NOTES

CHAPTER 1

1. Sand 1993:378. See also Pallemaerts 1996.
2. The work on international environmental institutions has expanded rapidly since the late 1980s. See Zürn 1998.
3. Levy, Young, and Zürn's 1995 review of the international regimes literature demonstrates this trend. Another review (Hasenclever, Mayer, and Rittberger 1996) notes that the new literature on norms entails a "radical critique" of traditional regime theory and requires attention to ideational or social structural factors.
4. Notably Finnemore 1996a; and Klotz 1995. See also Katzenstein 1996.
5. For example, Young 1994; and Haas, Keohane, and Levy (1993) emphasize institutional conditions for cooperation and a number of major recent research projects focus on regime effectiveness (Sprinz 1999; Wettestad 1999; Young 1999). Meyer et al. 1997 explain the organizational form, not the content, of what they call the "world environmental regime." Zürn's 1998 review of research on international environmental politics primarily focuses on, and promotes, research on regime effectiveness and institutional design, but notes the promise of some new research on transnational relations, ideas, and communicative action. Still, the research he cites, with few exceptions (e.g., Litfin 1994), takes the goals or values of institutions as given, rather than problematizing them in terms of how issues are framed or why some goals are promoted over others.
6. The term "liberal" can cause confusion. For Americans, liberal usually means social democratic. For Europeans it connotes classical or neoclassical economics. In keeping with its primary connotation in the International Po-

litical Economy literature, liberal here primarily means the favoring of "market-oriented public policy to resolve social and political problems" and a rejection of the perspective of Keynesian economics (Falk 1995:563 fn. 3). Moreover, I use the term liberal rather than "market" environmentalism both to differentiate it from "free market" environmentalism (e.g., Anderson and Leal 1991), and in reference to a liberal international order where state sovereignty is infused with classical liberal values such as "negative" rules of abstention (i.e., against unnecessary interference in the exercise of territorial jurisdiction among sovereign territorial states) and clear property rights. These characteristics of state sovereignty remain important structural features of the international system (Jackson 1990).

7. WCED 1987:43. This definition is the most widely cited, although variations appear elsewhere in the report.
8. Brooks 1992. For a list of about 25 definitions, see Pearce et al. 1989:173–185. See also Caldwell (1990:207) and Moffat (1996) for discussions of definitions. The Declaration is reproduced in IDRC 1993.
9. IIASA proposal for a workshop on "Sustainable Development: Principle and Criteria," quoted in Caldwell 1990:207.
10. On "governance without government" in international or global politics, see Rosenau and Czempiel 1992; Finklestein 1995; Young 1995.
11. I use the term norm in a generic sense to include rules, principles, standards, maxims, and so on. The terms may be used interchangeably.
12. In the case of embedded liberalism, Ruggie (1998:84) demonstrates that extreme versions of laissez-faire liberalism pose a greater challenge to postwar economic regimes than many forms of protectionism.
13. Economists tend to favor tradeable pollution permit schemes over other market approaches to pollution control. Such an approach involves the creation of a market where agents can buy and sell "rights" for actual or potential pollution. Under emission trading, "dischargers operate under some multi-source emission limit and trade is allowed in permits adding up to that limit." OECD 1994a:20. Other economic instruments might include charges or taxes or positive economic incentives, and variations on these themes.
14. For example, Hajer 1995; Weale 1992; Pallemaerts 1994, 1996; Chatterjee and Finger 1994; Sachs 1993; Hawkins 1993.
15. This is empirically true, not a causal claim.
16. Goldstein and Keohane (1993) classify ideas in the latter three categories.
17. I do not follow Finnemore's (1996a:22) sharp distinction between ideas, which are held by individuals, and norms, which are intersubjective, because that distinction corresponds to a neo-utilitarian versus constructivist view of ideas, not to analytic categories that can be related to one another. See Ruggie 1998:20. Rather, my argument is that ideas can have normative qualities, but what is important in identifying norms is the degree of institutionalization.
18. Ruggie 1998:20, quoting John Searle.
19. See endnote 5.
20. Gilpin 1987; Keohane 1984; Krasner 1985. Note, Keohane argues that a hegemon is not necessary for regime formation, but introduces no other theory

of regime formation in his major theoretical statement on neoliberal institutionalism.

21. The debate about U.S. hegemony, whether it is declining, and whether power is fungible across issue areas versus whether hegemony can be issue-specific, is voluminous. See Young (1989, 1994) and Paterson (1996:91–113) for discussions about hegemony as it relates to major environmental issues. For the limited purposes here, I simply assume that the United States is the only possible candidate for hegemony, but admit skepticism as to whether one can even reasonably speak of hegemony in relation to international environmental politics.
22. Jordan 1994a. The debate around additionality is discussed in detail in chapter 3.
23. For a critical review of new Gramscian scholarship in International Relations, see Germain and Kenny (1998) and responses from Murphy (1998) and Rupert (1998).
24. Maurice Strong, author's interview, February 1996.
25. Strong describes how the relationship came about as follows: "Schmidheiny . . . was a leading businessman who himself had a very strong commitment to the concept of sustainable development. I met him in the early period of my role as secretary-general at UNCED. I liked him and I challenged him to take time off from his business and become my senior business advisor. He thought about it. I went home for a weekend with him and his family—he agreed to do it and he did even more than he agreed to do. It proved to be a very fortuitous choice." Author's interview, February 1996.
26. Politicians and bureaucrats who attended did so in an individual capacity, not as representatives of their states.
27. Cracks began to appear in this coalition only after industrialized states agreed to some form of mandatory reductions in greenhouse gas emissions at the 1997 Kyoto, Japan meeting of parties to the 1992 Framework Convention on Climate Change. For example, energy giant Royal Dutch/Shell Group of Companies broke from the GCC in 1998 and pledged to cut emissions of greenhouse gases from its global operations by more than 10% by the year 2002 compared with 1990 levels. British Petroleum (now BP Amoco) made a similar pledge in 1998. See ENS 1998. It appears that major mergers in the industry have not adversely affected these commitments, and both energy giants recently announced internal carbon emission trading markets.
28. Robert Cox's historicism is an exception to the limitations of this literature, because it attempts to address the potential for agency in social movements as sources of counter-hegemony or the basis of alternative hegemonic blocs. However, most applied research in the neo-Gramscian school gives primary causal weight to economic variables, and cannot account for ideational or institutional change independent of economic forces, without importing subsidiary ideational explanations. The socio-evolutionary explanation is not so much a critique of work such as Cox's, as an attempt to take its insights without being limited by Gramscian foundations.
29. Risse-Kappen (1994) makes a similar point.
30. Hajer (1995) presents an "argumentative" approach that attempts to correct

this problem by focusing on how language affects identities and interests of coalitions of actors by creating "discourse coalitions" around particular story lines, as opposed to interests. However, his focus remains primarily on language and less on how and why ecological modernization became institutionalized in the first place.

31. Especially Florini 1996. The approach is also influenced by institutionalist theory as applied to international politics (e.g., March and Olsen 1998; Weber 1994), and the social structural aspects of the explanation draw heavily from Busumtwi-Sam and Bernstein 1997. The term evolution has a long lineage of use and abuse in both the natural and social sciences, the latter being particularly fraught with ideological manipulation. I want to distance myself from the teleological or value-laden use of such theories characteristic of early Social Darwinism. Such approaches posit that social evolution is moving toward a progressive goal, usually western ideals of civilization or social organization. Florini (1996:370) correctly identifies this common problem: "Such applications were based on a fundamental misunderstanding, if not a deliberate misuse, of the basic idea of evolution through natural selection—that 'fitness' is a purely contingent phenomenon. If some individuals or groups prosper while others falter, this means nothing about their relative virtue. It means only that the former happened to have a combination of attributes, resources, and/or luck that better met the environmental demands of the moment than did the latter."

    I chose the word evolution because I borrow the concept of "fitness" directly from Darwin's formulation and am attracted to the notion of evolutionary change as a useful analogy for the historical processes my socio-evolutionary approach identifies. However, the borrowing of concepts should not imply an endorsement of any particular variant of evolutionary theory nor do I claim that the socio-evolutionary approach as a whole can be derived from evolutionary theory as studied by biologists or geneticists. On efforts to apply concepts to the study of international relations *directly* analogous to evolutionary mechanisms and derived from specific theories of evolution in biology, see the special edition of *International Studies Quarterly* (1996).

32. The "selection" or "success" of norms in this case means they became the authoritative or legitimate responses to the problem in question, not that they necessarily best achieve some given ends. In this formulation, ends and means are not treated separately (Weber 1994:7). For example, the legitimacy (success) the trade regime bestows on notions such as reciprocity is neither as a means nor an end. Rather, as Kratochwil and Ruggie note, "in a quintessential way, [such norms] *are* the regime—they *are* the principled and shared understandings the regime comprises" (1986:770, emphasis in original).

33. Chapter 5 presents a fuller discussion of the concept of social structure.

34. Weber (1994) uses the concept "social fitness," but not in reference to an evolving social structural environment.

35. Hollis and Smith 1990:49–55. For the purposes of the discussion here, I am glossing over the question of whether this "covering law" approach to posi-

tivism (i.e., the law "covers" the event or situation in question) can really accommodate causal laws, or just regularities. See McKeown 1999:162–164, who draws especially on Miller 1987, on this point.

36. Ruggie 1995:95. See also Cox 1986.
37. For a discussion of the various reasons why, see Bernstein et al. 2000.
38. Searle (1995) defines social facts as those facts produced by virtue of relevant actors agreeing that they exist. They rest on "collective intentionality." See also Ruggie 1998.
39. For example, Wendt 1987, 1994; Dessler 1989; Kratochwil 1989; Katzenstein 1996.
40. Ruggie 1998:94, quoting Polkinghorne 1988.
41. See also Bernstein et al. 2000.
42. See Elster (1983:20:63–64) on the need for such a feedback mechanism in functional theories. For example, "In biology the theory of natural selection creates a presumption that whatever benefits reproductive capacity can also be explained by these benefits." The social sciences lack a generalizable mechanism of this sort, although a feedback mechanism may exist in particular cases.

CHAPTER 2

1. Conversely, deeply institutionalized norms, unless violated, may not be frequently articulated—they exhibit a taken-for-granted quality that can make quantifying institutionalization difficult.
2. Unless otherwise noted, preparatory documents are found in U.S. Department of State 1972.
3. The exclusion of the German Democratic Republic, but inclusion of the Federal Republic of Germany resulted from political maneuvering on the part of the West. Neither Germany had UN membership, but the FRG was a member of the International Atomic Energy Agency and a UN resolution in 1969 allowed its members to participate. UNCHE secretary-general Maurice Strong (2000:120–121) however had fought earlier to appoint a leading Soviet scientist, Vladimir Kunin, to the secretariat staff, and a second Soviet expert joined even after the boycott. In addition, Strong personally met with the Soviet ambassador in Stockholm every day of the conference to keep Moscow informed of the proceedings.
4. Munn 1992 and R.E. Munn, author's interview. In chapter 4 I further discuss Odén's role in developing the science that led to international responses to acid rain.
5. The request that financial commitments from the developed world be in addition to existing development monies—often termed "additionality"—is perhaps the one issue continually requested by developing countries that is consistently rejected by some developed countries, particularly the United States (although some inroads occurred at UNCED). It is for this reason that additionality does not appear in the list of norms below. See Jordan 1994a.
6. Numerous sources detail NIEO demands and history. For example, Rothstein 1979 and Krasner 1985.

7. I use gender-inclusive language even when discourse at the time used gendered language such as "mankind." However, in quotations or in statements of principles such as the "Common Heritage of Mankind," I will use the original language on first reference for accuracy.
8. *Founex Report* 1972:32. As an illustration of how much has changed in the South, note that worldwide condemnation met a similar proposal made by World Bank Chief Economist Lawrence Summers in a 1991 internal bank memo (subsequently leaked). See Rich 1994:246–249.
9. The Agesta Group AB Sweden 1982. The report backs up its findings with a detailed breakdown of the implementation record of the 109 proposals in the action plan.
10. Strong 2000:118–119. See also Herter, Jr. and Binder 1993:2. For details of Strong's background, see his autobiography (Strong 2000) generally.
11. Rowland (1973:37) states that Strong's first decision was to dispatch Chester Ronning, a seasoned Canadian diplomatic trouble-shooter and China expert, to Beijing to meet with Zhou to convince the Chinese to attend. Rowland suggests that Strong's integrity played a large role in Zhou's acceptance. Rowland also argues that it might have helped that Strong could claim a distant relationship to the late Anna Louisa Strong, a left-wing American journalist sympathetic to the Chinese revolution.
12. However, the principle of advance notification, although in the draft declaration as principle 20, did not appear in the final document of June 16. (Brazil insisted it be put over to the General Assembly, for essentially short-term political reasons, as it was then embroiled in a dispute with Argentina to which the principle would apply.) Some developing countries also feared the principle could be abused by developed states to impede development projects. The Canadian delegation in its speech to the plenary argued that principle 20 still reflected a duty under existing customary international law. It did appear in watered down form in UNGA res. 2995 (XXVIII). It also appeared in various forms in later environmental agreements and the Rio Declaration entrenched it formally in principles 18 and 19. See Rowland 1973:99, 135–136; Grubb et al. 1993:89; Sands et al. 1994:8.
13. Sohn 1973:443–444. Sohn presents a paragraph-by-paragraph analysis of the Declaration that includes the evolution of wording in negotiations. The following discussion draws heavily on his summary.
14. United Nations 1972b.
15. The importance of the case to environmental law is cited in a wide range of publications. For example, see Sands 1994:xxxi.
16. On the one hand "rational" implies the use of instruments such as environmental impact assessments to set guidelines for development or to define "optimal pollution levels" (Colby 1990, 16–17). On the other hand, the OECD (1971) equated rational management explicitly with management in "accordance with basic economic principles." In other words, rational management concerns "how to internalize environmental effects in economic mechanisms so as to ensure a rational allocation of costs." Given the usage by conservationists in the 1970s and 1980s, I would argue that rational planning at Stockholm fits with the first view above.

17. The Agesta Group AB Sweden 1982:3–4. See also Colby (1990) and Sagasti and Colby (1993), who characterize the period following Stockholm as dominated by an environmental protection management "paradigm," defined as a reliance on legal regulations aimed to make short-term economic tradeoffs to protect the health of people and a few species, and the separate treatment of environment and economics.
18. OECD 1975; Pearson 1994; author's interview, Jim MacNeill, a Canadian delegate and organizer of the OECD environment committee in 1970, and later director of the environment at OECD (1978–1984).
19. Turner (1995) argues that whereas environmental economists merely extend neoclassical economic theories to nonmarket phenomena, such as commons resources or public goods, ecological economists attempt to combine ecology and economics. For example, they attempt valuations of ecosystems and evaluate replacement costs—the cost to substitute artificial for natural processes that sustain a healthy environment.
20. Sands et al. 1994:xxxiv; Maurice Strong, author's interview; Pearson 1994:563; and personal observations of developing country speeches at the First Conference of the Parties for the Framework Convention on Climate Change, Ministerial Segment, April 4–7, 1995, Berlin.
21. Tolba officially took over December 1976, but unofficially began to run UNEP immediately after Strong stepped down in 1975 to head the newly formed Canadian Crown Corporation Petro-Canada.
22. A modified version of the speech is reproduced in Strong 1975.
23. The speech to the Second International Conference on Environmental Future, Reykjavik, Iceland, is reproduced in Strong 1977.
24. Strong 1977:170. Note, one difference between Strong and his successor is the former's spiritual vision of a world where intellectual, moral and cultural pursuits slowly take over from material pursuits in human development. Tolba left such inspirational speculations to others, instead focusing on education and implementation of UNEP's view of sustainable development.
25. See McCormick 1989:162–170 for a history of the drafting.
26. For example, sections 10.4.d, 13.4 and 13.5 on public participation in development planning and 14.10 and 14.11 on traditional knowledge in rural development.
27. UNGA resolution 38/161, para 8 a) and b) reproduced in YUN 1983:772.
28. YUN 1987:661–679. For a summary of UNEP's report see Dabholkar 1989.
29. Author's interview with a source who had high-level contact with WCED and UNEP.
30. On these competing environmental ideologies, see O'Riordan 1995a.

CHAPTER 3

1. Williamson 1993:1329. This should not imply that it originated solely in Washington. Williamson in fact cites the Latin American experience and intellectual trends there in response to the debt crisis as one of its more important sources, and notes it is part of a wider intellectual trend in development thinking.

2. Williamson 1990. See also Krugman 1995. Others present a slightly different mix. For example, Sachs' (1995) list includes open international trade, currency convertibility, private ownership, corporate ownership as the dominant organizational form, openness to foreign investment and membership in key international economic institutions. See also Pauly (1997:122) who emphasizes more the IMF's goal of opening financial markets. Notably, Williamson eschews the term neoliberalism or neoconservatism to describe the consensus because these terms include other policies that lack the same consensus. I thus use the term liberal economics as shorthand for a general trend away from state intervention and toward deregulation of markets and investment, privatization, liberalization of trade, and use of markets as a source of resource allocation.
3. Jordan 1994b. See also Fairman (1994) for evaluations of GEF's early performance.
4. See World Bank 1990 and later reports in the same series.
5. The World Bank (1992b:8) argued "there is no difference between the goals of development policy and appropriate environmental protection. Both must be designed to improve welfare." And, it sums up the rationale for its narrower definition as follows: "Basing developmental and environmental policies on a comparison of benefits and costs and on careful macroeconomic analysis will strengthen environmental protection and lead to rising and sustainable levels of welfare."
6. MacNeill, Winsemius, and Yakushiji 1991. Although it cannot be considered official Trilateral Commission policy, it was the Commission's main public response to Brundtland.
7. For a brief history of OECD activities, see OECD 1994a:11–25.
8. OECD Council (C(90)177/final) reprinted in OECD 1994a:11.
9. Dubiously, because the anarchical nature of the international system also means that market instruments would require global regulatory bodies with a high degree of legitimacy, surveillance ability, and political consensus. As chapter 5 will argue, such schemes do reflect a direction more consistent with existing international social structures, but that does not mean they are more practical, easier to set up, or more effective.
10. The United States, Japan, Great Britain, France, Germany, Canada, and Italy.
11. *Project 88* 1988; *Project 88—Phase II* 1991. See also *The Economist* 1988, 1991.
12. For an overview of trends in U.S. environmental policy up to Clinton's first term, see Vig and Kraft 1994. For a brief summary of the U.S. experience with economic instruments up to that period, see OECD 1994a, 1994b:295–298; Ingham 1994.
13. OECD 1994b:10–12. The authors point out the common property (as opposed to open access) as well as private property regimes may fulfill all four criteria. However, they favor private property since common property regimes, they argue, have a tendency to break down.
14. For succinct summaries of the agreements and negotiations see Grubb et al 1993. For full texts and preparatory documents see IDRC 1993. All references to United Nations', and other official, documents are from this source unless otherwise referenced.

15. In 1992, about 115 countries had environmental ministries or agencies compared with 11 in 1972. Imber 1994; Rogers 1993.
16. Dunlap, Gallup, Jr. and Gallup 1993. The authors admit that poorer, less economically developed nations, especially in Africa, are underrepresented, although the survey was the most comprehensive of its kind. The following is a list of countries surveyed organized by region: North America—Canada, United States; Latin America—Brazil, Chile, Mexico, Uruguay; East Asia—Japan, South Korea, Philippines; Other Asia—India, Turkey; Eastern Europe—Hungary, Poland, Russia; Scandinavia—Denmark, Finland, Norway; Other Europe—Germany, Great Britain, Ireland, Netherlands, Portugal, Switzerland; Africa—Nigeria. Less comprehensive surveys have been conducted. For example, Weale 1992, 25, notes that a Harris polling organization survey conducted in 1988–89 in 15 countries in all parts of the world found that leaders and publics in all but one country (Saudi Arabia) thought that the environment had become worse in the previous decade.
17. Parson, Haas and Levy (1992) estimate that about one-third of the approximately 1,400 NGOs accredited at the conference (as opposed to the parallel nongovernmental Global Forum) were from the developing world. See also Doherty 1994. Estimates range widely on the actual number of environmental NGOs in existence in the South.
18. For a summary of these and other pressures in the lead-up to UNCED see Brenton 1994:125–162.
19. A large number of books, articles, and speeches since about 1989 have supported the broadening of the security concept and particularly the notion of environmental security and/or the link between national security and the environment. See, for example, Woodrow Wilson Center 1996 and its subsequent publications.
20. For example, Rogers 1993; Chatterjee and Finger 1994; Grubb et al. 1993; Spector et al. 1994; Imber 1994; Campiglio et al. 1994; and Colorado Journal of International Environmental Law and Policy 1993. The best succinct summary is Haas, Levy and Parson 1992. Daily coverage of negotiations during preparations and the summit can be found in the *Earth Summit Bulletin* (which, following UNCED, became the *Earth Negotiations Bulletin*).
21. This includes not just environmental groups, but also industry groups, scientific organizations, and so on.
22. Some discrepancy exists in various reliable sources on the exact number of heads of states who attended (IDRC 1993 lists 104 speeches by heads of state) and NGOs at the Global Forum. The estimates are the most commonly cited.
23. The full title is the "Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests."
24. For a detailed comparative analysis of attempts to institutionalize these two norms see Busumtwi-Sam and Bernstein 1997.
25. Based on a five-point definition in Rana 1994. See also Payoyo 1997; Schmidt 1989; Herber 1991.

26. However, the United States refused to sign the latter over the inclusion of CHP and controversy over a proposed management organization. Without U.S. support, the treaty has little impact. Rana 1994:247.
27. The search was conducted via a CD-ROM (IDRC 1993) containing all official UNCED and preparatory documents.
28. United Nations 1994. The "Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, with Annex, adopted at New York, July 28, 1994" (UNGA A/RES/48/263), passed by a vote of 121–0 with 7 abstentions, contains legally binding changes to Part XI and is to be applied and interpreted together with the Convention as a single instrument. See chapter 5 for specifics of some of the changes along liberal lines. The LOS Convention, Agreement, and related legal material and commentary, has been posted on the world wide web at http://www.clark.net/pub/diplonet/los.html. For other commentary, see AJIL 1994.
29. WCED 1987:67–91; Sands 1994:xxiv; Commission of the European Communities 1993:104–105; OECD 1994a, 1994b.
30. Smets 1994. See also Sands 1994:xxxiv.
31. Its legal status is subject to debate, but the institutionalization of its wider meanings of redistribution and shared authority is weaker than ever. Payoyo 1997:452–459.
32. I have glossed over technical debates on implementing PPP in trade agreements (see Pearson 1994). My point is not that all economic activities now incorporate PPP, but that as an environmental norm, its primary meaning constitutes the legitimate basis of linking trade, economic activity and environmental concern.
33. Sjöstedt et al. 1994:18. Hajost (1994) notes that the United States did not appoint a high-level point person for the negotiations and U.S. agencies, including the Environmental Protection Agency, did not make it a priority until very late in the negotiation process. This is in stark contrast to the leadership role played at Stockholm.
34. Chasek (1994b), who also gives a summary of the process, organization of issues, negotiations, and results achieved at the PrepComs. The discussion of PrepCom IV below draws primarily on her account.
35. See South Centre 1991, which served as the basis of common negotiating strategy for the South. See Porter and Brown (1996:117) for a summary. On the South's negotiating stance more generally, see Mensah 1994.
36. For a detailed discussion of the Precautionary Principle and its history see O'Riordan and Cameron 1994. See also Bodansky 1991.
37. See, for example, Costanza and Cornwell 1992. See also OECD (1994a:43, 149), which invokes the principle (along with PPP) to legitimize increased use of market instruments.
38. Ricupero later became UNCTAD's fifth Secretary-General (in 1995). As Brazil's finance minister, he supervised the launching of the Brazilian economic stabilization program in 1994.
39. See Ricupero 1993 for his account of the negotiation of the financial chapter of Agenda 21.

40. For example, the Montreal Protocol allows a ten-year grace period for developing countries.
41. At the First Conference of the Parties for the Framework Convention on Climate Change in Berlin (1995), the G-77 formally split when India, at the behest of small island states, led the majority of developing countries to push for a strong protocol to limit emission of greenhouse gases, over the objections of a number of oil producing states.
42. On the negotiation of the Declaration see Kovar 1993; Imber 1994; Grubb et al. 1993:85–95; Porras 1994; Campiglio, et al. 1994. Many of the same issues arose in negotiations over climate change, which have been documented in a large number of books and articles. See, for example, Mintzer and Leonard 1994; Rowlands 1995; Paterson 1996.
43. The quotation is from Principle 12 of the Declaration.
44. Indeed, international lawyers did not play a prominent role in the negotiations over the proposed Earth Charter/Rio Declaration. Significantly, there was no suggestion that the International Law Commission play a prominent role in the Earth Summit preparations, an indication that most states felt the creation of new international law was mainly a political process best left to intergovernmental negotiations. The sense among international lawyers at that time was that the law commission is trusted to refine international law, not to develop new law, especially in a process like the Earth Summit where political, economic, and scientific considerations take precedence. Shibata 1994.
45. In 1994 parties to the 1989 Basel Convention on the Transboundary Movement of Hazardous Waste and its Disposal agreed to a ban on the waste trade with less-industrialized countries, although at the time of writing the ban lacked the necessary ratifications to enter into force. The ban is an exception to the general thrust of Principles 12, 13, and 14, which support trade liberalization as a way to improve environmental quality. On the ban see Krueger 1999; Clapp 1994.
46. The text of the protocol is available from the UNEP website at http://www.unep.ch/basel/COP5/docs/prot-e.pdf. For a discussion and summary, see IISD 1999.
47. The Ministerial Declaration is available at http://www.unep.ch/basel/COP5/ministerfinal.htm.
48. The United States released "interpretive statements" (one of only a handful of states to do so) on some sections of the Rio Declaration and Agenda 21. They included the U.S.'s long-standing opposition to a "right" to development on the grounds that a "right" might override other rights, such as human rights. According to the statement, the United States does not oppose principle 3 understood as the promotion of development "in a way that the development and environmental needs of present and future generations are taken into account." The statement on principle 3 is reproduced in Thompson 1993:90 fn. 1.
49. However, the principle limits its application to national legislation and projects that are subject to "a competent national authority." However, Principle 19—advance notification—implies states ought to notify others of results of an assessment that might produce effects beyond state borders. Hence, the

Declaration implies transnational application of the principle. See Kiss 1994:60.

50. For a summary see UN Commission on Sustainable Development 1997. The Biosafety Protocol is discussed further in the concluding chapter.
51. Other initiatives included the Helsinki Process on protecting forests in Europe, the Montreal Process on creating criteria and indicators (C&I) for the conservation and sustainable development of temperate and Boreal Forests (the Helsinki process included a C&I process as well), negotiations toward a successor to the 1983 International Tropical Timber Agreement (which led to a new agreement in 1994), and initiatives on labeling and certification schemes (not to be confused with C&I). The most important certification scheme, under the Forest Stewardship Council, involves market players and NGOs who want to set criteria to identify products produced from "well-managed" forests. A large number of expert and governmental workshops also convened on various aspects of the forestry issue. See Humphreys 1996 for a summary.
52. This section draws primarily from Humphreys 1996 and summaries of the IPF process from various issues of the *Earth Negotiations Bulletin*, volume 13 (on forests) unless otherwise noted.
53. *New York Times* 1997:7. Those who expressed support for a convention included Canada, EU, Indonesia, Malaysia, the Philippines, Papua New Guinea, China, Costa Rica, Poland, the Forest Alliance of British Columbia and the Canadian Pulp and Paper Association.
54. *New York Times* 1997:7; and personal correspondence with a Greenpeace representative on forests, San Francisco.
55. See Paragraph 28 on production and consumption and Section C on implementation in UNGA 1997.
56. The May 1995 Report on Trade and Environment to the OECD Council at the Ministerial Level (and accompanying studies) and the November 1996 Report of the Committee on Trade and Environment to the WTO Ministerial Conference in Singapore are summarized in Reiterer 1997. The quotation comes from the OECD report, quoted in Reiterer 1997:72.
57. Without formal agreement on PPMs, trade law on this issue is evolving through the (so far) few trade-environment disputes that touch on the issue, including "tuna-dolphin" and "shrimp-turtle." See, for example, Wynter (1999) for an argument that the WTO Appellate Body's decision on the "shrimp-turtle" dispute between the United States and India, Malaysia, Pakistan and Thailand, over the danger to protected sea turtles by shrimp trawling, left the door open for the use of PPM-based trade measures, if properly applied, under GATT Article XX, even though it ruled against a U.S. restriction on imports of shrimp caught with nets that are not equipped with "turtle excluder devices." The ruling found the U.S. acted in an unjustifiably discriminatory manner, not that PPMs were impermissible.
58. At meetings of the CTE during 2000, many delegates asked that the committee work on clarifying coverage of eco-labels under the Technical Barriers to Trade Agreement, and some expressed concern they could become an unnecessary barrier to trade. At the same time, delegates supported their use as an effective tool to promote environmental policies. One member state ar-

gued that eco-labels that included non-product-related production and processing methods were not consistent with WTO rules. There is general agreement within the CTE that eco-labeling schemes (whether mandatory or voluntary) should be developed in a transparent, nondiscriminatory (e.g., consistent with rules of national treatment), and least trade restrictive manner to achieve the policy objective. WTO 2000. Pressure may build to only allow mandatory schemes, such as those agreed to under multilateral environmental agreements, since voluntary schemes run a greater risk of being considered barriers to trade under WTO rules. However, agreement on mandatory schemes is obviously much more difficult.

59. Although many forest companies are beginning to show an interest in certification, some skepticism remains as to whether the process can be adequately reconciled with sustainability goals at the national or international level, whether certification might be used as a non-tariff barrier, and whether consumer demand will create sufficient incentive for companies to take part in such schemes. See Gale and Burda 1997; Kiekens 1997; Hansen 1998; and Bernstein and Cashore 2000b.
60. The text of the Protocol and Convention can be downloaded from http://www.unfccc.de.
61. For a review of trading under the Montreal Protocol see OECD 1998:25–33.
62. "Developed" here means Annex B countries of the Kyoto Protocol—those states that face quantified reduction and limitation commitments under the Protocol. Annex B includes all OECD countries except recent members Mexico and South Korea, and Turkey because it had not ratified the Framework Convention on Climate Change when Kyoto was signed. Annex B also includes economies in transition. Developing countries refer to non-Annex B states.
63. See IISD 1997b for a summary of negotiations. See also Grubb, Vrolijk, and Brack 1999 for a detailed analysis of the Protocol and its implications.
64. Negotiations at the Hague broke down primarily over the issue of carbon "sinks" or sequestration of carbon in forests or by other land-use or agricultural changes (under articles 3.3 [afforestation, deforestation, and reforestation] and 3.4. [additional activities that sequester carbon]. The Protocol allows the use of sinks, but they remain controversial, particularly owing to questions of accounting and verifiability, and whether the inclusion of sinks threatens the Protocol's environmental integrity. Specifically, states could not agree on whether to allow activities under article 3.4 in the first commitment period (2008–2112—the dates by which developed states agreed to meet their first reduction or limitation commitments under the Protocol) or whether or under what conditions sinks could be included in the CDM. The main protagonists were the Umbrella Group, which includes the United States, Canada, Australia, New Zealand, Japan, Norway, Russia, and Ukraine, who fought for wide latitude on the inclusion of sinks, and the EU, which opposed this position. A variety of technical issues related to sinks and the Kyoto mechanisms also remained unresolved, as did the shape of the compliance mechanism and questions regarding financing for developing countries. See IISD 2000e for a summary of COP-6.

65. As this book was going to press, U.S. President George W. Bush announced his country would withdraw from Kyoto, despite its 1998 signature. Since entry into force requires ratifications by 55 parties that account for 55 percent of developed country emissions, U.S. ratification (its emissions account for 36.1 percent) is important, but not mandatory. Indeed, most developed states have indicated they remain committed to action consistent with the Protocol. While the future of Kyoto is uncertain, some developing countries, led by Argentina (IISD 1998), have already pledged to undertake voluntary commitments, one condition for U.S. ratification. Since Bush announced no alternative proposals, any changes are likely to be toward even stronger allowances for market mechanisms and greater flexibility on targets, further reinforcing liberal environmentalism.
66. For example, as mentioned earlier, Shell and BP pledged to cut emissions (ENS 1998), and later BP Amoco (following a merger) and Royal/Dutch Shell launched internal carbon emission trading markets to help them reach their pledge (*Financial Times* 2000). In addition, organizations ranging from UNCTAD to the UN Industrial Development Organization have conducted research or workshops on the various mechanisms and the roles they can play in implementation. For example, on UNCTAD's activities, see its Greenhouse Gas Emissions Trading website at http://www.unctad.org/en/subsites/etrade/index.
67. Chatterjee and Finger 1994; Sachs 1993; Rogers 1993; Maurice Strong, author's interview.
68. The BCSD actually lobbied both positions in some ways. For example, it sought the removal of references to regulation of multinational corporations from Agenda 21, but also promoted the idea of voluntary self-regulation for industry.

CHAPTER 4

1. These two questions, for example, are ably addressed elsewhere, including, recently, by Andresen et al. (2000) on the former, and Meyer et al. (1997) on the latter. Neither, however, focuses on the equally important question of the normative content or framing of policies produced, that is, why global environmental problems are being managed or addressed in the ways they are.
2. Epistemic communities, for example, are especially noted for their progressive influence on "learning" within international organizations and domestic bureaucracies. See Haas and Haas 1995.
3. See Goldstein and Keohane 1993b:11; Yee 1996; Litfin 1994; Haas 1992b on its influence on the ideas literature in international relations and comparative politics.
4. On epistemes and the earliest formulation of the concept of epistemic communities, see Ruggie 1975, who draws especially on Foucault. On the broader potential agenda of the epistemic communities literature, see Adler and Haas 1992.

5. For example, the inclusion of scientific advisory panels for a number of treaties has affected decision making on technical matters, although to varying degrees. See Andresen et al. 2000; and Deutz 1997.
6. Litfin (1994) and Susskind (1994) raise similar issues that suggest a more complicated path through which science affects international environmental policy.
7. For a detailed, but very critical, review of the new sociology of science, see Bunge 1991.
8. A large literature exists on many of these concepts. For brief summaries that touch on their transnational applications see Bennet (1991:224–225) on policy communities and networks; Sikkink (1995) and Keck and Sikkink (1998) on transnational issue or advocacy networks; Smith et al. (1997) on transnational social movements; and Sabatier and Jenkins-Smith (1993) on advocacy coalitions.
9. See Hagen 1992:64–65, 122–145. The classic text is Odum 1953. Ecosystem and systems ecology are not always considered the same, but are associated owing to Odum's influential work.
10. William Clark, author's interview. Note, Clark, who has led major transnational research programs on sustainable development, does not refer to himself as an ecologist, but was trained as one and works on international ecological issues.
11. For these trends in global change research see *Ambio* 1994.
12. This is not an exhaustive list, but simply examples of individuals who led in promoting global environmentalism. Among other things, Strong served as secretary-general of the Stockholm and Rio conferences and as a commissioner on the Brundtland Commission; MacNeill was secretary-general of the Brundtland Commission and director of the OECD environment committee 1978–84, Thacher served as deputy director of UNEP 1977–1983 and occupied a number of roles in U.S. environmental diplomacy since the early 1970's, and Tolba headed UNEP from about 1977–1994.
13. Adams 1990:33. On the IBP see Hagen 1992:164–188.
14. Kowalok 1993:13–14. The discussion of acid rain draws primarily on Kowalok; Munn 1992 and author's interview with Munn.
15. From there to regional cooperation on mitigating acid rain in Europe and North America is a larger, and more complicated story—the illustration is merely to suggest that producing political action often stems from factors unrelated to scientific consensus. However, evidence also suggests that major turning points in reaching interstate agreements on acid rain stemmed more from political factors independent of new scientific evidence, such as Germany's 1982 sudden about face owing to a public outcry and media coverage over damage to the Black Forest attributed to the problem. Increased political salience then contributed to increasingly coordinated transnational scientific efforts and institutional development as much as vice-versa, and policy prescriptions (from specific targets to the tradable permit system for sulfur dioxide emissions in the United States) often did not stem from scientific findings, but from political considerations and other policy norms. On

the larger story of the politics-science interaction on acid rain cooperation, see, for example, Wettestad 2000. For an analysis focusing on Canada-U.S. cooperation, see Munton 1998.

16. This meeting was part of the First General Assembly meeting of SCOPE, Aug. 29–Sept. 4, 1971. At the same meeting, scientists in SCOPE gave Strong his first scientific briefing on problems of the environment. ICSU 1971:15–17; R.E. Munn (author's interview), a founding organizer of SCOPE.
17. For a summary of the role of scientists in some specific recommendations, see Thacher 1973; Kellermann 1973.
18. *IUCN 1972 Yearbook*: 20, quoted in McCormick 1989:98.
19. SCOPE 1971. According to Ted Munn (author's interview), the actual funding proposal was written in one night after Tom Malone brought Munn and British scientist Gordon Goodman to UNEP headquarters and told them if they got a funding proposal on Maurice Strong's desk by eight o'clock the next morning, they would get their money.
20. Author's interview. For Sachs vision of ecodevelopment, see, for example Sachs 1977, 1984.
21. I discuss the failure of ecodevelopment further in chapter 5.
22. For example, see sections 10.4.d and 13.4 and 13.5 on public participation in development planning and 14.10 and 14.11 on traditional knowledge in rural development.
23. The United States especially dominated research on ozone depletion. Haas 1992d:193.
24. Unless otherwise noted, information on the scientific history of the ozone issue is drawn from Kowalok 1993; Litfin 1994; Brodeur 1986; Rowlands 1995a:43–64.
25. Interpretations vary on the policy effects of the report from the U.S. government sponsored Climatic Impact Assessment Program, which involved more than 1,000 scientists from 10 countries, and on the precise reasons for the cancellation. Rowlands (1995a:45–46) argues that the report was open to wide interpretations because its executive summary, on which policymakers relied, focused on the minimal threat from a small fleet of SSTs and the report made only oblique references to more severe consequences in scenarios found elsewhere in the report. See also Litfin 1994:62; Kowalok 1993:17.
26. Note, in support of a scientific basis for the Precautionary Principle, Lemons and Brown (1995:20–21) argue that precaution stems from a "holistic" approach to science as opposed to positivist, predictive science. The former—because it is sensitive to complexity, uncertainty and interaction with other ecosystems and human activity—focuses on avoiding type II statistical errors (false negatives). Traditional predictive science focuses on minimizing type I statistical errors (false positives). However, most laboratory scientists who take a formal view of science argue the contrary, that such a position is not "scientific." There is certainly nothing resembling consensus on this point within relevant scientific communities.
27. Thomas quoted in Litfin 1994:104, see also 72–73. Brodeur (1986:78) notes that the previous administrator, Anne Gorsuch, took a very different view.

She called the science "highly controversial" in her Senate confirmation hearings. She also said that there was a "need for additional scientific data before the international community would be willing to accept it as a basis for additional government action."

28. Litfin 1994:99. On NGO support of precaution on other issues see Princen and Finger 1994:20, fn. 81.
29. Robert Watson, unpublished interview with Peter Berry (University of Toronto), January 1996, Washington, D.C.
30. Robert Watson, unpublished interview with Peter Berry (University of Toronto), January 1996, Washington, D.C.
31. Robert Watson, unpublished interview with Peter Berry (University of Toronto), January 1996, Washington, D.C.
32. Clark and Munn 1986. Munn (1987) lays out the intellectual framework for the environment program at IIASA.
33. William Clark, author's interview. On the use of these concepts at IIASA see Clark and Munn 1986; Munn 1987.
34. Some discrepancy exists in the actual number of reports submitted. Haas, Levy and Parson (1992:11) count 130 reports; IDRC (1993) lists 164 national and 13 regional reports; and Grubb et al. (1993) count 172 by UNCED, a number that rose to 190 by the end of 1992.
35. Dooge et al. 1992. See also "Recommendations from Sigma Xi and ASCEND 21" 1992; Marton-Lefèvre 1994.
36. Interview of a participant in the ASCEND conference.
37. South Centre 1991; Porter and Brown 1994:122; Arizpe, Costanza, and Lutz 1992; Grubb et al. 1993:30–33; *The Economist* 1992.
38. Susskind 1994:62. On the lead-up to the treaty see McConnell 1996; Brenton 1994:197–206; Grubb et al. 1993:75–84; Boyle 1996.
39. Rowlands 1995a:85–87; Grove 1991:66–67, adapted from his article in *Nature* (May 3, 1990). For a history of climate change research, focusing especially on the United States, see Hecht and Tirpak 1995; Victor 1995.
40. For example, Boehmer-Christiansen 1994a:146 fn. 22 cites, in addition to Bolin, Paul Crutzen, Sir John Houghton and Professor Yuri Izreal, who have served variously as WMO executive members, IPCC Bureau members and chairs of IPCC Working Groups, among other posts. However, more than one scientist I interviewed also mentioned bureaucratic competition between IPCC and WCRP.
41. Boehmer-Christiansen 1994a. The combination of climate research and energy policy, especially in alternatives such as nuclear energy, is a key theme in Boehmer-Christiansen's analysis.
42. Note, while Munn identifies Clark's keynote address as the paper that galvanized scientists into action, Clark himself downplays his role, or that of any single paper, and attributes conference chair Jim Bruce's framing of the policy implications of climate change as the main catalyst. Bruce framed the issue from the perspective that crucial economic decisions of governments, and the energy and resource sectors, were being made under the assumption that climate would remain relatively unchanged, and that since science now suggested that assumption no longer held, what might be the implications of

that and what should government and industry do next? R.E. Munn, William Clark, and Jim Bruce, author's interviews.

43. WMO organized the 1979 conference to demonstrate success in its long-standing research program on weather forecasting, so it turned to climate change, at least in part, to show atmospheric research still deserved funding. Subsequently, GARP transformed into the World Climate Research Programme, with support from interested states including the United States, Soviet Union, United Kingdom, and Canada. Author's interview, Gordon McBean, who has held executive positions at WMO, ICSU, and WCRP.
44. Boehmer-Christiansen (1994a:156) uses the term "science managers;" Litfin (1994) uses "knowledge brokers."
45. See Boehmer-Christiansen 1994a:156, who lists key individuals comprising the network who remained major players in scientific research up to and including the IPCC process. Names that stand out include Bolin, Tom Malone from ICSU and WMO, Gordon Goodman from the Stockholm Institute, and Tolba.
46. That estimate, however, is increasingly seen as conservative. The draft IPCC Working Group 1 Third Assessment Report released in January 2001 projects global mean surface temperatures to rise by 1.4–5.8 degrees C (2.5–10.4 degrees F) from 1990 levels by the end of this century based on GHG emission trends, a substantial increase over 1995 projections. (The main difference is based on revised estimates of the influence of sulphates from industry and power plants). It also takes a firmer position that anthropogenic (human-induced) emissions have contributed to oberved warming over the last 50 years (IPCC 2001).
47. Agrawala (1999:160–162), who also presents a detailed history and influence of the AGGG; interview with James Bruce, deputy secretary-general of WMO when AGGG was created.
48. The following discussion of the Toronto conference draws primarily from Agrawala (1999) and Paterson (1996:33–34).
49. Haas, Levy, and Parson 1992:10, make a similar point. For one of the only detailed studies of the role of such expert bodies on adequacy of commitments within treaties, see Deutz 1997.
50. James Bruce, co-chair of working group III of the IPCC second assessment report, author's interview. The list of authors for working group III includes some natural scientists, but primarily prominent economists including David Pearce of the United Kingdom and nobel laureate Kenneth Arrow of the United States.
51. Note, Elizabeth Dowdeswell, who later replaced Mustafa Tolba to head UNEP, is credited with the idea to revamp working group III. Dowdeswell's background is primarily as an administrator/bureaucrat, unlike Tolba who gained a reputation first as a scientist.
52. Gordon McBean, author's interview. When WMO set up IPCC, Japan sent representatives from its Ministry of International Trade and Industry, not hard scientists, and expressed a desire to get involved on response strategies because it saw opportunities as a leader in solar cell and other alternative energy technologies.

53. When controversy erupted over these figures, they were removed from the summary report, although they remained in the actual chapters. For brief notes on the controversy, see Skodvin 2000:162–164; "Heating up the Climate Change Debate" 1996; Wysham 1994.
54. WMO/UNEP 1992.
55. For example, Bolin 1994. Also, Sherwood Rowland, in Brodeur (1986:80–81) lists a number of reasons why scientists are not more active.
56. For example, ICSU and SCOPE generally failed to incorporate views of social scientists.
57. Susskind (1994:62–81) summarizes a number of these problems.

CHAPTER 5

1. I use the term policy entrepreneur generically to refer simply to individuals who creatively attempt to change, reframe, or promote policies or norms. While not inconsistent with labels such as norm entrepreneur or moral entrepreneur used by others (Nadelmann 1990; Finnemore and Sikkink 1998), I use a broader label here to avoid making a causal claim about the source of authority or reason for success of such individuals or groups independent of the broader theory proposed here.
2. Pigou 1920:23–30. See also Weale 1992; Hahn and Stavins 1992.
3. For a brief list of prominent studies see Thompson 1972. Notably, one such study cited was commissioned by the Canadian government from Jim MacNeill (1971), who later became secretary-general of the Brundtland Commission.
4. Although Moravcsik (1997:517 fn. 6) insists his theory of preferences is not pre-social, it must be if he assumes fully exogenous preferences.
5. Pioneering works in the new institutionalism include March and Olsen (1984, 1989). See also their foray into International Relations scholarship (1998).
6. This explanation should not be confused with attempts to superimpose a model of evolution from biology onto social phenomena. Efforts to develop social scientific concepts *directly* analogous to evolutionary mechanisms and derived from specific theories of evolution in biology have been employed to explain, for example, transformations in the international system or institutions, or conditions for optimum performance in the international political economy. See Modelski and Poznanski 1996 and other contributions to the September 1996 special issue of *International Studies Quarterly*. Here the analogy is strictly limited to the idea of fitness as a contingent phenomenon.
7. Florini also emphasizes legitimacy, but discusses it as indicative of norm "prominence," one of the factors that influences whether a norm will be accepted (1996:374–375). She uses "prominence"—a direct analogy to gene prominence as a factor that accounts for reproductive success in evolutionary theory—to encompass a number of other factors that affect the promotion of a norm. Thus the analogy, although creative, is too forced to focus attention directly on social processes. Spruyt (1994) also acknowledges a role for legitimacy, but gives greater emphasis to efficiency in his theory of the evolution of institutional forms in international politics. The main driver of

selection in his theory is the relative efficiency of political units to achieve given goals—i.e., reducing transaction costs, raising revenues, preventing free-riding—over their rivals in a given environment. Mutual acceptance of the legitimacy of some institutional forms over others plays a secondary role, although it is one of three factors he identifies as important in the selection process. See especially pp. 158–169, and 201 fn. 47.

8. My emphasis on this interaction also differentiates my approach from Emanuel Adler's theory of "cognitive evolution" (1991). Adler focuses primarily on innovation and learning within states, and secondarily on the subsequent diffusion and selection of new interpretations of the social world domestically and internationally. My approach focuses more directly on the interaction of ideas (whatever their source) and social structure.
9. I am only focusing on new ideas about global problems as a source of change. Social structure may also change owing to the emergence of new identities, such as from revolutionary states, changes in technology, wars, and so on. However, in all cases, I would argue, social structure reflects human beings' construction of meanings around such events and social forces, not simply from those forces or technological changes themselves. Technological change no more determines social structure than vice-versa, but the two interact. Spruyt (1994:21) makes a similar argument, as have a large number of social theorists, at least since Max Weber.
10. Florini 1996:364–365; Franck 1990:16, 38. Such a view of social structure is well supported within the constructivist literature. See Wendt 1992, 1994; Wendt and Duvall 1989; Dessler 1989; Kratochwil 1989; Busumtwi-Sam and Bernstein 1997; among others.
11. For example, Franck 1990; Frost 1996; Kocs 1994; Ruggie 1998; Reus-Smit 1997; Wendt and Duvall 1989; and Kowert and Legro 1996 all conceive of levels of norms. However, the specific formulation below of a three-tiered hierarchical structure is an innovation of Busumtwi-Sam and Bernstein 1997, and the following discussion is based on the model of social structure developed there.
12. This does not mean everything associated with the state is socially constructed, which is a claim virtually no one makes. Buildings, military weapons, flags, and documents of a state and the rocks, trees, water, and territory on which they sit are real. Rocks and trees are ontologically objective. Borders, however, are subjective. They define the boundary of the territorial state, and would not exist without the institution of sovereignty, or would at least mean something quite different. The meanings and uses of objects associated with the state are not self-evident as brute facts—the institutions of statehood are historically and socially constructed. The objects listed above are not inexorably linked to an entity called the state or a particular understanding or manifestation of sovereignty or political organization more broadly (although the symbolic content of these objects may be). States and international institutions are constructed in the sense that understandings of the state and sovereignty depend on shared meanings, they are socially constructed "all the way down," since even the most basic principles underlying sovereignty are not timeless, but came about through human interaction and understanding.

13. Ruggie (1986:144–145) argues property rights—the basis upon which states own property (territory) "differentiate among units in terms of possession of self and exclusion of others." Second, they designate a form of society—like private property rights, sovereignty establishes a society of "possessive individualists" arranged to reproduce this mode of differentiation and facilitate orderly exchange among separate parts.
14. Dessler 1989 among others. Krasner (1988:81), also uses an evolutionary analogy to argue that an explanation of how institutions begin needs to take account of the "genetic stock" of extant institutional structures, "not just external factors."
15. The practices of sovereign states are primary because the contemporary international system empowers states as primary units.
16. As Adler notes, quoting Popper, "in contrast to the past which is closed, as it were, the future is still open to influence, it is not yet completely determined" (1997:350 fn. 18).
17. I have not proposed a theory to explain the full relationship between power, external factors such as technological change, and social structural change and continuity, which is why the explanation relies on a historical snapshot of social structure at particular times to explain the entrance of new norms. As Finnemore (1996:15) notes, however, "There is no reason why the structure in a structural argument must be material and economic. Structures of shared knowledge and intersubjective understandings may also shape and motivate actors," and can be useful starting points for analysis.
18. Maurice Strong, author's interview. Subsequent quotations in this paragraph and the next are also from this interview. See chapter two for a list of participants.
19. Maurice Strong, author's interview. Sachs, however, is a critic of neoliberal or "scientific" economics and classifies his work as turning back toward a political economics or perhaps to a new "anthropological" economics. I. Sachs 1984:vii-ix. Also, I Sachs 1977.
20. Riddell (1981:8–14) lists 11 "macro principles" of ecodevelopment to guide such policies: (1) establish an ideological commitment (to ecodevelopment); (2) increase social equity; (3) attain international parity; (4) alleviate poverty-hunger; (5) eradicate disease and misery; (6) reduce arms; (7) move closer to self-sufficiency; (8) clean up urban squalor; (9) balance human numbers with resources; (10) conserve resources; (11) protect the environment.
21. McCormick (1989:162–170) details the complex compromises between various environment and development communities in the strategy's drafting.
22. For example, OECD 1994a, 1995, and 1998. The latter is one of many studies under the auspices of the Annex 1 Expert Group on the Framework Convention on Climate Change, whose analysis has been an important source of learning and influence in FCCC negotiations, especially on issues such as emission trading.
23. Jim MacNeill, author's interview. Hajer (1995:97–99) also credits the conference and OECD activities from 1979–84 as one of the most important sources and disseminators of these ideas.

24. MacNeill 1984 and author's interview. Strong (author's interview) did not see the choice between the possible agendas in as stark terms as MacNeill did, but rather as a continuation of the work started at Stockholm to link environment and development. He called the decision "tactical," and said that he did not recall the commissioners having a lengthy substantive discussion. As he tells it, "Jim and Gro Brundtland consulted with a few of us [and] felt that was the way we should orient our work . . . and it was decided that the new agenda was the better framework."
25. The argument parallels Finnemore's argument (1996:98–99, 114) crediting the World Bank's promotion of poverty reduction with giving legitimacy to this goal, which then influenced a shift in intellectual development circles toward a poverty orientation.
26. Weale (1992:23–32) and Hajer (1995) both focus on the "discourse" of ecological modernization.
27. Williamson 1990, 1993; Biersteker 1992; Rodrik 1994. See chapter 3 for some specific policy prescriptions attached to the "Washington Consensus," especially in IMF and World Bank programs. I am less concerned with specific policy advice—for example, whether pegged or fixed exchange rates should be preferred to floating rates—and more by the acceptance of broadly liberal economic norms in formerly recalcitrant countries.
28. For a historically grounded account of the IMF's promotion of these policies, see Pauly 1997. He argues that the Fund staff did not show particular intellectual creativity—indeed the policies themselves were little different than the League of Nations attempts to restructure debt in Central Europe following World War I—but rather used the Fund's surveillance function and financial resources in order to reduce bank debts in leading states while avoiding expulsion of debtors from international capital markets. The Fund provided incentives for its policies (see chapter 3) with the promise of restructured and reduced debt, and new financing in the form of private portfolio and direct investment.
29. See McNamara (1998) for a discussion of the intellectual and political roots of these economic norms in Europe toward a neoliberal consensus. According to McNamara, these policies placed price stability above all other goals as necessary for the success of the European Monetary System in the 1980s. She argues that these policies prevailed owing not to idealogy, but to the failure of Keynesianism to respond to deteriorating economic conditions following the first oil shock in 1973, policy innovation along monetarist lines, and emulation, particularly of Germany, where restrictive monetarist and anti-inflationary policies appeared effective. On the developing world acceptance of these norms, see Biersteker (1992); Busumtwi-Sam (1995); and Rodrik (1994) for various explanations.
30. For G-7 summit statements during this period see Hajnal 1989, 1991. For a summary of international statements in support of market instruments see OECD 1994a:13.
31. For a summary of international initiatives, see for example, OECD 1994a; *Project 88—Round II* 1991:2–4. For Post-UNCED programs see, for example, OECD 1994b, 1995, 1998.

32. Descriptions of specific initiatives on climate change can be found at UNCTAD's Greenhouse Gas Emissions Trading website, www.unctad.org/en/subsites/etrade/index.htm. For a general examination of UNCTAD's attempts since 1992 to incorporate environmental concerns into its research and programs, see Arda 1996.
33. UNGA 1994. The report was written under then Secretary-General Boutros Boutros-Ghali, but refers to comments made by de Cuellar in 1990.
34. For a detailed discussion see Busumtwi-Sam and Bernstein 1997. Among other changes, the 1994 agreement changed the role of the proposed management organization (the Authority) so that it now must respond to the "right" of states to mine mineral resources in the deep seabed, essentially putting in place an assured access rather than a common heritage regime. This change severely limits, perhaps even eliminates, the ability of the weakened Authority to control access. In addition, technology transfer provisions were changed so that transfers will now be guided by "conditions on the open market" and on "fair and reasonable commercial terms," and development of the Seabed shall proceed according to "sound commercial principles." See also Payoyo 1997:457.
35. Deudney does not argue that such a shift is occurring; rather, he sees in "green culture" some "of the major ingredients lacking in previous cosmopolitan alternatives to nationalism."

CHAPTER 6

1. Although I have not attempted it here, even apparently exogenous shocks might be fruitfully explored within a social structural framework since even major wars occur in the context of existing social relations.
2. Ruggie 1995; Wendt 1998. Admittedly, I have skirted over the issue of the relationship of the social world to the material world. I would argue, however, that investigating the content of social structure historically is sufficient methodologically for this approach, even if social structure ultimately interacts with material structure. This sort of chicken and egg problem is likely an unsolvable dilemma of social life. However, accurately identifying social structure serves as a useful shorthand for the manifestation of material interests, which, I have argued, are meaningful only in the context of social structure in any case.
3. See note 55, chapter 4.
4. James Bruce (author's interview) noted that economists in IPCC working group III for the 1995 report had a far greater consensus on core policy questions than the natural scientists involved.
5. One exception is Robert Keohane's review (1978) of the influential McCracken Report, although he looks more at the report than at the OECD's power *per se*. A few examples of systematic research on other organizations that might fall into this category include Gill (1990) on the Trilateral Commission and Pauly (1997) on the IMF, especially his focus on its surveillance function.
6. Finnemore 1993, 1996; Sikkink 1993; Keck and Sikkink 1997. See also Bernstein and Cashore 2000a.

7. See also Woods (1995:168) who focuses on the limitations of the "discovery" view of new ideas—that policies change when new good ideas are discovered.
8. Helleiner (1996:70) is referring specifically to works such as Haas, Keohane, and Levy (1993) and MacNeill, Winsemius, and Yakushiji (1991).
9. Hirschman 1989:349. Although Hirschman presents this rational response argument in the case of Keynesian economics, the Hall volume (1989a) as a whole finds it unconvincing. Hall (1989b), for example, argues that this "economist-centered" explanation is incomplete since economic theories and the economists that supported them waxed and waned in influence in comparison to other influences on policy. He argues for a more complete model of the policy process that looks at the interaction of ideas with their policy environment—administrative, political, and economic.
10. McNamara 1998. For example, she argues, in part, that the apparent success of monetarist policies in Germany in response to stagflation (simultaneous inflation and recession) in the 1970s, and the perceived failure of Keynesian policies, led other European countries to imitate Germany.
11. For example, Grubb (1998), among other concerns, questions the economic theories underpinning the Kyoto "flexible" market-based mechanisms even on efficiency grounds. He shows that "least cost" solutions initially do not necessarily lead to efficient outcomes in the longer term because, for example, the assumed incentive to innovate could be lost under such schemes.
12. IISD 2000d. Robert Watson, director of the World Bank's Environmentally and Socially Sustainable Development Program, also told the World Bank European Sustainable Development Forum that Bank President James Wolfensohn is placing greater emphasis on the promotion of sustainable development and that the identification of trade-offs is the main feature that distinguishes the 2002 strategy from the 1992 strategy.
13. Adding these criteria further complicates the already highly uncertain and politically charged science of modeling the costs and benefits of actions to mitigate climate change. Uncertainties range from energy prices and market conditions, to technological innovations. For example, models that allow scope for cost-effective improvements in energy efficiency might translate into net benefits (i.e., no-regret measures). Whereas such models face criticism for underestimating hidden costs of implementing new technologies, top-down models typically used in national forecasts tend to ignore such measures altogether, probably overestimating costs. See Grubb et al. 1999:163–165 and Appendix 2.
14. Anderson and Leal 1991. Note, however, that the supporters of "free market" environmentalism seem to misunderstand many of the compatibilities of current formulations of sustainable development with their position, thus they set up any environmental intervention as a target for attack. See Eckersley (1993) for a critique of free market environmentalism, even when it is less radical than the version endorsed by Anderson and Leal, as inappropriate as a blanket solution because it cannot balance economic efficiency with equally important goals of social justice and ecological sustainability.
15. See for example MacNeill, Winsemius, and Yakushiji (1991) where all these proposals are brought forward, yet political support has been found mainly

for action on proposals consistent with liberal/market norms. See also Weale (1992:157) and Goodland, Daly, and Serafy (1993) who argue for the need for environmental accounting.

16. Chatterjee and Finger 1993:3. See also Sachs 1993; Hawkins 1993.
17. For an argument that a more radical reformulation of the international relations literature is required see Saurin 1996.
18. For a succinct summary of the rulings, see Nordström and Vaughn, WTO Secretariat (1999), Annex 1, para. 140–147.
19. See Bernstein and Busumtwi-Sam (1998) for a further discussion of defining and understanding change at various levels of social structure.
20. There remains much debate on how radical a departure from the "Washington Consensus" the "Post-Washington Consensus" really entails. For example, Broad and Cavanagh argue that while financial elites within key governments and the international financial institutions seem willing to modify the goal of free capital flows, the consensus "largely holds with respect to trade policy" (1999:84). Similarly, Stiglitz's emphasis (1998, 1999) remains primarily on institutional support for markets to function smoothly and less on trade-offs. See also Naím 2000.