is more severe than non-compliance and, in any case, a "treaty that sustains real cooperation must deter non-compliance and non-participation" at the same time (p. 355). International agreements seldom structure incentives in such a way as to achieve full cooperation, a fact that means they are "often able to sustain only a second-best outcome" (p. 357). Designers of international agreements almost always face a "trade-off between the depth and breadth of cooperation," and the optimal mix is apt to be a function of the number of countries involved (p. 356).

How should we evaluate the models Barrett constructs and the conclusions they yield? The models themselves are deductive systems whose implications are logically entailed. Moreover, Barrett makes use of extended analyses of the fur seal agreement of 1911 and the Montreal Protocol of 1987 along with more limited accounts of many other agreements to show that the theory he develops offers penetrating insights into the forces at work in specific cases. Still, this leaves the status of the theory on somewhat shaky ground. As Barrett himself observes, "great care must be taken in holding history up to the light of a highly abstract model (p. 358). The well-known problems of specifying payoff structures for real-world situations in a manner that is precise yet not arbitrary makes it impossible to cast the insights of this theory in the form of predictive generalizations and "test" them against evidence drawn from a sizable universe of cases. Although Barrett refers in passing to the findings of the growing body of experimental literature on decisionmaking under a variety of circumstances, his models rely resolutely on utilitarian precepts featuring standard calculations of expected utility. It would be an interesting exercise, for instance, to consider how various assumptions about risk aversion and precautionary behavior would alter the tortuous calculations of marginal benefits and costs that Barrett reviews in his final chapter on climate change as well as the conclusions about the Kyoto Protocol emerging from these calculations.

It is worth noting as well, that Barrett's concern with the importance of offering strategic advice that "can help practitioners" (p. 358) leads to a mode of analysis that simply does not address many issues that have occupied the attention of those pursuing other approaches to international cooperation. He has little to say, for instance, about the actual processes through which issues are framed in policy settings and make their way to a high enough place on the policy agenda to command focused attention. His emphasis on the analysis of pay-

off structures precludes any systematic concern for the role of integrative bargaining or the exercise of power in the treaty-making process. His state-centric approach rules out any sustained assessment of the growing role of non-state actors and, more generally, civil society in addressing largescale environmental problems. Although he acknowledges the problem posed by the difficulties of constructing counterfactuals in this field of study, he has nothing to say about a variety of efforts on the part of analysts operating within the framework of the “new institutionalism” to devise methods to firm up our understanding of the roles that institutions play as determinants of collective outcomes in a variety of social settings. At the end of the day, therefore, he is unable to say with certainty whether even apparently successful agreements like the Montreal Protocol really do make a difference in solving major environmental problems.

That said, a particularly attractive feature of this book is its clear and consistent focus on the design of international agreements and its deliberate engagement with the concerns of practitioners responsible for crafting the provisions of specific agreements like the Montreal Protocol and the Kyoto Protocol. The take home message in this connection is that “different environmental problems . . . will have different, usually second best, international remedies” (p. 398). This conclusion is surely right. In a lengthy concluding chapter on climate change, Barrett drives this point home by exploring the fundamental differences between the problems of ozone depletion and climate change. As he observes in a powerful critique of the Kyoto Protocol, “Montreal was the wrong model, and the Kyoto Protocol is unlikely to sustain meaningful cooperation” (p. 360). Interestingly, his analysis of the problem of climate change leads to the conclusion that an agreement emphasizing policies and measures including technology standards may work better in addressing climate change than the focus on quantified targets and timetables that lies at the heart of the Kyoto Protocol. As he notes, the MARPOL treaty dealing with ship-based pollution may be a better source of insights regarding the treatment of climate change than the Montreal Protocol. Barrett himself observes that this line of reasoning with its emphasis on action-based measures that do not depend on the market to achieve their goals “will seem a curious proposal” coming from an economist (p. 398). Far from being a cause for criticism, however, this counterintuitive conclusion serves to underline the subtlety as well as the power of the theory set forth in this important book. All those desiring to match the provisions of international agreements with the principal features of specific environmental problems will do well to ponder what Barrett has to say about such matters.