

International Environmental Negotiations: The Current State of Empirical and Analytic Study

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Gunnar Sjöstedt, ed., *International Environmental Negotiations*. Newbury Park, Calif.: Sage, 1993. 344 pages.

Lawrence E. Susskind, *Environmental Diplomacy: Negotiating More Effective Global Agreements*. New York: Oxford University Press, 1994. 201 pages.

Karen T. Litfin, *Ozone Discourses: Science and Politics in Global Environmental Cooperation*. New York: Columbia University Press, 1994. 257 pages.

Over the past decade, there has been an extraordinary rise in the prominence of international environmental policymaking. New treaties have been negotiated and implemented, new international institutions established or existing ones reformed, and massive political conferences such as the United Nations Conference on Environment and Development (UNCED), the "Earth Summit," held.¹ Accompanying this activity has been a wave of scholarly and research interest. Global environmental issues have prompted new interest in, and contributions to, studies of international regimes, institutional effectiveness, international law, the role of scientific advice in international policymaking, and the problems of treaty implementation and compliance, as well as the study of negotiations.

To study international environmental issues from the perspective of negotiations — rather than, for example, examining their implications for

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cooperation under international anarchy, for the effectiveness of international institutions, or for the relationship between scientific knowledge and political power — must denote a choice of either empirical domain or of analytical perspective.

To treat negotiations as an empirical domain is to identify certain processes and events of international environmental policymaking as “negotiations,” and direct empirical attention to them. These might include international conferences and meetings, parliamentary and diplomatic procedure, or the development of national position statements and negotiated text.

To treat negotiations as an analytical perspective, on the other hand, is to concentrate on certain analytic categories. Among these are parties, their perceived interests and alternatives to agreement, and how these change; approaches taken to solve joint problems and create joint benefits, and to claim value; processes of communication, accommodation and persuasion and their effects on parties’ perceived interests and behavior; and the effects of agenda and process innovations, including interventions by chairs or other neutrals.

Choosing a negotiations perspective implies making three significant assumptions about the character of international environmental policymaking.

- *The center of policymaking is (boundedly rational) actors.* Participants in environmental policymaking are actors — individuals, or collections of individuals acting together as organizations or governments — who seek to advance their interests. Interests may be imperfectly perceived or rapidly changing, and the effectiveness of their pursuit may be severely constrained. But policymaking is best understood as a process by which actors seek to advance their interests.
- *Outcomes are jointly chosen, not determined or imposed.* International environmental policy is made by joint decisions of participating parties, who have at least some discretion to make different choices. Outcomes are not determined by structure, nor can they be imposed by a single hegemonic actor.
- *Communication matters.* Parties to negotiations communicate, tacitly or openly, sincerely or strategically, and their communication can influence the joint agreements they reach.

These assumptions distinguish a negotiations perspective from other analytic approaches to international policymaking. The first contrasts with purely discursive approaches that remove actors from the center of policymaking, and with approaches that describe actors’ behavior in entirely non-rational terms. The second contrasts with strongly structuralist approaches to international relations. The third contrasts with strongly rationalist game-theoretic approaches in which communication is regarded as “cheap talk.” Any of these approaches may be instructive or valid, but they accord no importance or explanatory power to negotiations as an analytic construct.

The empirical and analytical aspects of a negotiations perspective are mutually compatible; one may coherently adopt either, or both. One may use various analytical approaches to study an empirically-bounded "negotiations" domain (as, in the books reviewed here, do Litfin and several contributors to the Sjöstedt book).² Or one may use a negotiation-analytic perspective to study any aspect of environmental policymaking, or indeed any domain of collective decision making.

But to study negotiations without making such a choice on either the empirical or analytical dimension is to fall into a trap, re-labeling phenomena as "negotiations" but providing neither a usefully focused empirical investigation, nor an analytical lens that advances understanding. This trap is not unique to international environmental negotiations, but is a risk that confronts any negotiation study. It arises whenever negotiation researchers simultaneously make two claims, each of which is separately attractive: (a) that many social processes can usefully be regarded as negotiation, even when not conventionally recognized as such; and (b) that negotiations can usefully be understood from diverse analytical perspectives.

Assuming this trap is avoided, studies of international environmental negotiations can offer insights into three kinds of questions, including scholarly questions of explanation and description, and practical questions seeking to provide advice.

1. "Internal" questions of explanation and prediction that seek to identify regularities and explain outcomes. What happens in international environmental negotiations, and why? Study of such questions can begin inductively, observing behavior and seeking patterns and regularities. Observed regularities, or particular outcomes, can be explained using analytic approaches drawn from negotiation analysis, from international relations, or from other sources.
2. Advisory questions that seek to inform actors in international environmental negotiations. How should one proceed to advance one's interests or attain a preferred outcome? Alternatively, how should negotiation processes be designed to promote better outcomes for all? One might seek to found such practical advice on empirical regularities or conceptual explanations. The goal must be that systematic study and analysis can provide well-founded practical advice that goes beyond what intelligent participants would already find obvious from their experience.
3. "External" questions of explanation and prediction that connect the environment to other domains of international affairs. Do environmental negotiations differ significantly from other fields of international diplomacy? To what extent and under what conditions can explanations drawn from other areas be applied to the environment? To what extent and under what conditions can insights or explanations derived from the environment help to understand other areas? When environmental nego-

tiations yield significant innovations, what effects are these likely to have on other domains of policy or diplomacy?

Through a review of three recent books, this essay considers the current state of scholarship and research on international environmental negotiations. The three were chosen because of their prominence, their strong focus on international environmental negotiations, and their disparate styles and methodological approaches. Several other recent books also address international environmental negotiations. In addition to Sjöstedt's edited collection of essays, environmental negotiations figure in other contributions of the Processes of International Negotiation (PIN) project of the International Institute for Applied Systems Analysis (IIASA), including Kremenyuk (1991) and Zartman (1994). Sjöstedt, Svedin, and Aniansson (1993) provide a collection of international environmental negotiation case studies, principally from Swedish negotiation participants. A series of edited volumes, published annually by the Program on Negotiation of Harvard Law School, provides a diverse collection of empirical case studies, methodological approaches, and reform proposals (Susskind, Siskind and Breslin 1990; Susskind, Dolin and Breslin 1992; Susskind, Moomaw and Najam 1993 and 1994; Moomaw, Susskind and Sawin 1995). Other recent works on international environmental policy whose relevance to a negotiations perspective is clear, though less explicit, include Haas, Keohane and Levy (1993), Keohane and Levy (1996), Sands (1994), Young and Osherenko (1993), Young (1994), Holdgate (1996), O'Riordan and Jaeger (1996), and Gunderson, Holling, and Light (1994).

International Environmental Negotiations

Edited by Gunnar Sjöstedt, *International Environmental Negotiations* collects a diverse set of cases and analytic perspectives. Two introductory chapters outline a conceptual framework; nine case studies summarize negotiation and policy history on particular international environmental issues; five concluding chapters provide distinct analytic perspectives. The volume's dual goals are to identify regularities from past international environmental negotiations, and to draw lessons of potential use to practitioners. The book does not seek to explain outcomes.

In the two opening chapters, Kremenyuk and W. Lang provide political, diplomatic, and legal background to international environmental issues, while Faure and Rubin propose organizing concepts and questions. Faure and Rubin's main contribution lies in two schemes they propose to structure the case studies to follow: first, a simple five-fold taxonomy to sort data from the cases (actors, structure, strategies, process, and outcomes); and second, a list of twelve characteristics they assert are more prominent in environmental negotiations than others, that significantly shape outcomes, and that may call for distinct approaches to negotiations.

These twelve characteristics are of mixed types. Some are simple and concrete, others abstract. Some describe the structure of global environmen-

tal issues, for instance uncertainty and shared interests with asymmetries, while others describe typical negotiation approaches or agreements, such as multi-party negotiations over multiple related issues, negotiations in public, or agreements that establish institutions. The most novel of their characteristics form a pair, in seeming opposition: international environmental negotiations often address widely shared interests in protecting the environment, but the immediate effect of negotiation is often perceived to be a distribution of harms, not benefits. This tension arises because the advancement of shared environmental interests often requires restraining continuing, profitable activity. The collective harm an activity imposes may not be evident immediately, but may only slowly become so as the activity grows in scale. Even then, the harm often must be inferred from scientific investigation, rather than being directly observable by all. Consequently, widely shared environmental interests are often latent, not clearly perceived at the outset. Environmental negotiations thus typically distribute immediate misfortune for eventual collective gain. Several essays in this volume investigate the implications of this central tension, as does Susskind's book.

The major contribution of the Sjöstedt book is in its empirical case studies. The issues studied vary in maturity, in physical scale,³ and in effectiveness of management. The cases are rich in factual detail, often reflecting the author's personal involvement, but are stronger in narrative than in analysis. Analysis typically consists only of taxonomic sorting of facts and events, for which only some of the contributors follow Faure and Rubin's five categories. Consequently, coordination among the cases is regrettably loose. Indeed, not all cases are consistent in their primary levels of description. Some are broad historical overviews of issues, while others provide substantial detail on particular actors, interests, institutions, meetings, proposals, and arguments. Some do not clearly distinguish negotiations, either as an empirical domain or as an analytical approach, from the broader study of international environmental affairs. The amount of factual detail in the cases defies summary; rather, I selectively identify from various cases a few events and processes that appear to be of greatest interest and to hold the greatest potential for drawing useful generalizations.

Szell's review of the Montreal Protocol negotiations on ozone depletion identifies two factors that favored those seeking strong controls. First, he argues that conflict over the pace of negotiations was a surrogate for conflict over stringency of controls. Activists repeatedly exploited periods of high political concern to force the pace, enacting strong measures that were not reversible when concern subsequently declined. While others have argued that the Protocol's provisions for periodic assessment and review acted as a ratchet forcing continual strengthening of measures (Tolba 1989), Szell identifies negotiating and political factors, independent of institutional design, that had the same effect. Second, the activists could often make and publicly defend extreme opening demands from which subsequent retreat still yielded significant tightening of controls. In contrast, opponents' opening

proposals were always bounded by the status quo, and forceful public defense of even this position could be politically costly. The natural succession of offer and counter-offer thus favored continual tightening of controls.

Szell's chapter and Kempel's chapter on the Basel Convention both describe the forceful role played by U.N. Environment Program (UNEP) director Mustafa Tolba, though only the ozone chapter explains how he gained this role. According to Szell, Tolba emerged as a strong mediator when two factions deadlocked and the chair had to leave a meeting suddenly, and did not relinquish the role for several years. The two authors characterize Tolba's role in sharply different tones — favorable in ozone and unfavorable in Basel — but the bases for this difference are unfortunately not addressed.

Thacher's detailed, thorough review of cooperation to protect the Mediterranean emphasizes the early period of pre-negotiation and problem definition. Particularly prominent are the roles that non-state actors, NGOs, and individuals played in shaping shared understandings of the problem at that stage. UNEP contributed strongly to this process, identifying and bringing together actors who might have common interests, from governments of different states or even from within the same government. UNEP's conduct here more closely exemplifies its often invoked "coordinating and catalytic role" than do the forceful interventions of the executive director at international negotiations identified by Lang and Kempel.

In a contrasting case, Mortimore describes the repeated failure of policy makers to achieve common action in the Sahel. He argues that here, cooperation was obstructed by precisely the lack of shared understanding of the problem whose early development Thacher argues was crucial in the Mediterranean negotiations. Mortimore also observes a key implication of uncertainty in environmental negotiations. With high uncertainty, though risks may be grave, negotiators can never know when it is essential to act. Consequently, deadlines are always socially or politically constructed, and so may appear arbitrary and lack the authority to compel serious movement toward agreement.

J.T. Lang's review of three treaties dealing with biological conservation makes three significant observations. First, referring to the Bonn Convention on Migratory Species, he notes that combining vague obligations with weak implementing bodies virtually guarantees stagnation. Second, he argues that states often participate in environmental negotiations with reluctance, which they wish to conceal. That some states wish to appear more committed to agreement than they are, he argues, accounts both for the importance of NGO participation and for the prominence of procedural conflicts as surrogates for substantive conflict. Third, he articulates a basic tension in environmental negotiations: stringency versus participation. Negotiations typically form around a core of enthusiasts who prefer strong measures. Broadening participation requires including less enthusiastic parties, who will only consent to join a common obligation at levels weaker than the

enthusiasts prefer. Unfortunately, the chapter neither identifies conditions that would favor pursuing more stringency or more participation at the margin, nor suggests in which order to pursue these two goals.⁴

In the final case, Sebenius draws from the Law of the Sea negotiations twelve lessons to apply to early climate-change negotiations. Several of his lessons take the form of tensions that must be balanced. For example, he notes that pursuing a broad package agenda with universal participation risks obstruction, but that separating narrower, issue-specific agreements risks selective participation and failure to realize potential joint gains. He proposes starting with modest measures and limited participation, seeking to broaden participation over time, and using review provisions such as those employed in the Montreal Protocol to increase stringency as necessary. He argues that drawn-out negotiations harm prospects for agreement, because initial activists are likely to become fatigued and divided over time, while potential opposing coalitions are likely to emerge and mobilize.

The five concluding chapters present a diverse, idiosyncratic set of analytic perspectives, some more and some less connected to the cases. Rubin identifies potential roles for third-party mediators in environmental negotiations that resemble jobs filled by chairs, individual delegates, and intergovernmental organizations in the cases. Young summarizes potential roles of international organizations in environmental negotiations. He argues that their greatest influence comes not during direct interstate bargaining, but both before and after, when they can help to frame issues and support implementation. This view is consistent with most of the cases, but not with ozone or the Basel Convention.

Zartman rejects the tendency to characterize international environmental negotiations primarily as group problem solving, with the associated assumption of predominantly common interests. He argues that interests do conflict, and resolving conflicts to reach agreements typically requires a dramatic moment, perhaps a crisis — hopefully one that can attract the required attention without being of global or catastrophic scale. Against those who stress the importance of early issue-framing by non-state, often scientific, actors, he argues that major interested parties must themselves participate in issue-framing, so as to define and bound the problem in a politically solvable way.

Zartman highlights two questions stemming from recent experience in international environmental negotiations. First, he asks whether agenda formulation can be made tighter and more systematic, while remaining as productive as it recently has been. Second, he describes recent experience as characterized by loose, vague initial agreements with review provisions that subsequently “fall forward” into tighter ones, and asks whether this fortunate progression can reasonably be expected to continue. On each question, his prediction is pessimistic. As scientific progress clarifies early perceptions of interests and process is tightened, ideological polarization and early obstruction are likely to increase. He contends that scientific progress and

institutional learning will have paradoxical effects, bringing international environmental negotiations increasingly to resemble the ideologically paralyzed "New International Economic Order" negotiations of the 1970s.

In conclusion, the case studies in this book provide useful factual data, and identify many provocative, interesting events. The conceptual and analytical pieces, while only weakly connected to the cases, also make some contributions. But in aggregate, the collection is too catholic and too undisciplined. By not adopting any consistent conceptual approach (except a set of taxonomic categories that not all authors follow), it renounces, explicitly, any attempt at explanation. The lack of conceptual rigor also prevents consistent organization of the case studies and fails to provide a structure by which to understand and examine the many intriguing observations the authors raise. Consequently, the collection fails in its aspiration even to identify regularities across cases. With no commonality of analytic perspective, the interpretation of events tends to be loose, ad hoc, and unique to each case, while the empirical and analytical boundaries of what the collection is studying are obscured. Consequently, at points the collection re-labels familiar phenomena as negotiations without thereby advancing understanding.

Environmental Diplomacy

In contrast with the Sjöstedt volume, Susskind's *Environmental Diplomacy* (1994) has a predominantly practical goal, seeking to inform negotiations and to advance an agenda for reform of the negotiation process. The author relies on a review of fifteen international environmental negotiations, and his considerable experience in domestic environmental dispute resolution.⁵ The opening chapter describes and critiques the current system for negotiating international environmental agreements, while the four central chapters each advance one component of Susskind's agenda for reform. A concluding chapter presents additional reform proposals.

The opening chapter accurately highlights many key aspects of current practice in international environmental negotiations, and identifies several weaknesses. Four of Susskind's criticisms are especially persuasive. These are: that scientific uncertainty is subject to partisan exploitation, so agreements may neglect the best available knowledge; that principles or early measures negotiated in a preliminary Convention may constrain later action in ways that turn out to be misguided; that the process lacks a stage of negotiations in which illustrative specific options can be considered without being misconstrued as, or quickly pressed to become, commitments; and that the system fails to encourage linkage of joint decisions across environmental issues or media, or more broadly between environmental and other issues such as trade, debt, development, or security. For each of these, it is persuasive that the failings are real, that they are exacerbated by current negotiation processes, and that feasible process reforms might mitigate them.

Several other critiques are slightly less persuasive, but still have some merit. These include the observations that international negotiations are

slow; that they gravitate toward "lowest common denominators" because of the tradeoff between increasing stringency and increasing participation; that countries bargain hard and exaggerate their needs; and that parties tend to perceive the allocation of costs more saliently in environmental negotiations than they perceive the joint gains to be realized. These problems may be worsened by weaknesses of negotiating process, but they also have partly structural origins, which are likely to limit the benefits available from even skillful process reform.

Other elements of Susskind's critique have less force. Some describe difficulties whose origins lie primarily either in the structure of interests typical of environmental issues (e.g., nations have incentives to free-ride, and monitoring and enforcement are difficult), or in the basic structure of the international system (e.g., powerful states often dominate outcomes). While it is clearly worthwhile to seek reforms of negotiation process that might mitigate these difficulties, it hardly seems appropriate either to blame their existence on shortfalls of current process, or to expect even the most inspired of process reforms to solve them. Other criticisms appear to be erroneous, or to depend on a specific and highly limited view of current practice, such as the claims that environmental treaties usually impose the same requirements on all parties (since the mid-1980s, they do not) and that the current system does not permit informal consultations or coalition-building before entering formal negotiations (it does, and it happens all the time, though among a narrower set of states and other actors than Susskind would likely wish).

The strongest elements of Susskind's critique, however, pose fundamental questions: How can scientific knowledge, including uncertain or not fully consensual knowledge, be effectively used in political and partisan processes? How far is it appropriate to reach in breadth in crafting agreements, and with what likely pitfalls? Should early weak or symbolic measures be adopted when support for stronger ones is lacking? If so, how can they be crafted to promote, not obstruct, appropriate later action? How much can the speed of international policymaking be increased through process reform?

Susskind's four-fold reformist agenda occupies the rest of the book. The four central chapters examine representation and voting; linkages between science and politics; linkages between environmental and other issues; and monitoring and enforcement.

On representation and voting, Susskind identifies a goal of key importance: encouraging informal proceedings that permit flexible option generation and joint problem solving. To pursue this goal, he calls for a series of modest reform proposals, plus a more ambitious proposal for increased nongovernmental organization (NGO) involvement supported by activist secretariats.

His modest process suggestions would clearly help advance his central goal, though by how much is not clear. Susskind would encourage delegations

to arrive without positions firmly established, and would designate some meetings as brainstorming sessions at which commitments are neither expected nor welcome. These would obviously be constructive changes, but Susskind does not state how much benefit he thinks they would bring. Nor does he address the forces that typically obstruct such openness and flexibility.

As for NGOs, Susskind somewhat sharpens his initially vague proposal by stating four principles of NGO participation: all NGO sectors should be included, at all stages; informal problem solving should be stressed; and NGOs should not supplant national representatives, but their nonvoting status should not matter in consensus proceedings. While the constructive roles NGOs can play are widely acknowledged, these principles do not address the two basic problems of NGO participation: Who has standing to participate, and how is it decided? And what are participating NGOs permitted to do?

Who participates? Susskind argues that all nongovernmental sectors — such as environmentalists, local officials, and industry — should be welcome, and should be collectively responsible for policing their participation, admitting only groups that are responsible and committed to seeking consensus. Given the diversity and conflict of NGO interests, this principle seems insufficient. NGOs will likely experience conflict over who meets these criteria, and be unable to resolve conflicts over standing themselves.

What can participants do? Susskind avoids this question by saying that NGOs' lack of voting status does not matter, because decisions will be made by consensus. But voting rules do matter; diplomatic consensus is conditioned by whatever voting rules apply. Susskind is silent on whether he would wish NGOs to be permitted to block a consensus. In fact, lacking a vote in the alternative, they would not be able to. The proposal seeks greater leverage over state conduct, but NGO participation in diplomatic processes alone will not achieve this. More is needed, at least the cooperation of some states plus NGO and other domestic political pressure at home.

Beyond these two questions, Susskind's central claim that NGO participation will promote more flexible option generation may not be borne out. NGOs are indeed the source from which many innovations in environmental diplomacy have come. But NGOs also represent the public eye in negotiations. For a variety of reasons, free and open exchanges of ideas, as opposed to ideological posturing and reiteration of initial positions, is more likely in private than in public (Elster 1995). The most flexible and creative pre-negotiation and problem solving normally occurs between relatively low-level officials in informal consultations before the start of public negotiations. These occur well out of the eyes of the public, the officials' political masters, and NGOs. Such full NGO participation as Susskind proposes is untried, and the case for its constructive effect is ambiguous. Susskind advances some *a priori* factors to suggest it would help, but does not sustain an argument that these would outweigh other, opposing *a priori* factors, which suggest that NGO participation could obstruct his goal.

On linking science and politics, Susskind notes that science's contribution to environmental negotiations has often been weaker than its contribution to earlier issue-framing or subsequent implementation. He makes two proposals to improve this linkage, and to mitigate the harm of partisan exploitation of scientific uncertainty: public forums to probe and clarify the bases of scientific dissent; and contingent agreements, pre-agreed commitments that would come into force if, or when, particular environmental conditions were observed. Both these proposals promise benefits given further elaboration, but their presentation needs more amplification and disregards important pitfalls.

The first proposal seeks to clarify scientific disputes. Structured public processes, facilitated by skilled neutrals, would "force scientists to confront the sources of their disagreements" (p. 78). But the purpose of these processes is not specified. They could certainly elevate public debate, but if this is their primary target then their contribution to improved international negotiations is indirect at best. If, on the other hand, they are intended to have formal standing in negotiation processes, then their own process must be much more carefully spelled out. Who decides what questions are posed and how they are framed? How are participating scientific experts selected? Are they supposed to reach consensus, and what happens if they do not? If the forums are to integrate or adjudicate among contending views, then who does this adjudication (the skilled intermediaries? neutral non-expert juries?), and how? In these process details lie grave difficulties. Procedural solutions to policy-intensive scientific disputes, constructed by analogy to legal proceedings, have been sought since the 1960s (e.g., see Kantrowitz 1967). Such ideas have repeatedly encountered two stumbling blocks: differences of policy preference and values cannot cleanly or fully be separated from scientific and methodological dispute; and some scientific disputes remain persistently opaque to non-experts. If Susskind's intention is for these processes to contribute directly to international negotiations, then he fails to state how they would overcome these problems unless by extraordinary, unspecified (and perhaps unattainable) virtuosity of the neutral facilitators.

The proposal to seek contingent agreements has promise, but it too requires further specification. Conditional pre-commitments can help parties reach agreement when they differ about uncertain events or future trends. Indeed, such agreements have been considered in previous environmental negotiations, such as in the ozone layer negotiations of the early 1980s. But Susskind's enthusiastic endorsement (p. 80-81) overlooks the proposal's serious conceptual problems.

The proposal as stated appears to rest on three unwarranted assumptions. First, it assumes that parties in initial negotiations can agree both on what future observation, or "trigger," would justify immediate response, and on what the appropriate response would be. This assumption would be fair if most scientific dispute were over how fast we are changing the environment and so how soon the trigger would be reached. But scientific dispute

also pervades questions of the consequences of specified environmental changes, how much we should care, and how we should respond to a specified change. Contingent agreements could displace only one of several science-based sources of dispute over what we should do.

Second, the proposal assumes that all would agree when the trigger was observed, so parties would reliably carry out their conditional agreements. While some environmental observations may be simple and uncontroversial — for example, trends in atmospheric carbon dioxide concentration — there is often serious scientific dispute over what has been observed. It took ten years to establish that global stratospheric ozone was declining (WMO 1988), and controversy continues over whether or not anthropogenic global climate change has been observed, despite the carefully nuanced 1995 statement of the Intergovernmental Panel on Climate Change (IPCC) on the question (Santer et al. 1996). It is likely that parties who wished to avoid their commitments could find experts to argue that the trigger has not yet been observed, at least until the relevant scientific consensus has reached near unanimity.

Most seriously, the proposal assumes that the initially agreed-upon trigger, and the response to it, would remain the desired response at the later time when the trigger is observed. Scientific progress in the interim could easily falsify this assumption, rendering either the trigger or the agreed-upon response inappropriate. The benefit of firm conditional pre-commitments lies in their rigidity once triggered, which would compel all to do what they previously agreed was required. But this rigidity of enforcement, with no provision for review, update, or over-ride, makes it impossible to benefit from advances in knowledge. In this respect, Susskind's proposed contingent agreements are likely to worsen, not better, one aspect of his initial critique of current practice: that early agreements constrain later action in ways that may subsequently prove to be misguided.

In sum, these paired proposals minimize the complexity of linkages between scientific knowledge and policy; understate the likelihood of dissent over measurements that have been vested with high political stakes; and may obstruct the exploitation of advances in knowledge regarding the character and severity of environmental risks, and of appropriate responses. Contingent agreements may be a highly promising approach, if the character and magnitude of the uncertainties they target is carefully defined and limited, and if they are appropriately integrated into broader processes for dynamic, adaptive management of global environmental problems. But no specific proposal yet advanced, including Susskind's, has overcome the conceptual and practical problems that have thwarted attempts to apply them so far.

On issue linkage, Susskind provides a general, useful discussion of factors affecting attempts to link previously unrelated issues. Linkage can bring more parties to the table and extend opportunities to exploit differences and develop advantageous package deals. But linkage makes agendas more com-

plex. It can also open negotiations to threats or blackmail, and raises the risk of deadlock. Susskind's recommendation, like Sebenius' in the Sjöstedt collection, is to exploit linkage but be careful. Unfortunately, neither author provides guidance on how to recognize when to push for broader linkage and when to be cautious. Susskind provides more specifics on linkage in his opening chapter, where he decries the difficulty of integrating environmental negotiations across media, and argues that UNEP's leadership of environmental negotiations obstructed drawing linkages to nonenvironmental issues. On these points, the lack of specific practical guidance is particularly disappointing. Susskind might have noted what body he would favor for more broadly linked negotiations and why, and might have suggested specific ways to help environmental negotiations, even under UNEP, to integrate more broadly across media.

Susskind's discussion of ways to improve monitoring and enforcement is a similar mix of promise and frustration. He presents a useful summary of difficulties and an illustrative list of specific initiatives that have been proposed, based mostly on analogies to other issues. For example, he proposes that a global league of environmental NGOs form a "Green Amnesty International" to monitor government compliance and shame wrongdoers, and suggests a variety of devices to make agreements "nearly self-enforcing," such as posting bonds, requiring purchase of insurance policies, or requiring detailed annual reviews of performance. These proposals all show promise, but they are unfortunately too cursory to be critically examined.

Some of the book's concluding proposals closely follow Susskind's main reformist argument, while others are newly introduced. Principally, Susskind advances ten recommendations from the "Salzburg Initiative," a consultative process of scholars, diplomats, and environmental activists that he led at the Salzburg Seminar in 1990 and 1991. He also presents a new recommendation, not drawn from the Salzburg Initiative or otherwise anticipated in this book, for a standardized process of environmental treaty-making.

This new recommendation involves a common, three-stage negotiating process for all international environmental issues, to be managed by a single international body (perhaps the Commission on Sustainable Development). Common timing, participation, and ratification requirements would be fixed for each stage. A six-month first stage, to scope a potential threat and identify relevant principles, would be followed by a two-year second stage to negotiate specific commitments. Half the United Nations membership must agree to start either of the first two stages, and half of those participating in the second stage must approve to enact an agreement. If the second stage fails to reach agreement, a two-year waiting period is required before another attempt may be made on the same issue. If an agreement is adopted in the second stage, the third stage consists of required update and review on a three-year cycle.

This proposal is provocative, indeed staggering in its boldness. It is also frustrating in its relative lack of supporting argument and its disconnection

from the proposals and arguments that comprise the rest of the book. Susskind offers a brief argument in its support, and addresses a few potential objections, though not the strongest or most central ones, which in my view are three: No single international organization can — or should — have a monopoly over international environmental policy development; global environmental issues are not all the same; and states are really not equal.

First, the proposal seeks to standardize environmental negotiations by using a common template, and by putting one organization in charge of the process for all environmental issues. Giving one organization such a monopoly over a broad issue area at first seems dangerous. The body could become, as international organizations sometimes do, eccentric, unrepresentative, or corrupt. This danger is mitigated, though, by the proposal's lack of feasibility. Granting formally exclusive jurisdiction to one body would no doubt have some effect, but states ultimately can and will negotiate agreements using the bodies they choose, or through ad hoc processes they create for the purpose.

Second, the proposal seeks to speed environmental diplomacy by imposing common deadlines, participation requirements, and voting rules for all issues. But not all international environmental issues are the same. Some involve all nations, others do not; some may allow the completion of treaties in two years, others may not — perhaps because required scientific or technical assessment takes more than two years to complete. A forced common template would advance and smooth some negotiations, while harming others by creating pressure to meet arbitrary deadlines, opportunities for procedural obstruction, and possibilities for blockage and blackmail by peripheral actors.

Third, the proposal seeks to use process rules to enforce effective equality of all states, independent of their contribution to, or interest in, the issue being negotiated. While this goal may be attractive for some issues, for global environmental issues it is seriously misguided. In environmental issues, certain nations — usually but not always large or rich ones — matter more. They do more harm, they care more about the problem, and they have both more responsibility and more capability to undertake solutions. For any environmental problem, the major contributors and the major victims must be centrally involved in its solution. This centrality reflects both their intensity of concern and their degree of responsibility and influence, neither of which can be captured by simple voting rules that weight all nations equally. The practical need to grant greater standing to those most concerned is especially compelling in view of concerns about effective implementation of agreements, which Susskind shares.

Finally, the proposal has unexplained inconsistencies with other elements of Susskind's agenda. While he generally stresses consensus agreements, this proposal is based on specific voting majorities. While he generally seeks to promote open option-generating, this proposal's rigid schedule will surely discourage such processes through relentless pressure to meet

imminent deadlines. While he otherwise seeks ways to link issues more creatively, this proposal drives specific negotiations issue by issue, excluding prompt re-establishment of negotiations that fail to reach agreement.

In sum, *Environmental Diplomacy* does a real service by highlighting the importance of process issues in international environmental negotiations, and bringing these questions before a wide audience. It identifies a series of central issues and criticisms. It presents a series of bold and innovative reform proposals, some of which may offer significant improvements to current practice. These are all contributions worth applauding.

On the other hand, the work frustrates the reader with arguments that are too often sketchy or disjointed, proposals that are insufficiently specified or supported by argument, and claims that are loose and overdrawn. The book tantalizes but does not satisfy. For some of his central critiques, Susskind does not clearly argue how his proposed innovations would address them. This is most striking for his most serious critique, that current practice does not adequately encourage joint problem solving, or separate option generating from commitment and decision.

It is particularly unfortunate that the book's claims are intemperate, because neither its critique nor its reform proposals should be dismissed out of hand. Both the critique and the reform proposals must be specified in more detail, with careful consideration of the conditions of their validity or practicality. With such elaboration, both would merit serious, sympathetic examination.

Ozone Discourses

Litfin's *Ozone Discourses* contrasts with the other two books in several respects. While the Sjöstedt volume reviews multiple international environmental issues in separate short cases, and Susskind bases his critique on a review of fifteen issues which he does not explicitly present, Litfin provides a detailed history of negotiations on a single issue, stratospheric ozone depletion. While the others advance various generalizations, arguments, and proposals, she pursues a single argument in depth. While the others seek both generalizations and practical guidance for negotiators, Litfin places herself squarely within International Relations theory, seeking to explain observed outcomes rather than advise negotiators.

In contrast to conventional neorealist and institutionalist schools of international relations, she adopts a reflectivist approach, which grants greater importance to subjective understandings and knowledge structures, and hence to negotiations. Her particular interest is in the role of scientific knowledge in developing international cooperation on environmental policy. She initially set out to apply and test the theory of epistemic communities (Haas 1992a) to the case of stratospheric ozone depletion, but found that the simple story — a consensual community of scientific experts formed, then promoted the emergence of policy cooperation — was not supported by her evidence. She then proceeded to examine more complex and two-way

interactions between scientific knowledge and politics, arguing that science acts as a key source of legitimation in developing political consensus, but only once it has been framed or interpreted to explicate its policy relevance.

Her review of stratospheric ozone negotiations presents evidence that opposes those who have claimed these negotiations were in some strong sense “driven by science” (e.g., Benedick 1991; Haas 1992b). She highlights four characteristics of the relevant scientific knowledge: that it was not fully consensual; that it could not directly imply policy choice; that constructing policy-relevant claims from scientific knowledge required concurrent socio-economic assumptions, such as growth scenarios for use of ozone-depleting chemicals; and that the available scientific knowledge admitted disparate (though not unlimited) interpretations, with distinct policy implications that served different actors’ interests.

She therefore highlights a crucial reframing that occurred in 1986, which first directed attention to the implications of long-term continued growth in production of chlorofluorocarbons (CFCs).⁶ In discussing the 1987 negotiations, she argues that even though negotiators claimed not to be considering the Antarctic ozone hole (which had not yet been reliably attributed to CFCs), the hole was crucial in making different framings and interpretations of available scientific knowledge more or less acceptable. In negotiations since 1987, she highlights the process by which stratospheric chlorine loading became a surrogate metric in which “harming the stratosphere” was effectively measured; policies were then compared, and accepted or rejected, based on their effect on chlorine, rather than their subsequent, less strongly consensual effect on ozone.

Throughout the negotiations, she argues that the importance of competing interpretations of underlying scientific knowledge has empowered “knowledge brokers,” low-level, technically sophisticated officials in various government ministries. These were the principal interpreters of science for negotiations and policymakers; in disaggregating scientific results into rhetorical stances, they inevitably manipulated them for ideological and political ends.

Litfin’s primary contribution to our understanding of international environmental negotiations is a negative argument: Science’s contribution to negotiations cannot be as predominant or unambiguous as has been claimed. Rather, she argues that power and knowledge are mutually interactive (p. 178) and that at least the framing and prominence of scientific knowledge are influenced by politics and power.

She does not propose a specific alternative hypothesis, nor systematically examine other explanatory factors. Indeed, she acknowledges that her approach does not permit testing alternative hypotheses, or even strong generalizations, because her explanation depends too much on specific context and contingencies. Rather, she claims more limited contributions: telling a good story; identifying the risks of adopting certain simple causal explanations; and offering general insights that are looser and less specific than hypotheses.

In focusing on discursive use of scientific knowledge, she highlights central aspects of negotiations that standard international relations theory neglects: competing arguments, facts, and framings. But her methodological approach also contrasts with that of negotiation analysis, in that her focus on discourses, and on networks of power and knowledge, removes actors from the center of the analysis.

For understanding international environmental negotiations, she provides several significant contributions. First, she provides abundant, empirically-grounded detail on the formation, interpretation, and use of scientific knowledge and uncertainty in a particular environmental negotiation. All three books reviewed here highlight the importance of science-policy linkages, but only Litfin provides enough empirical detail for the reader to trace the paths of these linkages and to support her argument about their influence on outcomes. In so doing, she also models the kind of detailed, thorough empirical research that is essential in gaining better-grounded understanding of causal processes operating in real negotiations.

Second, she identifies the role of scientifically competent intermediaries in advancing competing interpretations of available scientific information; she argues for the importance of advancing compelling framings that appeal to various constituencies; and she consequently clarifies the importance of rhetorical and argumentative skill. Through tracing the influence of these factors, she illustrates the importance of negotiation studies carefully delineating the stances, contributions, and interests of multiple actors, both inside and outside governments.

Finally, Litfin presents a novel methodological approach whose points of contact with both standard international-relations schools and negotiation analysis could offer promising contributions to both. Her work could benefit, however, from a negotiation perspective, in that she falls into a few common misunderstandings. For example, on page 186, she says it is "almost tautological that negotiators who agree on the facts are more likely to agree on policy." This claim neglects any possibility of exploiting contingent agreements, as surely as Susskind's endorsement of contingent agreements overstates their power.

Conclusions

These three works are representative of the broad state of understanding about international environmental negotiations. All treat negotiations more as an empirical domain than as an analytic perspective, as at present does the field at large. The three exemplify the increasing number, detail, and quality of empirical studies of international environmental negotiations and, in particular, the increasing availability of multiple empirical studies of the same issue. Multiple studies are valuable because so many are written by participants. While the insider's perspective gives these studies rich detail, it inevitably causes them to reflect the knowledge perspective, and biases, of the participant. Duplicative studies help to identify and control such biases.

These empirical studies are generating an increasingly rich set of curious incidents, anomalies, innovations, and puzzles. While many are highly context-specific, some arise analogously across multiple cases, appearing to admit the formulation of generalizations or hypotheses. Only very limited attempts have yet been made at such generalization, though, and present empirical work is not yet sufficiently advanced to support such attempts effectively. Many apparent regularities are not specified sharply enough to allow formulating precise explanatory propositions, resolutions, or advice. Many simply state that a particular phenomenon is important, or that two processes or factors are in tension. Moreover, there is as yet essentially no analytically-oriented study of international environmental negotiations.

Consequently, the ability of current scholarship to contribute to the three classes of questions identified at the opening of this essay is quite limited. Progress on internal questions has been good at describing processes of international environmental negotiations and identifying empirical regularities and anomalies, but not at explaining them. More explanatory progress is needed on internal questions if research is to provide well-grounded practical advice to negotiators that goes deeper than common sense. Of the three books reviewed here, Susskind's is the boldest in advancing practical advice, but if his proposals are helpful it is not because they are carefully grounded in current research. On external questions, there is essentially no progress so far. Assertions about the uniqueness of environmental negotiations are widely made (e.g., in Faure and Rubin's twelve characteristics), but no careful case has been made to argue the extent of environment's uniqueness, nor to examine the extent and character of influences between the international environment and other domains.

This state does not indicate a failure of the field, but merely the newness of international environmental negotiations and their study, and the intrinsic difficulties of research in this arena. More analytically disciplined studies of international environmental negotiations that draw on the growing body of empirical study, and more sharply focused empirical studies informed by a negotiation analytic perspective, could provide great value. Current work has identified a set of questions that show evocative parallels across multiple cases, that are of high practical importance, and that represent the most promising agenda for the next stage of research. Three such questions are prominent in all three books reviewed here. They concern: the role of scientific knowledge and uncertainty in international environmental negotiations; characteristic dynamics of international environmental negotiations; and the opportunities and limits of process-based intervention.

All three works stress the centrality of scientific knowledge, consensus, uncertainty, and dissent to environmental negotiations, but differ on the mechanisms of their influence, and how (if at all) they can be better employed to support constructive outcomes. Two distinct stages and forms of science's contribution to environmental negotiations are identified. Several authors identify its contribution to the early development of shared

understanding of the character of an issue, while others highlight its more problematic contribution to reaching negotiated agreements.

The role of science is linked to Faure and Rubin's observation that environmental negotiations affect both common and conflicting interests, with the conflicting ones normally perceived more saliently at the early stages. Scientific knowledge is commonly regarded as identifying and characterizing environmental harms, hence primarily highlighting shared environmental interests and supporting collective action. But Litfin points out that science alone cannot serve such a function; drawing policy-relevant conclusions from scientific knowledge also requires social or political assumptions and agreement on interpretation. Moreover, scientific knowledge can also highlight asymmetric or conflicting interests by advancing understanding of disparate impacts or the costs of environmental protection.

There are several promising directions for research in the role of scientific knowledge in environmental negotiations. This work should seek to understand better the interaction of actors and discourse, which is the essence of negotiations; in effect, negotiation analysis must meet post-modern social theory. Such an approach would take argument and persuasion seriously, but would interpret it as actors' attempts to clarify their own interests, and to shape others' perceptions of their interests and alternatives. Such studies would examine in detail the processes of reciprocal formation of scientific and policy consensus, without presuming which comes first. Studies of the design, conduct, and use of formal scientific and technical assessments in international environmental negotiations are an especially promising direction to pursue.

The cases studied in these three books all support the claim that international environmental negotiations show dynamic patterns of evolution over time. They proceed through multiple steps, and initial outcomes or agreements are rarely fixed and final (Lang 1991). Factors that influence dynamic interactions of negotiations and agreements are consequently of key importance. Several authors highlight particular dynamic aspects of environmental negotiations. Some highlight intentionally constructed dynamics such as periodic assessment and review provisions; others identify exogenous irreversible or dynamic factors, such as political or rhetorical asymmetries that favor strengthening of agreements, and the tendency of negotiations to move in response to crises.

Several cases support the claim that any action requires convergence in framing the issue among relevant political actors, on their own or through contributions of scientists, NGOs, international organizations, or other neutrals. But on other key questions in the dynamics of environmental negotiations, the cases and authors support strongly divergent views.

The most important of these concern the implications of adopting a limited, weak, or symbolic agreement when support is inadequate to enact a strong or concrete one. Does such an agreement facilitate or obstruct subsequent attempts to enact a stronger one? If early weak agreements establish

political, procedural, or institutional factors that subsequently favor stronger action or grant advantages to its advocates, or if the passage of time without an agreement favors the opponents, then a proponent of strong action would take whatever is available early. But if early weak action removes political pressure that would otherwise build (MacNeill, Winsemius, and Yakushiji 1991), or merely fails to create leverage for subsequent action, a proponent would shun the available agreement and keep pushing for more. The aggregate empirical record appears to support the claim that early weak agreements facilitate later stronger ones. More work is needed, however, on the processes and conditions by which this occurs (if it does), as well as the effects of institutional setting and NGO participation; on the effects of the different ways in which early agreements can be weak (for example, soft-law versus hard, weak versus stringent obligations, or limited versus broad participation); and on the implications of different orders of tightening early agreements on different dimensions (for example, deep then broad, broad then deep, or some combination [Schmalensee 1996]).

A related set of questions begins from the observation that these arguments about dynamic effects are all independent of knowledge gained over time, and of any sense of the appropriate level of action on a particular issue. Process or institutional factors that favor the continual tightening of agreements could lead to agreements that are too stringent and cannot be reversed. In general, we must expect that advancing knowledge will sometimes favor stronger, sometimes weaker, and sometimes different action. Defining negotiation processes that can adapt dynamically, appropriately reflecting changes in knowledge, is a central and difficult problem on which current empirical studies provide little insight. Detailed process studies of how to accomplish this, perhaps drawing insights from other policy domains that have made some progress toward this goal, are of the highest priority.

The ingredients of sensible adaptive management are likely to include expert assessment bodies; variation in the specificity or generality of obligations; international institutions with some control over the negotiating agenda; provisions for review of obligations and monitoring of implementation; process rules determining who participates at what stage; and heuristics for the evolution of participation and stringency over time. Contingent agreements may well have a significant role to play in this broad process. How to implement these, and the specific contributions of each, are questions that need further detailed conceptual and empirical study.

Finally, what is the role for standardized negotiation process, or for process-oriented neutrals, in international environmental negotiations? The number of active international environmental negotiations underway, already large, will surely increase, in view of both new issues being proposed for negotiation and the increasing tendency for treaties to require periodic assessment and review of commitments. The case histories in these three books, and many other empirical studies, have identified key contributions

from various intermediaries serving as knowledge brokers, issue framers, and clarifiers and focusers of ambiguous interests. These figures make diverse, sometimes seemingly essential contributions. Sometimes they resemble mediators, though in multi-party settings; sometimes they exercise substantial process authority, which can be used to wield strong influence over substantive outcomes — and which can be squandered.

While there is a rich body of work on techniques of mediation and its contribution to conflict resolution, there is little work yet on the specific functions such neutrals can perform in international environmental negotiations. Also lacking are studies of the requirements and conditions for their effective contribution, and of whether greater systematization of negotiating process is more likely to facilitate agreement and relieve “treaty congestion,” or to stifle the creativity and relatively rapid progress that the current system has exhibited. Susskind relies substantially on intervention from skilled neutrals to perform specific functions in his system, but systematic investigation of the extent and character of such contributions remains at an early stage.

Advancing any of these research questions will require detailed empirical studies, and tracing of decision and communication processes. These studies are especially demanding in international environmental negotiations because of the multiple levels of analysis that co-exist in a negotiations framework. Levels of interactions from state to state, from individual to individual, and across levels, are all presumed to matter. The unbounded empirical agenda must be specified by more analytically driven studies, more methodologically disciplined, that can reduce the data burden by identifying key concepts and relations on which to focus empirical efforts. While significant progress has been made in the study of international environmental negotiations, the field is at an early stage of development and there is much valuable and exciting work now ripe for pursuit.

NOTES

1. UNCED was held in Rio de Janeiro in June 1992.
2. It would, of course, not be particularly interesting to study an empirical negotiations domain from an analytical perspective, such as structuralist theories of international relations, that regards negotiations as epiphenomenal, or their influence as insignificant.
3. The scale of the cases ranges from the Rhine River to the globe.
4. Similar points are made by the Sebenius essay, and by Peter Sand (1990). Schmalensee (1996) presents a general argument based on patterns of investment and the risk of emissions leakage for pursuing broad participation first, and only then increasing the stringency of commitments.
5. Seven of the issues he reviews overlap with those treated in Sjöstedt.
6. CFCs, the class of chemicals making the largest contribution to stratospheric ozone depletion, were phased out in 1996 in the industrialized countries by agreement in the Montreal Protocol. Developing countries continue to produce and use the chemicals under a ten-year grace period incorporated in the Protocol.

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