

CONSTRUCTING EFFECTIVE ENVIRONMENTAL REGIMES

George W. Downs

Department of Politics, New York University, 715 Broadway, New York, New York 10003;
e-mail: George.Downs@nyu.edu

Key Words environmental agreements, effectiveness, multilateral institutions, political economy, constructivism

■ **Abstract** In the environmental literature, accounts of cooperative progress commonly emphasize the activity and leadership of nongovernmental organizations, as well as the constitutive roles that environmental regimes play by legitimizing, by promoting reflectivist discourse, and by redefining roles. This essay lays out the differences between the constructivist and political-economic theories of environmental regime effectiveness and examines the extent to which the constructivist emphasis is empirically justified by three recent collections of case studies. Of the surprisingly modest effects that environmental regimes have had, most appear to have come through the use of mechanisms that already play a prominent role in the political economy literature. Constructivist processes, despite the attention they have received, appear to have had only a marginal impact.

INTRODUCTION

The political science literature on environmental cooperation differs from the literatures of security and trade regimes in at least three ways. One difference is that the environmental literature emphasizes the impact of organizational and institutional strategies on cooperation far more than the effects of socioeconomic and political variables. For every article describing the role of per capita income, type of government, or relative price changes, there are ten that describe the role of nongovernmental organizations (NGOs). A second difference is that both formal and statistical models are far more scarce in the environmental literature; one sees the occasional flowchart or table but equations of any sort are exceedingly rare. Finally, the literature on environmental regulation is far more self-consciously prescriptive; recommendations about how to best promote cooperation are the rule rather than the exception.

Part of the explanation for these differences is undoubtedly that the vast majority of individuals who do research on environmental cooperation are active environmentalists who want to increase the effectiveness of both existing and

future regimes. They focus on institutions because institutions promise policy leverage and are amenable to influence. An equally important part of the explanation appears to be that environmental researchers typically view state preferences as being far more malleable than do political economists.

In addition to sharing with political economists the belief that institutions make coordination easier by lowering transaction costs and influence state policy strategies by altering payoffs, environmental researchers also believe that institutions can reconstruct states' identities and their underlying value structures by relying on the transforming power of a variety of social processes. This belief helps explain the nature of the methodology that dominates the field and its institutional focus. The extreme malleability of preferences makes the coefficients and equilibria that might emerge from conventional statistical and formal models seem irrelevant—reflecting, at best, interesting snapshots of an as-yet-undefined historical process. The malleability of state preferences also suggests that social scientists have an unprecedented opportunity to influence environmental outcomes by influencing the institutions that are in a position to reconstruct state preferences, notably regulatory institutions and NGOs.

This essay questions the extent to which this belief in the ability of social processes to alter states' utility functions is substantiated in the growing literature on environmental effectiveness and considers the implications of the answer for estimating the relative explanatory power of constructivist and political economic theories about the role of institutions in the evolution of cooperation. First, however, it is necessary to outline the two theories, highlighting their differences and their effects on empirical expectations about the impact of institutions on the evolution of environmental cooperation.

THE CONSTRUCTIVIST PERSPECTIVE AND EFFECTIVENESS

Constructivism is a notoriously slippery concept that has had many different theoretical representations in connection with institutions (Ruggie 1998, Young 1999, Kingsbury 1997). This essay focuses exclusively on those constructivist processes that are argued to lead to the reconstruction of state identities and the transformation of states' underlying value structures. This focus eliminates processes such as the diffusion of information and the development of new knowledge, neither of which usually leads to a reconstruction of a state's underlying preference structure and both of which have long been integral to the political economy and utilitarian perspectives. Specifically, constructivism is represented here by three processes that play virtually no role in any rival paradigm: legitimation, role definition, and reflectivist appraisal.

Legitimation

Young & Levy (1999:24) argue that those who regard the rules and provisions of regimes as legitimate or authoritative will often comply with their requirements

without engaging in detailed calculations of the benefits and costs of doing so. In the case of individuals, this behavior results from socialization. At the institutional level, it occurs through internalization or routinization; bureaucrats charged with implementing a given regime do so without extensive calculations and, if questioned, justify their actions by referring to their mandate.

Constructivists expect the legitimacy of a regime's rules to be a function of the process by which the regime was created and by which the rules were made and of how long the regime has been in place. Frequently mentioned as determinants of legitimacy are democratic decision-making, high consensus standards, and the degree of distributive fairness embodied in standards. The length of time a regime has existed is important because the socialization of individuals grows deeper over time and because a bureaucracy's procedures multiply over time and also become progressively more routinized. Less often mentioned but probably also important is the set of states that support a particular regime standard. Developing countries are characteristically wary of rules that they view as having been designed and backed primarily by developed states.

Role Redefinition

Although regimes rarely create new actors, they do shape the identities and preferences of extant ones by defining roles and assigning them to the various actors. These new roles gradually generate new identities for the states that occupy them, and with these new identities come new interests (Wendt 1992:396–99). For example, the United Nations helped foster the creation of a host of new identities and leadership roles such “permanent member of the Security Council,” “friend of the Secretary General,” and “nonaligned state.” To the extent that this redefinition of roles is driven by a nonutilitarian social process and is not simply an outcome of calculated bargaining, it can be considered a constitutive process.

The literature is not clear about the conditions that lead to significant role redefinition, but the examples given imply that it is related to the size of a regime and the complexity of its goals. Thus, we would expect relatively little role redefinition to emerge from a bilateral water management regime or even the Agreement for the Conservation of Polar Bears compared with the Climate Change Agreement or Convention of International Trade in Endangered Treaties.

Reflection

Reflectivist appraisal processes are more complicated and operate more subtly than legitimation or role redefinition. They generate cooperation by transforming underlying interests as states interact with each other. Wendt (1994) describes two such processes and another that is closely related. In the two processes that he groups together as strictly reflectivist, actors adopt identities by learning through interaction to see themselves as others see them. The more materially or psychologically dependent an actor is on others, the greater will be the impact of the perception of these external actors.

The first reflectivist process emphasizes the impact that cooperative interaction will have on the “other”: “By showing others through cooperative acts that one expects them to be cooperators too, one changes the intersubjective knowledge in terms of which their identity is defined” (Wendt 1994:390). The second reflectivist process is a reflective variant of the first. By engaging in cooperative interaction, a state projects something about itself that redefines the intersubjective environment from which it derives its self-conception. Another state absorbs this new presentation of the cooperator, projects this new identity back, and resocializes the cooperator to a new conception of itself. Thus, an actor’s self-concept will gradually change and the new identity (e.g. that of a cooperator) will be internalized (Wendt 1994:391). These two processes not only generate a level of cooperation greater than that predicted by a strategic, game-theoretic model, they also produce a convergence of identity such that actors learn to see themselves as “we” and are bound by certain norms.

The third reflectivist process involves the more self-conscious dimension of rhetorical practice, which takes the forms of discussion, dialogue, persuasion, and political argument. Although there is some overlap, this process is more fundamentally transformational and less information-based than that described in the literature of deliberative democracy (Habermas 1987; Elster 1998). According to Wendt (1994:391), “The goal of rhetorical practices in collective action is to create solidarity; thus they may have an important expressive function independent of their instrumental value in realizing collective goals.” Acts of cooperation create a language of cooperation that then frames actors’ responses to new events. In this way, cooperating engenders further cooperation. Wendt offers the examples of European statesmen talking about a “European identity” and of Gorbachev trying to end the Cold War with a rhetoric of “New Thinking” and a “common European home.”

Constructivists and their sympathizers believe that over time these processes together can produce a far higher level of compliance and a far deeper level of cooperation than might be achieved if states were driven by utilitarian calculations alone.

The Transformational Design and Its Assumptions

Although legitimation, role redefinition, and reflectivist appraisal are always operating, their ability to achieve their full cooperative potential depends to some extent on how the regime is designed. Four widely prescribed design recommendations are incorporated into what is sometimes known as the transformational model. This design calls for a policy of inclusive, universal membership, modest initial obligations, consensual decision making, and a preference for conflict resolution techniques over enforcement mechanisms.

Each of the design principles represents an empirical expectation that is tied to the operation of one or more of the three constructivist processes.

1. The more inclusive a regime, the greater the level of cooperation it will produce. Political economists are wary about admitting into a regime states

that are likely to undermine its cooperative evolution out of self-interest (e.g. incorporating the more environmentally regressive oil-producing states into the Climate Change Regime). With their high level of confidence in the ability of institutions to mold state preferences, constructivists are comfortable absorbing the initial cost of incorporating recalcitrant states, anticipating that their goals will become more progressive after legitimation, role redefinition, and reflective appraisal have kicked in. Further, a large membership itself promotes socialization because as state policy makers come to view an environmental problem as a common concern, they will begin to see fulfillment of their state's obligations as intimately linked to its standing in the wider community of states (Chayes & Chayes 1995:27). Thus, activist states and regime officials can apply community pressure to cajole laggard states into increasing their commitment to addressing an environmental problem.

2. Weak rules lead to more effective regimes and more cooperation in the long run than do demanding obligations. Initially, commitments and obligations should consist of few, if any, specific performance targets or timetables. This maximizes participation. Soft law is preferable to hard law because weak standards effectively reduce the price of admission to the regime, thus enticing even the least committed members to join. Once the states are members, the three constructivist processes can transform their preferences toward embracing more ambitious binding commitments. As Levy (1993:76) says of the convention on long-range transboundary air pollution (LRTAP), initially a weak institution oriented only toward scientific research and ambiguous goals, "Weak rules permitted strong consensus-building powers, whereas strong rules would have generated hostility on the part of governments...." Generality and vagueness also promote the ongoing dialogue that transforms and socializes the member states toward more progressive normative development.
3. Consensual decision making produces greater effectiveness than do less demanding, more majoritarian rules. Even if they choose to abide by the wishes of the majority, states that vote against an obligation are likely to feel alienated from the regime and are therefore less likely to actively participate in subsequent discussions connected with it. This interferes with the operation of all three constructivist processes. Moreover, an institution that requires consensus signals that it and the rules it promulgates are legitimate.
4. Coercive enforcement mechanisms operate to sabotage the evolution of effective regimes. The transformational design begins from the assumption that states have a "propensity to comply" with their treaty obligations. Non-compliance with environmental treaties is caused primarily by ambiguous and vague rules, unavoidable time lags between fundamental reform and performance, and the lack of technical or administrative capacity to implement complex environmental regulation. Sanctions not only are inappropriate, it

is argued, but often do more harm than good. By alienating states, the regime reduces the extent to which they view its rules as legitimate and distances them from reflectivist processes. Both tendencies are exacerbated by the fact that only the most powerful states can organize a multilateral sanctioning response.

It is important to note that the transformational design is no mere academic exercise. Fourteen of the 50 multilateral environmental agreements of which the United States is a member, including the Climate Change Convention, possess at least three of its four design prescriptions, and its underlying logic plays a prominent role in policy discussions (Downs 1998:342).

THE POLITICAL ECONOMY PERSPECTIVE

Let us now turn to the political economy literature's expectations about the determinants of environmental regime effectiveness. Political economists make no attempt to explain the nature of utility rankings or underlying tastes but assume that they are exogenous. As such, political economists are agnostic about the role of the processes of legitimation, role redefinition, and reflection in shaping the underlying preferences of states (except insofar as they believe that the evidence suggests that such underlying preferences are relatively stable). Political economists are, however, interested in (a) how an actor's preference for one good as opposed to another is affected by relative prices and (b) how relative prices are determined by technology, information, and the changes in incentives that are brought about by the policies of institutions.

The operation of relative price changes can be quite subtle, and economists have evidenced considerable creativity in devising theoretical arguments and presenting data to show that apparent changes in an actor's underlying utility function are, in fact, effects of relative price changes (North 1990). Becker (1996) has even attempted to explain changes in behavior in addiction or after developing a taste for classical music as the result of an accumulation of what he calls consumption capital.

Even if relative price changes are not the predominant source of state preference changes in the area of environmental regulation, they are certainly important. Some of the relative price changes with the greatest impacts stem directly from the effects of environmentally hazardous processes such as deforestation, acid rain, and ozone depletion. Others are closely tied to technological innovations. For example, the success of the Paris Commission at controlling land-based sources of Northeast Atlantic pollution appears to have more to do with the availability of water-based "muds" than with a sudden willingness of states to embrace more stringent and costly measures. Technology was also the driving force behind the cessation of virtually all offshore dumping and incineration under the Oslo Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft. Specifically, the cessation resulted from advances in land-based incineration that reduced the

cost of hazardous waste incineration, not from the normative transformation of Britain's environmental policy. Finally, Dupont's development of an alternative to fluorocarbons played a key role in overcoming industry objections to the Montreal Protocol in the US (Benedick 1988).

Because political economists do not believe that state tastes can easily be reconstructed, their predictions and implicit design recommendations are quite different from those of constructivist-oriented scholars. On the predictive side, Barrett (1997) suggests that the incentive for states to remain outside an environmental agreement and "free ride" means that only small multilaterals, and large ones that are very shallow, can be totally self-enforcing in the sense that they are sustained solely by reciprocity rather than by a linkage relationship to an agreement in another area such as trade. Political economists also argue that the prospects for an effective agreement are improved by the active leadership of at least one and probably more than one of the world's great powers because of their economic and military leverage over smaller states. Conversely, they expect an agreement's prospects for effectiveness to be reduced insofar as it depends on the participation of nondemocratic states, because an absence of democratic institutions increases the chances that producer interests, rather than consumer interests, will predominate.

The Transformational Design from a Political Economy Perspective

Political economists express concern about the consequences of combining universal membership with a high consensus norm. If the preferences of more regressive states are not changed or are changed only very slowly, these states will be able to block any progress that might have been possible with a smaller membership. These opportunity costs can be substantial. If Britain had been admitted to the original Coal and Steel Agreement and had maintained the position that it did in fact hold for the next 20 years, the evolution of the European Union would have been far slower. Similarly, India and China would have been able to block the writing of an effective Nonproliferation Treaty (Downs et al 1998).

Political economists are also skeptical of the claim that enforcement hinders cooperation rather than being sometimes necessary to facilitate it. Although enforcement plays a small role in coordination regimes, such as those establishing rules for handling emergencies at sea or delineating the notification procedures to be used for nuclear accidents—where there is little incentive for a state to unilaterally defect—some form of enforcement often plays an important role in Prisoners' Dilemma-type agreements, such as a fishing agreement or the Climate Change Agreement, in which defection can be quite profitable (Downs 1998).

Constructivist theorists who believe that state preferences are most frequently changed by social forces would doubtless respond that the results of models with different assumptions and evidence about the historical importance of relative price changes are hardly conclusive. Even some economists, after all, acknowledge that

there is evidence that purely constructivist forces can have an impact; for instance, the abolitionist movement succeeded in changing public opinion in Britain during the 1830s and in the northern states prior to the Civil War (North 1990:85). Is it not possible, the constructivists could ask, that more such examples might be uncovered if those searching for them were less negatively disposed to finding them than are most economists?

Constructivist theorists could further point out that the appearance of NGOs and the evolution of a more closely integrated global society are relatively new phenomena that may have dramatically increased the influence of outside forces on public opinion and state policy making. To the extent that today's world differs from the world of even only 30 years ago, is it unreasonable to believe that new rules hold sway? For better and worse, American culture has transformed the tastes of consumers all over the world. Is it not possible that a concerted campaign on the part of multinational institutions and NGOs or a pattern of continuous interaction between laggard states and more environmentally progressive states might be able to do the same?

Questions about the degree to which a state's underlying value structure can be reconstructed by social forces and about the relative importance of constructivist processes and political economic factors in shaping state preferences concerning the environment are unlikely to be resolved in the near future. However, new insights into these questions should be possible as we sift through the analyses of what has become an impressive number of environmental agreements. The following section considers the evidence contained in three recent collections of essays on effectiveness edited by Weiss & Jacobson (1998), Young (1999), and Victor et al (1998).

ASSESSING THE IMPACT OF CONSTRUCTIVIST PROCESSES

Compliance and Effectiveness

One way to assess the importance of constructivist processes is to examine their impact on compliance rates. Historically, international lawyers in particular have tended to tie compliance closely to effectiveness on the grounds that understanding the former is a prerequisite for predicting the latter. There are, however, numerous conceptual problems associated with using compliance as a surrogate for effectiveness. Because treaty standards are endogenous in the sense that they represent a joint strategy of the states that set them, and because states and the politicians who run them are motivated to appear successful, actors have an incentive to tie the terms of agreements to what they expect to be able to achieve. As a consequence, most compliance rates are likely to be high, especially when the political costs associated with failure are likely to be significant.

It follows that the compliance rate associated with a given treaty may have no relationship whatsoever to effectiveness. States that cannot summon the political will or financial resources to solve a challenging environmental problem but wish

to make a nominal gesture will set weak standards and then comply with them because they demand very little. Such standards, however, will rarely be effective. To further confuse matters, it is possible that partial compliance with a treaty that contains ambitious standards could be far more effective.

Beyond the problems posed by endogeneity, compliance studies tend to suffer from other methodological problems common to all areas of effectiveness research, especially those based on case studies. Particularly rare, for example, are careful counterfactual estimates of what would have happened in the absence of a given intervention. Most commonly, an analyst interested in the effect of NGO activity simply studies a case in which such activity was present and assigns any progress in compliance or effectiveness to NGO activity, even though some of that progress might have occurred because of a technological breakthrough, the political efforts of a major state, or any number of other causes. Similarly, the analyst interested in state capacity will compare the compliance rates of high-capacity states with those of low-capacity states and assume that the difference between them represents the impact of capacity instead of other systematic differences in the two types of states (e.g. differences in per capita income or technology).

Engaging Countries: Strengthening Compliance with International Environmental Accords (Weiss & Jacobson 1998), the first of the three books this essay examines, recognizes many of the limitations just discussed, especially the problematic relationship between compliance and effectiveness. The authors' attention to both cross-national and longitudinal variation in compliance rates makes it a rich source of information on the relative importance of structural and social forces, both of which are emphasized.

In many ways this book appears to attest to the relevance of the constructivist vision. Of the four sets of factors the authors believe are responsible for trends toward improved compliance in the late 1980s and the early 1990s, they deem the international environment to be the most important. This is the set that contains the greatest proportion of elements connected with reflectivist processes (e.g. international conferences, public and media opinion, and international NGOs).

Consistent with constructivist theory, Weiss & Jacobson (1998) find that states are highly sensitive to their position relative to other states—not so much because they fear material consequences in the form of formal or informal sanctions as because they fear the social and psychological consequences of being seen as a laggard. Reputation is especially important in areas that are highly visible because of such massive, well-publicized events as the Rio Conference or the concerted efforts of prominent NGOs.

Another process with a strong social dimension that Weiss & Jacobson emphasize is leadership, both by individuals inside a given state and by particular states operating in the international system. Indeed, leadership may be the most important factor of all. The authors note that the history of environmental progress in particular areas suggests that “what might be termed a leader is crucial to the negotiation of environmental accords and to the promotion of compliance with them. In fact, in the cases studied here, it is hard to see how effective progress would have been made without the efforts of leader countries” (Weiss & Jacobson 1998:537).

Without denying that these and other social forces played some role, one may question both how important they were relative to political-economic factors and the degree to which their effect was independent of those factors. The authors offer little evidence about the importance of international factors relative to the other areas, especially the characteristics of the problem area, including what they call the activity involved (i.e. the number of actors involved, the concentration of actors in major countries, and the effect of economic incentives). Yet, the broad features of Weiss & Jacobson's compliance histories coincide strikingly with the expectations of political economists—expectations based on variables very different from those at the foundation of the constructivist program. Thus, just as Barrett (1997) predicts, widespread cooperation in any meaningful sense is extraordinarily rare, and in cases where real progress has occurred, it can almost invariably be explained by the actions of a relatively small number of states whose per capita income is relatively high.

There are also issues concerning the independence of social forces from other aspects of the environment. For example, most of the international environment variables described above are endogenous to the extent that they are a function of the problem area. Major international conferences and NGO activity are a response to the severity of an environmental problem and its resultant damage. Because problem severity and estimated damage are inextricably tied to a problem's economic consequences, it is not easy to determine to what degree states are responding to economic costs versus responding to conferences or NGO activity. Doubtless the latter do have some independent or mediating effect on the outcome, but it is almost certainly less than it appears to be.

It is just as difficult to parse out the constructivist versus political-economic dimensions of leadership. However, the fact that the leadership role is always played by an economically powerful country suggests that the material component, rather than the normative one, is the critical factor. (If it were not, we would expect to see a more conspicuous role played by activist states such as Canada and Sweden, both of which have progressive environmental values and tend to be more trusted by Third World states than are the major powers.) Weiss & Jacobson apparently believe so, noting, "Because of their economic strength, three political units [the United States, the European Union, and Japan] were in a position to play a key role in the formation of environmental accords and in promoting compliance with them" (1998:537). In addition, the central leadership role of these powerful states again brings into question the independent power of NGOs, world conferences, and other dimensions of the international environment to effect change. At a minimum, it suggests that the impact of the latter forces is determined by their ability to activate a powerful state.

Problem Solving Success as Effectiveness

For the reasons outlined above, researchers in political science and economics are paying more attention to the effectiveness of environmental regimes and less attention to compliance rates. Among recent effectiveness studies, *The Effectiveness*

of *International Environmental Agreements* (Young 1999) contains perhaps the most systematic examination of constructivist processes. The authors of each of the book's three detailed case studies were asked to highlight the importance of six different regime functions. Two of these functions are primarily constructivist (legitimation and role definition) and several others contain constructivist elements (learning facilitation and internal realignment).

Mitchell et al (1998), the authors of the case on vessel-born oil pollution at sea, do not attribute any of the regime's success to its impact on role definition. However, they contend that the extrautilitarian impact that regimes had by virtue of the legitimacy or authority of the organizations that implemented portions of the regime were significant. The fact that the International Convention for the Prevention of Pollution from Ships' (MARPOL) equipment provisions had been developed inside the International Maritime Organization (IMO) gave them a legitimacy within the shipping community that they might not have had otherwise. There are at least two reasons for this. First, the shipping industry knew and trusted the IMO, and shipbuilders were used to implementing its regulatory standards in areas such as safety. Second, the transaction costs associated with implementation were reduced because regional organizations in Latin America, Asia, and elsewhere already had memos of understanding in which they agreed to inspect ships for violations of IMO standards.

In assessing the independent contribution of legitimation processes and understanding exactly what the nested cooperation between MARPOL and IMO signifies, it is worth noting that Mitchell et al do not claim that participating in a regime connected with the IMO led states to agree to deeper cooperation, only that implementation was better because the regime was able to exploit the IMO's reputation. The underlying utilities of the actors were never altered. There is also the issue of whether the process represents legitimation or something else. The line between enmeshing a state in a community of discourse and exploiting extant linkages for purely strategic reasons is a very fine one. It seems possible, for example, that policy makers in this case were motivated by purely utilitarian considerations—to take advantage of the reputation and administrative capacity of an existing organization. Reputation may have a normative component, but it may also be nothing more than a simple behavioral history that actors believe tells them something about future reliability.

Stokke et al (1999), the authors of the Barents Sea Fisheries case, assign some importance to role redefinition. However, the role redefinition they describe did not occur because of the fisheries regime. It was brought about by the Law of the Sea, which created 200-mile exclusive economic zones. These zones dramatically increased the power of coastal states to control key fishing areas and reduced the access of third parties to key harvest areas.

Moreover, it is not clear that this calculated redistribution of power was the outcome of a nonutilitarian process. The increased power of coastal states that resulted from the Law of the Sea was a consequence of its establishment of exclusive economic zones. These were the agreement's most distinguishing feature and were the outgrowth of tireless and careful negotiations.

Munton et al (1998), the authors of the case on the control of acid rain, believe (like Mitchell et al) that their case contains evidence of legitimation. The authors argue that although Great Britain had no economic or scientific reason to reduce its sulfur emissions in 1980 beyond a projected 25–29%, it increased that figure to 30% because that figure had been accorded special legitimacy by the regime. This contention is corroborated by the importance of a similar abstract benchmark achieved in 1993 and by roughly comparable events in Russia and Eastern Europe.

This evidence is less ambiguous than that in the cases discussed above. The 30% target does indeed appear to have had the kind, if not the magnitude, of impact that constructivists contend often determines the effectiveness of regimes. The only difficulty, as the authors readily admit, is that the magnitude of the effect described in the case is very modest.

In addition to the two primarily constructivist functions of legitimation and role redefinition, constructivist forces can influence state policies through what Young (1999) calls internal realignment; that is, reshaping the constellation of domestic interests and altering the balance of power among them. Young believes that one of the major contributions of *The Effectiveness of International Environmental Agreements* is to advance our understanding of the centrality of what regimes accomplish by precipitating internal realignments. “One of the most important processes at work here centers on the role of regimes in empowering and legitimizing various interest groups—some would call them communities—seeking to influence the behavior of governments on issues that regimes address” (Young 1999:264). Political economists typically incorporate internal realignment effects into their theories by considering the long-term impact of incentive changes on the political strength of various domestic actors and the coalitions of which they are members (see Gilligan 1997, Downs 1998:339). The constructivist dimension of internal realignment lies primarily in the symbolic significance of agreements and their constitutive effects.

Internal realignment played a small role in the oil pollution and fisheries cases but a larger role in the acid rain case, in which environmental forces seemed able to exploit the regime as a means of building political coalitions and exerting pressure on opposition groups. As a result, according to the case authors, the LRTAP regime played a “modest role” in realigning domestic politics in some countries (Munton et al 1998). Especially in Britain, LRTAP appears to have both inspired interest groups to mobilize and supplied them with a symbol that considerably increases their effectiveness. Internal realignment also seems to have had an effect—though a somewhat smaller one—in Germany.

Despite this evidence, Young’s cases reinforce the standard political economy vision of regimes far more than they challenge it. Exogenous changes in relative prices in the form of deteriorating environmental conditions invariably constitute the principal motivation for the creation of the regime, and the country-specific consequences of these price changes interacting with country-specific economic conditions determine most of the differences in the policy positions of individual

states. Regimes affect state preferences primarily by restructuring incentives and reducing transaction costs.

The Implementation and Effectiveness of International Environmental Agreements (Victor et al 1998), unlike Young's book, makes no explicit attempt to evaluate the relative importance of nonutilitarian motivations and constructivist processes. Its cases do, however, devote considerable attention to evaluating the impact of "breadth of participation," which the literature argues is central to reflectivist processes. The cases suggest that, consistent with constructivist expectations, greater NGO participation leads to the formulation of more demanding environmental policies. Yet, curiously, this stringency of declared policies does not appear to have much impact on actual state behavior. In the case of NO_x regulation, for example, the United Kingdom, the Netherlands, and Norway all had different levels of NGO participation and correspondingly different policies; yet the three countries all achieved roughly the same level of emissions. More important in accounting for actual outcomes were factors related to the role of relative prices, exactly as economists would have predicted (Raustiala & Victor 1998). In the United Kingdom, emissions became easier to control because of an apparently unrelated restructuring of the power sector and an increase in the natural gas supply. A similar increase in supply was important in the case of the Netherlands. In Norway, emissions went up because of an unanticipated increase in the effluents from ships.

At the international level, the impact of widespread state participation was similar to that of NGO participation within states. Thus, there is no indication that a high level of interaction leads to reflectivist resocialization and more progressive values, especially in the case of nonliberal states, which consistently have the least progressive stance toward the environment. Raustiala & Victor (1998) conclude that however beneficial universal participation may be for establishing the legitimacy of a given regulatory agreement, the reluctance of nonliberal states to vote for demanding standards may condemn widely participative multilaterals to a lifetime of shallow cooperation.

In addition to the participation results, *The Implementation and Effectiveness of International Environmental Agreements* contains some provocative findings about the impact of nonbinding agreements. These findings are potentially relevant to the constructivism-political economy debate because, according to some authors, they perform an explicitly reflectivist function. Kingsbury (1997) suggests that the fact that nonbinding agreements allow states to make more ambitious commitments is by itself an explanation of their effectiveness because such commitments push states toward what they imagine themselves capable of. According to this argument, transparency and extensive implementation reviews are important components of nonbinding agreements not so much because of the social or material sanctions that they threaten but because of the additional opportunity they provide for reflectivist forces to operate. In short, they deepen the constitutive process.

Raustiala & Victor (1998) suggest that under conditions of uncertainty, non-binding agreements facilitate but do not directly cause more effective cooperation

by permitting states to make more ambitious commitments than they would otherwise make. The ambitious goals then inspire them to make more intensive efforts to change the behavior of target groups than they would otherwise. Binding agreements cannot fulfill the same function because states are reluctant to commit themselves to a standard that they could be punished for failing to achieve. Further, nonbinding agreements facilitate learning by doing and allow states to move forward faster with lower transaction costs. Raustiala & Victor believe that these benefits support taking a new approach to international environmental governance.

Currently, there is great enthusiasm for the power of nonbinding agreements to promote cooperation. Contesting the common assumption that states would be more likely to comply with binding commitments, Weiss (1997) notes that experience reveals little or no difference in compliance. The findings are similar in effectiveness research. According to Raustiala & Victor (1998:685), their cases “point to many instances where nonbinding commitments have had a greater influence on behavior, especially when states have sought the benefits of international cooperation but have been uncertain of their ability to implement commitments.” Defection, so feared by advocates of binding agreements, is avoided through the use of transparency and extensive implementation reviews. Since these are not tied to the application of material sanctions in nonbinding agreements, they appear to promote compliance by virtue of the social approbation or diminished status within the community of states that follows from a violation of its normative structure. Thus, in connection with North Sea pollution, Britain was progressively isolated as the “Dirty Man of Europe” and faced high-level pressure at the North Sea Ministerial Conference. Raustiala & Victor (1998:688) note that nonbinding agreements not only take advantage of states’ concern about losing face and suffering reputational damage but also allow reflectivist processes to operate on individuals who have the most power to influence policy making in their states.

There are several objections to this assessment of the relative effectiveness of nonbinding versus binding agreements and to the constructivist account of how they operate. With respect to estimating the relative effects of the two types of agreements, this conclusion is insensitive to the effects of endogenous selection that plagued earlier work on compliance. Given the obvious differences between binding and nonbinding agreements, it seems extremely unlikely that states employ the two under the same conditions. It may therefore be inappropriate to make direct comparisons of their respective compliance rates or levels of effectiveness and to argue consequently that because they are roughly equivalent, they are also interchangeable. Such comparisons might be like comparing the success rates of United Nations operations in which force is used with operations in which UN activity is restricted to mediation. Perhaps the higher success rate of mediation means that that it works better than force, but perhaps not; it may mean that force tends to be used when officials have good reason to believe that mediation will not be successful (e.g. in Korea). At the very least, if one believes that such data shows that there is no reason to use force anymore, one must bear the usually substantial burden of demonstrating either that force and mediation have been employed in similar contexts or that the differences in context do not effect the relative success rates.

There is also a political economy account of how nonbinding agreements operate that must be disposed of before the constructivist account can be embraced wholesale. Indeed, a substantial literature in political science and economics deals with agreements that are nonbinding in the legal sense but are enforced by exogenous relative price changes and the regime-based manipulation of incentives. These include tacit arms control agreements, unofficial cease-fires, price fixing, the recognition of spheres of influence by nation-states, oligarchy, and so forth. This literature is complementary to the literature of international law in its contention that such nonbinding agreements are often motivated by a need for flexibility and a desire to avoid the high transaction costs of more formal agreements. However, the political economy literature differs dramatically in the role that it assigns to normative and material forces in sustaining compliance. According to the political economy literature, tacit arms agreements between rival states and price fixing agreements among oil producers are not held together by a common normative framework so much as by the unspoken knowledge that one party's violation will lead to a comparable relaxation of the agreed-upon standards by the other party.

To support this position, political economists (e.g. Barrett 1997) would point out that their theory predicts that since nonbinding accords exploit the power of reciprocity, relatively few states will be involved, at least in that subset of cases in which such accords lead to deep cooperation. Significantly, this prediction appears accurate in Victor et al's (1998) most prominent examples, e.g. the North Sea case.

CONCLUSION

Unlike the literatures dealing with trade and security cooperation, the literature on environmental cooperation tends to emphasize constructivist explanations of change, as opposed to more traditional political and economic explanations. Explanations for cooperative progress commonly refer to the importance of NGO activity and leadership, and to the socializing and constitutive influence that regimes exert by their capacity to legitimize, promote reflectivist discourse, and redefine roles. This essay has evaluated this constructivist orientation by examining the extensive case evidence contained in three recent volumes dealing with different dimensions of regulatory effectiveness in environmental regimes.

Despite the variation across the twenty-odd cases described in the three books, the empirical picture of environmental cooperation and the role of environmental regimes in changing state preferences differs remarkably little—at least qualitatively—from that which has emerged in the security and trade literatures and from the expectations established by the political economy literature. Relative price changes, usually in the form of costly deterioration of environmental conditions and the development of improved environmental technologies, have been by far the most important determinants of changes in state preferences. Although these exogenous relative price changes may not be sufficient conditions for the establishment of effective regulation, it appears that without them, nothing is likely to

happen. Their primacy suggests that they set an important limit on the malleability of state preferences by institutions.

One of the most interesting and well-established findings in the area of multilateral environmental regulation is that cooperation *per se* has played a very modest role in achieving this progress. A great deal of evidence (Downs et al 1996, Murdoch & Sandler 1997, Sandler 1997, Victor et al 1998) indicates that most cooperative agreements are relatively shallow in the sense that they do not require states to do much more than they would have done in the absence of the agreements. This is not to deny that states have made progress in ameliorating environmental problems such as acid rain, wetland depletion, and water pollution. But such progress has generally occurred relatively independently of regimes. This leads one to conclude that relatively little cooperative progress can be explained by anything that regimes have done, whether by reconstructing preferences along constructivist lines or by manipulating incentives.

This absence of cooperative progress poses a greater challenge for constructivists than for political economists, because it is the constructivists who most strongly emphasize the ability of institutions to reconstruct the underlying value structures of states by promoting identity convergence. However, the three recent books on effectiveness discussed here provide little evidence that such value reconstruction regularly takes place or that it is systematically linked to the design characteristics embodied in the transformational model.

Of the modest contribution that regimes have made, most has come through the use of mechanisms that already play a prominent role in the political economy literature. These include commitment to reciprocal action that is likely to be withdrawn if massive noncompliance is found during implementation review, the creation of modest sanctions and financial incentives, the imposition of political and economic pressure by powerful developed states, and the diffusion of improved information about the costs and trajectory of environmental destruction. Because several of these mechanisms are typically present in the same regime, it is difficult to evaluate their relative importance.

Constructivist processes, at least as they are described in the three books reviewed here, appear to have played a minor role. The most important constructivist processes tend to be reflectivist. A number of cases suggest that developed democratic states and states eager to be accepted into trade organizations such as the European Union are concerned enough about their reputations as environmentally progressive states to adopt policies that they otherwise might not. However, the impact of this reputational incentive is never very great. It inspires states to perform slightly better than a narrower conception of their self-interest would predict, but this small difference does not indicate that these processes are powerful enough to reconstruct the preferences of environmentally unprogressive states.

Evidence of the advocacy effectiveness of NGOs and NGO participation—a constant preoccupation in the environmental literature—is present, but it is more modest and more ambiguous than the literature suggests (Wapner 1996, Princen & Finger 1994, Hurrell & Kingsbury 1992). NGO participation leads to more

demanding environmental policies but does not necessarily affect the level of state implementation (Victor et al 1998). This finding suggests that just as relative price changes set limits on the ability of social processes to reconstruct state preferences, government bureaucracy may impose other limits. It also may indicate that NGOs have greater capacity to mobilize opinion than to monitor government activity or environmental outcomes.

The research on effectiveness reported here does, however, point to two potentially interesting areas where constructivist forces interact with political economy processes. One subject for future research is the importance of constructivist processes in animating the regulatory potential that is established by relative price changes and income effects. If one could control for the potential net economic benefits of regulation, would one find a large variance in the effectiveness of regimes and states receiving high scores that could be accounted for by constructivist variables? Beyond controlling for net economic benefits of regulation—no small matter in itself—answering this question would require both further refinement in the infant craft of developing constructivist process indicators and the conscious inclusion of cases where exogenous price changes have occurred but where there has been little or no environmental progress.

A second synthetic area worth exploring is the process Young (1999) calls internal realignment, or the capacity of regimes to empower and legitimize interest groups. Here, it might be relative price thresholds that play the animating role. That is, the impact of realignment—like the impact of regimes themselves—might well be contingent on the achievement of a certain relative price threshold. This would explain why, even though Germany has some of the most radical environmental groups in Europe, neither of Germany's major political parties did much about acid rain until problems began appearing in German forests (Munton et al 1999).

Whatever happens next, environmental researchers in the political science and international-law traditions should temper their faith in the power of social processes to reconstruct state preferences and the feasibility of environmental change strategies based on this alleged power. While neither should be dismissed out of hand, there is no indication that either holds the potential that their proponents claim. If anything, recent effectiveness studies—and the extremely modest levels of multilateral cooperation that have been achieved to date—argue precisely the opposite.

Visit the Annual Reviews home page at www.AnnualReviews.org

LITERATURE CITED

- Barrett S. 1997. Towards a theory of international environmental cooperation. In *New Directions in the Economic Theory of the Environment*, ed. C Carlo, D Siniscalco, pp. 239–80. Cambridge, UK: Cambridge Univ. Press
- Becker GS. 1996. *Accounting for Tastes*. Cambridge, MA: Harvard Univ. Press. 268 pp.

- Benedick RE. 1988. Ozone diplomacy: new directions in safeguarding the planet. Cambridge, MA: Harvard University Press. 512 pp.
- Chayes A, Chayes AH. 1995. *The New Sovereignty: Compliance with International Regulatory Agreements*. Cambridge, MA: Harvard Univ. Press. 404 pp.
- Downs GD. 1998. Enforcement and the evolution of cooperation. *Mich. J. Int. Law*. 19: 319–44
- Downs GD, Rocke DM, Barsoom PN. 1996. Is the good news about compliance good news about cooperation? *Int. Org.* 50:379–407
- Downs GD, Rocke DM, Barsoom PN. 1998. Managing the evolution of multilateralism. *Int. Org.* 52:397–418
- Elster J, ed. 1998. *Deliberative Democracy*. New York: Cambridge Univ. Press. 282 pp.
- Gilligan M. 1997. *Empowering Exporters*. Ann Arbor: Univ. Mich. Press. 186 pp.
- Habermas J. 1987. *The Theory of Communicative Action*, Vol. 1. Boston: Beacon. 399 pp.
- Hurrell AH, Kingsbury B, eds. 1992. *International Politics of the Environment*. New York: Oxford Univ. Press. 512 pp.
- Kingsbury B. 1997. The concept of compliance as a function of competing conceptions of international law. In *Engaging Countries: Strengthening Compliance with International Environmental Accords*, ed. EB Weiss, pp. 49–80. Washington, DC: Am. Soc. Int. Law
- Levy M. 1993. European acid rain: the Power of tote-board diplomacy. In *Institutions for the Earth*, ed. PM Haas, RO Keohane, MA Levy, pp. 75–132. Cambridge, MA: MIT Press
- Mitchell R, et al. 1999. International vessel-source oil pollution. See Young 1999, pp. 33–90
- Munton D, et al. 1999. Acid rain in Europe and North America. See Young 1999, pp. 155–248
- Murdoch JC, Sandler T. 1997. The voluntary provision of a pure public good: the case of reduced CFC emissions and the Montreal protocol. *J. Pub. Econ.* 63:331–49
- North DC. 1990. *Institutions, Institutional Change, and Economic Performance*. New York: Cambridge Univ. Press. 152 pp.
- Princen T, Finger M. 1994. *Environmental NGOs in World Politics*. London: Routledge. 272 pp.
- Raustiala K, Victor DG. 1998. Conclusions. In *The Implementation and Effectiveness of International Environmental Agreements*, ed. DG Victor, K Raustiala, EB Skolnikoff, pp. 659–707. Cambridge, MA: MIT Press
- Ruggie JG. 1998. *Constructing the World Polity*. London: Routledge. 312 pp.
- Sandler T. 1997. *Global Challenges: An Approach to Environmental, Political, and Economic Problems*. Cambridge: Cambridge University Press, 234 pp.
- Victor DG, Raustiala K, Skolnikoff EB, eds. 1998. *The Implementation and Effectiveness of International Environmental Agreements*. Cambridge, MA: MIT Press. 737 pp.
- Wapner P. 1996. *Environmental Activism and World Civil Politics*. Albany, NY: State Univ. NY Press. 238 pp.
- Weiss EB, ed. 1997. *International Compliance with Nonbinding Accords*. Washington, DC: Am. Soc. Int. Law. 264 pp.
- Weiss EB, Jacobson HK, eds. 1998. *Engaging Countries: Strengthening Compliance with International Environmental Accords*. Cambridge, MA: MIT Press. 615 pp.
- Wendt A. 1992. Anarchy is what states make of it: the social construction of power politics. *Int. Org.* 46:391–425
- Wendt A. 1994. Collective identity formation and the international state. *Am. Polit. Sci. Rev.* 88:394–98
- Young OR, ed. 1999. *The Effectiveness of International Environmental Agreements*. Cambridge, MA: MIT Press. 326 pp.
- Young OR, Levy MA. 1998. The effectiveness of international environmental regimes. In *The Effectiveness of International Environmental Agreements*, ed. O Young, pp. 1–32. Cambridge, MA: MIT Press