

ON THE POLITICAL ECONOMY OF GLOBAL ENVIRONMENTAL REGULATION

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Scholars of regulatory politics have long puzzled over environmental regulation. Although public choice theory has explained much of economic regulation as the product of concentrated interest group politics, the theory has not furnished a convincing account of environmental regulation. [FN1] Civic republican theory has offered an alternative hypothesis for the emergence of environmental regulation, but has often been more normative than positive. Both the origin and the content of environmental regulation remain enigmatic.

The puzzling politics of environmental regulation are even more murky at the global level, where the public choice and civic republican theories of regulatory politics are even less probative. Despite the rapid growth of international environmental law, [FN2] relatively little attention has been given to developing or comparing positive political theories specifically addressing global environmental regulation. [FN3] The recent acceleration of major environmental treaty law--notably the 1987 Montreal Protocol regulating chlorofluorocarbons (CFCs) [FN4] and *750 the 1997 Kyoto Protocol regulating greenhouse gases [FN5]--demands a more thorough analysis of the political economy of global environmental regulation.

Part I of this essay reviews the public choice and civic republican theories at the national level and argues that neither theory provides a full account of both the origin and content of environmental regulation. [FN6] Public choice theory has difficulty explaining the origin of national environmental law: indeed, it suggests that diffuse environmental benefits and concentrated compliance costs will yield no environmental legislation. Public choice theory does provide a more robust explanation of regulatory content, demonstrating that rent-seeking by concentrated interests can distort the hidden details of regulation. Conversely, civic republican theory seems to account for the origin of national environmental law, but has less to say about regulatory content. A hybrid synthesis of the two theories attributes the origin of national environmental law to civic republican movements and to political entrepreneurs who capitalize on such movements, and attributes the content of national environmental laws to public choice theories of parochial rent-seeking. This hybrid synthesis suggests that a coalition of both civic republicans and parochial rent-seekers may be a necessary precondition to the enactment of key environmental laws.

Parts II and III carry the debate to the global level. Part II argues that the standard positive political theories provide an even weaker explanation of the origin of global environmental regulation than of national environmental regulation. The beneficiaries of global environmental quality are even more diffuse and latent than their national counterparts, suggesting an even

greater public choice bias against regulation at the global level. Meanwhile, civic republican discourse is even more limited at the international level because of the vastly larger scale of the polity, the greater diversity of cultures involved, and the more market-like rhetoric of international treaty negotiation. The origin of environmental regulation is thus even more difficult to explain at the global level than at the national level. Moreover, the voting rule for adopting international law requires the voluntary assent of every party to be bound, rather than the majoritarian voting rule provided for national legislation in most countries. The voluntary assent voting rule makes adopting regulation a cooperation game rather than a coercive enterprise, and thus raises the hurdles to be surmounted in order to adopt broadly applicable regulation. In sum, the establishment of global environmental regulation should be (nearly) impossible--a conclusion apparently belied by reality.

*751 Part III examines the content of global environmental regulation. Just as the presence of parochial rent-seeking might explain the details of national environmental legislation, national governments and interest groups likewise might attempt to skew the details of global environmental regulation in order to secure gains over their economic rivals. Part III highlights several examples of parochial rent-seeking strategies in the climate change treaty negotiations. This Part suggests that much of the opposition to tradeable allowances observed in the climate negotiations may arise from rent-seeking rather than disagreement on the merits. The voluntary assent voting rule for adoption of international treaties should, however, sharply constrain such rent-seeking; it is the majoritarian voting rule for adoption of national legislation that enables winners to extract rents from losers. The voluntary assent rule means that prospective losers can simply decline to participate. At the global level, then, rent-seeking should be rebuffed or at least largely tamed. Still, rent-seeking is attempted in global environmental treaties. Part III explores how this reality can be squared with the theory of rent-seeking.

Part IV draws both positive and normative conclusions concerning the origin and content of global environmental regulation. As a positive matter, current theories are inadequate to explain the origin and content of global environmental regulation, and more research is needed to develop and test new positive theories. As a normative matter, compared to the majority voting rule, the voluntary assent voting rule may not only hinder the initiation of global environmental regulation, but may also render the content of such regulation less susceptible to distortionary rent-seeking. Calls for more majoritarian or coercive global environmental governance, based on impatience with the timidity of the voluntary assent rule, should be reappraised in light of the voluntary assent rule's superior ability to insulate environmental regulation from parochial rent-seeking.

I. THE PUZZLE OF NATIONAL ENVIRONMENTAL REGULATION

The examination of positive political theories of national environmental regulation in this Part is a critical prelude to examining such politics at the global level. First, the success or failure of these theories at the national level provides a useful benchmark for comparing their relative success at the global level. As I argue in Parts II and III, whatever the success of these theories at the national level, they are much weaker when applied at the global level; thus, we need a new effort to explain the positive politics of global environmental regulation. Second, the explanatory theories of global environmental politics will themselves depend inescapably on some

explanation of national environmental politics. International treaty negotiations are a "two-level game" in which each nation-state's position at the global level is itself in part a product of national-level politics. [FN7] As Professor Putnam puts it, the nation-state is not a *752 singular "it" but a plural "they." [FN8] Thus, " a ny testable two-level theory of international negotiation must be rooted in a theory of domestic politics...." [FN9]

A. PUBLIC CHOICE THEORY

1. The Logic of Collective Action

A main prediction of rational choice theory is that markets will underproduce public goods. Public goods are goods that, once produced, are enjoyed essentially by all; the provider of the public good cannot exclude anyone from sharing in it, and its enjoyment by one person does not diminish the enjoyment of others. Clean air is a classic example of a public good. According to rational choice theory, individuals will generally face disincentives to undertake costly efforts to generate public goods, because the provider bears the cost but is able to recoup only a small fraction of the benefits. Individuals will generally face incentives to free-ride on others' provision of public goods, resulting in a general failure to provide the level of public goods that all would prefer if they could act collectively.

The key insight of public choice theory is that these barriers to the provision of public goods afflict not only private conduct but political activity as well. [FN10] Public choice theory sees politics as a market. Since organizing political pressure to produce legislation is costly, proposals to generate diffuse public goods through general-interest legislation will attract limited organizing efforts. Individual voters and re-election minded politicians, as rational actors, would rather free-ride than bear the cost of producing public goods for others. Politics will thus be biased toward the provision of appropriable benefits--private goods--to concentrated interest groups. [FN11] Further, because becoming informed about political choices is itself costly, individual voters will also remain rationally ignorant of the politics of public goods. [FN12]

Thus public choice theory predicts that the public's collective but diffuse general interest in a cleaner environment will be muted by the incentives for each citizen to free-ride, and will be systematically defeated in the political marketplace by industry's concentrated interest in avoiding costly regulation. As Professors Farber and Revesz have emphasized, the logic of public choice *753 seems to predict that there will not be any environmental regulation at all. [FN13]

But, in fact, environmental regulation does exist. The public choice logic of collective action is undermined by the emergence of environmental law in the United States, particularly the dramatic adoption of the modern environmental statutes such as NEPA, [FN14] CAA, [FN15] CWA, [FN16] ESA, [FN17] TSCA, [FN18] and RCRA [FN19] in the years 1969-1976. How could diffuse citizen beneficiaries of a cleaner environment have suddenly organized to overcome the entrenched concentrated interest of industry? The origin of environmental regulation poses a major puzzle for public choice theory. [FN20]

A further problem for public choice theory is the staying power of environmental regulation

during the 1980s. Environmental law remained vigorous and even grew stronger despite a concerted campaign for deregulation. Ironically, the 1980s campaign for deregulation left environmental law in place, but swept away much of the economic regulation that public choice theory had explained as enacted to serve industry's concentrated interests. [FN21] Belying the public choice hypothesis, the concentrated interest groups appear to have lost both coming and going.

A partial rehabilitation of the public choice model is offered by the theory of political entrepreneurship. If the aggregate net benefits of producing a public good such as clean air are large enough, there can be incentives for an astute political actor to expend the costs of securing legislation in order to reap the political rewards of voters' prospective approval. [FN22] Several accounts of the *754 origin of modern environmental regulation turn on such anticipatory entrepreneurship. [FN23] But because the political entrepreneurship thesis depends on an exogenous emerging preference among voters for environmental protection, it converges with the civic republican theory of how such voter preferences arise. [FN24]

Insofar as the political entrepreneurship thesis has the potential to explain everything, however, it proves too much. Every instance in which environmental legislation trumps concentrated opposition could be attributed to the anticipation by a clever political entrepreneur of latent, heretofore unexpressed but imminently salient public attitudes. The public choice approach remains unable to provide a coherent and testable explanation of the origin of environmental regulation.

2. Rent-Seeking

An alternative tack for the public choice camp is to insist that the logic of collective action means that there will be no general-interest environmental regulation, and to argue that any environmental regulation that does arise is really private-interest rent-seeking in disguise. Indeed, the typical complaint from public choice theorists is not that there is too little environmental regulation, as the logic of collective action would suggest, but that there is too much. Public choice theorists trace most or all regulation to rent-seeking, arguing that any ostensibly public-regarding regulation that does emerge must have been *755 designed to favor rent-seeking concentrated interests, such as subgroups of the regulated industry attempting to burden their rivals. [FN25] Some adherents go so far as to argue that this is the only real theory of all regulation. [FN26] One asserts that " invariably, regulation is found to be better explained in terms of self-interested redistributions of wealth among private demanders of regulation, rather than any public-spirited correction of genuine market failure." [FN27]

Although intra-industry rivalry is the most commonly studied form of rent-seeking, the motivations behind rent-seeking span a wide range. As James Q. Wilson puts it:

It is far harder to defeat the pseudo-environmentalists. They claim to be serving the public when in fact they are serving political and organizational interests of their own. These interests range from anti-market and anti-capitalist ideologies through the desire to win reelection by brandishing empty environmental slogans to a pecuniary stake in saving jobs, thwarting competitors, and selling machinery. [FN28]

The unifying characteristic is that these advocacy groups use environmental regulation, not to achieve general environmental quality improvement (a public good), but rather to deliver other more parochial ends (private goods). In this model, environmental regulation may be supported by self-interested factions such as industry subgroups seeking to burden rivals, vendors of pollution control technology seeking to force increased demand for their wares, and purported environmental advocacy groups whose real agenda is social engineering or bureaucratic control rather than environmental improvement per se.

There is considerable evidence that particular environmental regulations have been shaped by parochial rent-seeking. [FN29] But this theory can be critiqued on *756 several grounds. First, although it explains such episodes as the scrubber and prevention-of-significant-deterioration (PSD) requirements in the 1977 Clean Air Act (CAA) amendments, [FN30] it does not offer any real explanation of the origin of modern environmental law from 1969 to 1976. [FN31] Once the legislative ball gets rolling, industry subgroups will undoubtedly scheme to tilt the playing field their way, but there is little or no evidence that it was industry who agitated for the enactment of NEPA in 1969, the 1970 CAA, or the 1973 Endangered Species Act. The empirical public choice literature has said much about the details of the 1977 CAA amendments but very little if anything about the outburst of environmental lawmaking around 1970. A plausible inference is that if industry sees environmental regulation as inevitable, it will try to influence the mechanics of such regulation, but that industry would generally prefer no such regulation even to self-serving regulation and hence will not spontaneously lobby for new environmental laws. Spawning new environmental regulation is a risky gamble in which one's rivals might gain the upper hand, so better to leave the beast alone unless it cannot be avoided--and then, play to turn the monster against one's rivals if it cannot be subdued altogether. The theory of rent-seeking thus explains far better the content of regulations--the choice of regulatory instruments, barriers to new sources, and other design details [FN32] of which the public is essentially rationally ignorant--than the original emergence of such regulations.

*757 Second, even as to content, several scholars have found the empirical evidence of rent-seeking to be limited. According to Roger Noll:

[T]he evidence is still far from fully conclusive. . . . [There] is the lurking danger of tautology, i.e., of attributing causality to an inevitable consequence of any public policy action. It is impossible to imagine that regulation could be imposed without redistributing income. Hence, a look for winners in the process--and organizations that represent them--is virtually certain to succeed. Until fundamental measurement problems about stakes, power, and gains are overcome, analysts will not be able fully to predict and to explain the details of regulatory policy. [FN33]

Another review of the literature concludes that "much theoretical work has been done with only casual reference to observation. Often the analysis is motivated by reference to one or two examples that seem to support the model." [FN34] Justice Breyer has expressed similar doubts about the anecdotal and untestable nature of the rent-seeking literature. [FN35] The theory of rent-seeking, for example, accounts for the manner in which the eastern coal and rust-belt interests won parochial rent-seeking gains in the scrubber and PSD provisions of the 1977 Clean Air Act amendments, but not for these same interests' loss of these same gains in the 1990 Clean Air Act amendments. [FN36] This turnabout poses a sharp challenge to the public choice story.

Third, there is a significant schism in the public choice field about the implications of rent-seeking. Most scholars argue that special interest politics are dysfunctional and impose net losses on society. [FN37] But a vocal minority asserts that competition among special interest groups will engender adoption of *758 the most efficient regulatory approaches. [FN38] Depending on who is correct, special interest rent-seeking could yield environmental legislation that serves or disserves the broader public interest. Not only does this schism complicate the normative assessment of interest group politics, but it also makes it difficult to draw any positive inferences about interest group influence from the observed outcomes of environmental legislation. Public-regarding laws might reflect Becker's happy competition of avid rent-seekers rather than proving the failure of the dismal model of rent-seeking distortions. Similarly, the enactment of apparently skewed legislation might reflect the best outcome possible, not the role of dastardly special interests. Public choice theory must resolve this internal debate before it can make testable predictions about legislative results. [FN39]

B. CIVIC REPUBLICAN THEORY

In contrast to public choice theory, civic republican theory contends that regulation reflects public-spirited, moral deliberation. Professor Farber argues that periodic "republican moments" that swamp organized industry opposition may explain the original emergence of modern environmental law. [FN40] Farber draws on an article by James Gray Pope that identifies five defining features of republican moments: (1) widespread, serious political discourse; (2) debate couched in moral terms, with appeals to the common good rather than private interest; (3) debate centered on changes to the fundamental social, political, or economic order; (4) direct citizen action, such as militant protests, civil disobedience, or popular assemblies that overshadow representative politics; and (5) social movements and voluntary associations displacing interest groups and political parties as the preferred unit of political organization. [FN41] These factors do seem to describe the political tumult of the late 1960s, which produced, among other things, the era of modern environmental law. Samuel Huntington's characterization *759 of "creedal politics" [FN42] seems an especially apt framework for understanding the adoption, on moralist grounds, of absolutist command-and-control pollution laws and the rejection of market-based incentives. [FN43]

Civic republican theory, however, is more normative and aspirational than positive and predictive. [FN44] Its image of public-regarding, moral discourse has great difficulty accounting for the many perverse twists in environmental law, which public choice scholarship attributes to rent-seeking. And absent some method of forecasting the eruption of republican moments in advance, civic republicanism is of little help in predicting the future direction of environmental regulation. [FN45] Further, the theory does not seem able to account for the almost continuous record of environmental lawmaking over the last thirty years. Civic republican theory depicts republican "moments" as rare and startling instances--occurring perhaps only three or four times in the nation's history. [FN46]

*760 C. A HYBRID SYNTHESIS

The relative strengths of public choice theory in explaining content, and civic republican theory in explaining origins, suggest that a hybrid synthesis of the two may be able to address both

concerns. It makes sense that populist upsurges could fundamentally shift the legislative agenda, but that stealthy interest-group dealmaking would still control design details that the public cannot effectively monitor. Professor Yandle calls this hybrid theory a story of "Baptists and bootleggers." [FN47] The name comes from the story of Sunday liquor store closing laws that were supported by the unlikely alliance of Baptists seeking religious purity and bootleggers eager to suppress their competitors for one day each week. Generalized, Baptists--populist moral crusaders--drive the political agenda, while bootleggers--powerful special interest groups, especially in the regulated industry itself--influence the details of regulation to serve their rent-seeking parochial ends. [FN48] The public does not scrutinize these regulatory details effectively, because they are technical issues for which high monitoring costs imply rational ignorance.

The result can be either the successful political provision of public goods, or moralistic laws with nefarious consequences. The Sunday closing laws, for example, appear to protect the public against drinking on the Sabbath, but in reality may only shift alcohol purchases from legitimate stores to illegal moon-shiners. The net impact of the Sunday closing law on public health could be perverse if the bootleggers produce a more potent or contaminated product, or engage in violence. Likewise, well-intentioned environmental regulatory proposals can be hijacked for intra-industry and inter-regional rivalry. [FN49] Rent-seeking rivalry can undermine environmental goals by selecting higher-cost and less-protective regulatory instruments in order to burden rivals. [FN50]

The Baptist and bootleggers thesis is attractive but requires further study. Even if some examples bear out the story, its strongest possible claim--that *761 environmental regulation can be adopted only when backed by a hybrid coalition--remains conjecture. The more modest claim--that many or most environmental regulations are adopted and shaped by a hybrid coalition of populist agenda-setters and parochial rent-seekers--helps explain national environmental regulation, and, to some extent (as discussed below), global environmental regulation as well.

II. THE PUZZLE OF GLOBAL ENVIRONMENTAL REGULATION: ORIGINS

Can global environmental regulation be explained by these theories of regulatory politics? This Part begins to answer this question by focusing on the origins of global environmental regulation. Part III then considers the content of global environmental regulation.

A. PUBLIC CHOICE THEORY

The logic of collective action implies that there should be even less environmental regulation at the global level than at the national level. First, the collective global interest in a clean planet is far more diffuse than the nation's collective interest in a clean country. The benefits, for example, of preventing climate change would be spread globally and be enjoyed well into the future. Whereas United States clean air legislation involves some 250 million beneficiaries today, climate change regulation involves perhaps ten billion beneficiaries decades in the future. [FN51] Climate change regulation also involves potentially high costs to concentrated industry interests in the present. Public choice theory would therefore predict widespread free-riding by climate protection beneficiaries and potent opposition by concentrated industry interests. Nation-

states recognize that the externalities from emissions of greenhouse gases transcend national borders, leading each nation-state to underinvest in abatement. [FN52] Each nation-state would rather free-ride on the protective efforts of others.

Second, the global legal context is tilted against effective regulation. Whereas advocates of collective action at the national level need only muster a majority coalition to enact legislation that regulates polluters, collective action at the global level requires the voluntary assent of all those who would be regulated, including polluting nations. [FN53] The fact that international treaty law can only be ***762** adopted by voluntary assent rather than imposed coercively by majority rule makes it even easier for opponents of regulation to block action. Majority rule can impose regulation as long as a coalition of winners outnumbers the losers. The voluntary assent voting rule, by requiring each party to consent before it can be bound by the proposed regulation, requires every regulated entity to perceive itself as a net winner from joining the regulatory treaty. In order to cover the relevant sources of the environmental harm worldwide, parties seeking a regulatory treaty may need to persuade recalcitrant harm-producing countries to sign on. This dynamic enables opponents to block agreements, delay negotiations, and demand side payments, thus raising the price of regulation for the winners and fostering stalemate. [FN54]

The voluntary assent voting rule makes treaty adoption a multiparty cooperation game. As in the "prisoner's dilemma" game, nations may do better under mutual cooperation but will face incentives to free-ride and defect from the cooperative solution. [FN55] Some global environmental problems may be even more resistant to resolution than the "prisoner's dilemma" game, because they involve powerful parties who do not perceive net gains from mutual cooperation and must therefore receive substantial side payments to secure their participation. [FN56] Global climate change may be a prime example: key countries such as China and Russia may perceive a warmer planet to be favorable to their agriculture sectors, while emissions controls would be costly to their growing coal-based economies. In such cases, the adoption of effective climate change regulation by treaty under the voluntary assent voting rule may be very difficult or impossible.

Third, there is less room for political entrepreneurship at the global level. Since there is no elected representative body of world legislators, it is unclear who could capture the political rewards of generating otherwise nonexcludable ***763** global public goods. Perhaps a single large country or regional bloc could act as a hegemon, receiving a large enough share of the global benefits that it would provide the public good unilaterally. [FN57] But hegemony theory seems inapplicable to global climate policy because no nation or block of nations, not even the United States or the European Union, represents a large enough share of both the benefits of global protection and the sources of global environmental change to take much action unilaterally. [FN58]

Some have suggested that environmental nongovernmental organizations (NGOs) may be potent enough to act as global regulatory entrepreneurs. [FN59] Environmental NGOs are more active now than they were in the early 1970s, and may be more active globally than industry groups. [FN60] Still, NGOs do not run global policy, nation-states do. [FN61] Perhaps the influence of NGOs in national politics could lead to higher environmental standards in their home jurisdictions, in turn motivating industry and labor lobbyists to join with environmentalists

to press for uniform regulations applicable internationally across competing jurisdictions. The integration of a world economy with mobile capital may make national governments hesitant to regulate unilaterally for fear of "leakage" of capital and jobs to less regulated countries, and instead may motivate industry groups in more regulated nations to lobby for multilateral regulatory regimes that harmonize standards upward. [FN62] This roundabout strategy for leveraging *764 environmental standards upward is reminiscent of the situation in the United States in 1970, where the Clean Air Act was evidently supported by industries seeking to supplant patchwork state regulation (the analog to patchwork national regulation at the global level) with uniform federal regulation. [FN63] But the 1970 Clean Air Act was also driven by competition between presidential candidates Nixon and Muskie for nationwide voter appeal. [FN64] At the global level there is no globally elected chief executive to carry the regulatory flag, and multilateral negotiations cannot internalize the rewards of political entrepreneurship as well as a single elected executive official who sponsors generalized environmental protection in a bid to match voters' potential preferences.

Taking together the effects of more diffuse beneficiaries, the voluntary assent voting rule, and the weaker opportunities for political entrepreneurship, public choice theory should conclude that very little global environmental regulation will occur, or at least that much less will occur at the global level than at the national level. In short, if public choice theory held that the passage of the 1970 Clean Air Act should have been impossible under majority rule within one country, then it should hold that a global climate treaty is a fortiori completely impossible. But of course global environmental regulation does occur, and increasingly so. The Kyoto and Montreal Protocols [FN65] are two of the most salient examples; there are dozens of others. Perhaps the logic of collective action does not apply to global environmental regulation (or to environmental law at any level). [FN66] Or perhaps it does apply, and the international environmental treaties that we observe are relatively few in number, just the tip of the regulatory iceberg. The treaties we observe may be those that arise when the value of internalizing global environmental externalities comes to exceed the transaction costs of regime set-up and enforcement (including the costs of overcoming free-riders and cooperative losers). [FN67] If so, then as the set-up and enforcement costs of environmental treaties were reduced and their benefits were perceived to grow, and/or if international legal institutions became more centralized and majoritarian, then the global environmental regulatory edifice could expand dramatically.

B. CIVIC REPUBLICAN THEORY

Alternatively, global environmental regulation could be explained as a kind of international republican moment. Perhaps a startling event like the discovery *765 of the Antarctic ozone hole, or the hot summer of 1988, can spur a global moral discourse that yields action.

Several factors cut against this view. First, international relations involve national representatives acting in their national interest and not as global civic republican representatives. [FN68] Examples include the continued North-South divide over development versus environmental protection; [FN69] the United Kingdom's five-year delay in approving sulfur emissions reductions because the benefits accrued only to other nations; [FN70] the international inattention to desertification issues; [FN71] and opposition by fossil fuel producers and consumers to greenhouse gas emission reductions policies. [FN72] Poorer countries may be

especially likely to resist appeals to noble, global, public-regarding civil republican efforts, because their societies are struggling for daily survival and have more immediate priorities than global environmental protection. [FN73]

Put another way, the civic republican thesis often attempts to rebut the public choice paradigm-- in which politics, like private affairs, is a market-- by arguing that individuals qua voters/citizens behave differently from the way they would behave qua consumers. Civic republicans assert that in the political realm, citizens express public-regarding preferences about how the world should be, even if in the commercial realm they express private-regarding preferences. [FN74] This thesis might accurately depict the origins of national legislation (though this proposition is debatable), but international law is inescapably the *766 product of a multiparty bargain--a market exchange. [FN75] The participants in international law may well view themselves mainly as transacting bargains and not primarily as expressing civic values. Even diplomats' own perceptions of their "national interest" may be derived from the plural politics of national legislative markets, as envisioned in the public choice model, [FN76] further weakening the prospects for civic republican deliberation at the international level.

Second, the likelihood of a deliberative civic movement sweeping across diverse societies on a global scale seems far more remote than such a reformation taking place within a single country. The scale of the global polity is probably too large for such a movement to develop, and the higher transaction costs of global deliberation would obstruct much discourse. Pope, in defining the features of republican moments, worried that even one nation was too large a polity for republican moments to occur: "Unfortunately, the republican ideal of deliberative democracy was designed for societies the size of city-states. The notion that ordinary citizens can engage in deliberative self-government seems utopian in a polity as large as the United States." [FN77]

Third, the requirement that a republican moment involve direct citizen participation seems less likely at the international level. Recall that Pope's theory requires that "representative politics are overshadowed by extra- institutional forms of citizen participation such as popular assemblies, militant protest, and civil disobedience; and ... social movements and voluntary associations displace interest groups and political parties as the leading forms of political organization." [FN78] Although NGOs are rising in importance, [FN79] they have not yet attained anything close to the ability to replace nation-states as global political actors. The international treaty-making process is much more insulated from direct citizen participation than is national politics. Among other things, there is no international legislature to which popular pressure and NGOs can appeal; their only real avenue is to influence the treaty negotiating strategies of national governments.

Fourth, the internal political systems of some nation-states may inhibit citizen participation. Countries with totalitarian regimes or limits on free speech may make it impossible or difficult for their citizens to give voice to the moral discourse that republican moments require. Many important countries sitting at the international environmental negotiating table--for example, China--may not be liberal democracies with broad rights to assembly and speech. Even some democracies, such as Japan, may not share the tradition of popular pressure to adopt environmental regulations that makes the civic republican theory even *767 arguably applicable to the origin of United States environmental law. [FN80]

Fifth, the prospect of a shared moral discourse seems less likely when the discourse must be conducted across national boundaries. The heterogeneity of cultures, traditions and interests across nations, with differing philosophical worldviews, removes global treaty negotiations from the civic republican realm of a shared moral and legal understanding.

Nevertheless, there may still be some room for global moral deliberation. There are examples in which it seems, at least at first glance, that nations have conceded more during international environmental negotiations than a cold calculation of their national interests would seem to justify. [FN81] These include the British acceptance of the European Union's emission reduction targets for sulfur dioxide; the agreement by Japan to cut CFC production under the Montreal Protocol; Mexican acceptance of the Montreal Protocol even before a special fund was created to help Mexico and other developing countries; Brazilian action to protect rainforests; Egyptian action to limit pollution of the Mediterranean; and Canadian and Russian support for action to reduce the risks of global warming despite the possibility that these same two nations might benefit from increased agricultural activity if global warming occurs. [FN82]

Might the nature of the environmental subject matter tend to make national negotiators more inclined to strive for the common global good? [FN83] This seems doubtful. Much more likely is that these countries perceived additional persuasive "carrots" for participation, perhaps via "linkages" to other issue areas; or the threat of punitive "sticks" for nonparticipation, such as trade sanctions. [FN84]

In addition, the nation-states that negotiate international environmental treaties may represent global elites. Although Professor Michelman has said that the "primary impetus for transformative republican lawmaking comes not from empowered elites at the center of society, but from hitherto subjugated groups at the margins" [FN85]--suggesting the impossibility of republican moments at the global level--this view is not universal. Professors Sunstein and Michelman, have each seen the opportunity for republican deliberation in such elite institutions as the Supreme Court of the United States. [FN86] Thus negotiations among a *768 few "great powers," such as the United States, the European Union, and Japan, could provide the breeding ground for global moral discourse. Or perhaps the transnational dialogue among the "epistemic communities" of scientists, environmental agencies, and environmental advocacy groups could be the basis for the creation of new international moral norms. [FN87] Further research is needed either to demonstrate or disprove these possibilities in the context of the global climate change negotiations. My own sense from having participated in the climate change negotiations is that the market bargaining analogy, rather than the civic republican analogy, is closer to the reality of international environmental negotiations. The United States, the European Union, and Japan did not deliberate over global moral virtue, nor did the community of experts shape the outcome. Rather, the national governments viewed each other as both potential cooperators and worrisome economic rivals, and negotiated hard for both collective and individual net benefits. The national governments did pay heed to the information presented by scientists and NGOs, but always conducted and relied much more heavily on their own in-house scientists and policy advisers. Indeed, the Intergovernmental Panel on Climate Change (IPCC) itself was created in part to keep climate science under the management of national governments rather than the epistemic community of climate scientists. And the climate treaty negotiations were run, ultimately, by

heads of state, not by environmental ministries. The climate treaty negotiations were as much about GDP [FN88] as about GWP. [FN89]

These critiques of civic republican theory's applicability at the global level seem to lead us back into the cold embrace of public choice theory. But as we observed earlier, public choice theory seems to predict the absence of global environmental regulation. We lack a successful positive political theory of the origin of global environmental regulation.

III. THE PUZZLE OF GLOBAL ENVIRONMENTAL REGULATION: CONTENT

The detailed design of global environmental regulatory treaties is as puzzling as its origins. While at the national level much of the content of regulation is ascribed to rent-seeking special interests, at the global level such activity should be muted by the voluntary assent voting rule for international treaty law. Even so, the history of global environmental regulation reveals considerable efforts at international rent-seeking. Such attempts were evident in the negotiation of the *769 Montreal and Kyoto Protocols: [FN90] some countries sought these regulations not to protect the planet for collective benefit, but to burden their economic rivals for their own national advantage.

A. GLOBAL RENT-SEEKING: THE THEORETICAL CONSTRAINTS

The special interest rent-seeking phenomenon, which undergirds both the public choice and hybrid Baptist and bootlegger theories of environmental regulation, depends on the presence of a coercive voting rule. Coercive voting rules; of which majority rule is one example, enable the winners to impose costs on the losers. [FN91] It is "the coercive power of government" that enables rentseekers to extract value from political losers and redistribute it to themselves. [FN92] As Richard Posner wrote in an early article:

Not only do industries obtain all sorts of unmerited benefits from the government, but they are able to twist attempts to regulate them into protection against competition. The result is that government subsidizes business on a vast scale. . . . The ugliest aspects of corporate behavior are a product of the structure of government in a democratic society. Like everyone else businessmen seek to manipulate their environment....It is the nature of democratic ...government that a numerous, durable, articulate, and focused interest group...will wrest privileges and benefits from government and thwart efforts to control its behavior. Consumers, citizens, taxpayers, constitute too diffuse and amorphous a group to compete in this league....The very democratic structure that we so highly--and rightly--prize facilitates the plundering of taxpayers and consumers by interest groups able to use the powers of government for their own ends. [FN93]

In principle, the voluntary assent rule at the global level means that such coercive redistribution cannot occur. No country will adopt a treaty that does not yield net gains for the country. [FN94] International agreements, unlike majoritarian legislation, are analogous to voluntary multiparty contracts in which every contracting party must benefit to secure its participation. [FN95] Professor Mueller concludes that predatory rent-seeking in international agreements is therefore *770 "out of the question". [FN96] Professor Moe puts the difference in voting rules plainly:

The unique thing about [majoritarian] public authority is that whoever gets to exercise it has

the right to tell everyone else what to do, whether they want to do it or not Public authority gives [the winners] the right to make themselves better off at [the loser's] expense. Their decisions are legitimate and binding. They win and he loses....This kind of outcome--redistribution that makes some people better off and some people worse off-- is alien to the economic world of voluntary exchange. People do not enter into exchanges that they know will leave them worse off. The reason it happens in [national] politics is that people can be forced to do these things by whoever controls public authority. This is what makes politics so different, and why it cannot be well understood in terms of voluntary exchange and gains from trade.... Economics is essentially about voluntary exchange, politics is essentially about the (inherently coercive) exercise of public authority. [FN97]

The voluntary assent voting rule assures that no party is made worse off by joining the treaty; if it were made worse off, it would not assent. Hence, rent-seeking on a global level should be rebuffed. "Redistribution of income and wealth...are all blocked by this rule." [FN98] Along a spectrum of voting rules, the less coercive the voting rule, the less the opportunity to force transfers of rent from losers. "Stricter voting rules...raise the cost to legislators of finding diffuse minorities to 'supply' taxes and transfers." [FN99] "The stricter the voting rule, the more these negative-sum deals will fail to pass muster." [FN100]

The implication is that, at first glance, there should be no rent-seeking observed in global environmental treaties. Professor Keohane remarks that:

the lack of binding authority associated with international regimes...leads us to rely more heavily on microeconomic, market-oriented theory than on theories of public choice. Most public choice theory is not applicable to international regime change because it focuses on the processes by which authoritative, binding decisions are made within [nation-] states. Yet in international politics, binding decisions...are relatively rare and unimportant, and such decisions do not constitute the essence of international regimes.... [At the international level,] "exit"--refusal to [participate]--is an ever-present option. [FN101]

***771** The public choice theory of coercive rent-seeking ought therefore to have little role in predicting the content of global environmental regulation.

Another way to describe the relatively greater constraint on rent-seeking at the international level is to observe that the "demanders" and "suppliers" of international regulation are the same actors--the nation-states that negotiate each treaty. [FN102] At the national level, transfers of rents are facilitated by the separation of the demanders of regulation--interest groups-- from the suppliers of regulation--the general public from whom rents are extracted coercively. [FN103] Because of the voluntary assent rule, regulation at the international level can only be supplied voluntarily by participating nation-states, who will not agree to suffer a net loss of rents to enrich other nation-states.

B. GLOBAL RENT-SEEKING: THE PRACTICAL REALITY

Despite its apparent impossibility, rent-seeking--or at least attempted rent-seeking--is rife in global environmental regulation. Global environmental treaty negotiations are not solely about protecting the global environment; countries bring diverse interests to the table, including both

global environmental protection and national economic advantage.

Self-regarding economic interests may contribute to both the development of global environmental regulation and its content. For example, countries may favor international environmental regulations to boost their sales of pollution control technology. Japanese support for the climate change treaties may have derived in part from the economic interests of Japanese energy technology companies anticipating an opportunity for profit in a more carbon-conscious world. [FN104] United States support of the Kyoto Protocol [FN105] may have been spurred, in part, by the lobbying efforts of alternative energy providers trying to outflank their fossil fuel competitors. [FN106] French support for greenhouse gas limitations may similarly reflect its hope to sell more nuclear power plants. This kind of pressure for more stringent regulations by "vendor" nations and industries *772 would parallel such pressure by vendor industries--bootleggers--at the national level. [FN107]

Nations may also support international environmental regulation in order to alleviate special burdens on themselves. If environmental Baptists generate pro-environmental regulation in one jurisdiction, that jurisdiction or its industry may then seek uniform harmonized regulation across all jurisdictions in order to preclude the possibility of an economic competitor gaining advantage due to less stringent environmental regulation in some jurisdictions. This strategy to "level the playing field" has been observed in both federal environmental legislation and international environmental treaties. [FN108] Likewise, if a proposed treaty would impose economic burdens on some countries more than others, the more burdened parties may insist on more equal burden-sharing before they will ratify the treaty. For example, the Kyoto Protocol imposes emissions targets only on "Annex B" (industrialized) countries. Just before the Kyoto Protocol was negotiated, the U.S. Senate voted 95-0 to adopt a resolution refusing to ratify any treaty that did not limit emissions in developing countries as well as industrialized countries. [FN109] After the Kyoto meeting, the Clinton-Gore Administration said that it would not even submit the treaty to the Senate for ratification until the treaty had been augmented with more stringent obligations on developing countries. [FN110]

Industry may also support new international environmental regulation to exploit a prospective competitive economic advantage. For example, there is evidence that United States manufacturers of CFCs, who had opposed international controls on CFCs, switched positions in 1986 to press for an aggressive phaseout of CFCs in the Montreal Protocol in part because they perceived gains from "predation through regulation": the United States manufacturers were farther ahead in the production of CFC substitutes than were their competitors, so a rapid CFC phaseout, although it would hurt them a bit, would hurt their *773 rivals far more. [FN111] This is a classic case of bootleggers aligning with Baptists; rent-seeking industry looked to burden its rivals in allegiance with environmental advocates out to protect the planet. But it also shows that this rent-seeking occurred within a legal framework that (necessarily) made all parties net better off. If environmental advocates had not pressed the other CFC-producing countries to join the treaty, the U.S. CFC manufacturers could not have succeeded in their predatory gambit. This hybrid coalition may well have saved the stratospheric ozone layer.

Rent-seeking, by itself, is probably not sufficient to explain the origin of global environmental regulation. There appear to be no cases in which rent-seeking bootleggers were able to inspire a

new global environmental initiative without the support of environmental Baptists. And at the international level, the intended victims of a purely rent-seeking stratagem could always exercise their right to withhold their voluntary assent to the regulatory treaty. The real impact of rent-seeking is in the design of the detailed content of global regulatory treaties--the technical aspects of instrument choice which are essentially invisible to the public eye. Such bootlegging by industry can distort the details of global regulatory design while remaining purportedly faithful to the Baptist environmental agenda. The most interesting evidence on this point comes from the choice of regulatory instrument in the climate change negotiations.

C. INSTRUMENT CHOICE IN THE CLIMATE CHANGE NEGOTIATIONS

The treaty negotiations on global climate change are among the most environmentally and economically important, and politically complex, of all regulatory policy matters. Global warming could dwarf all other anthropogenic environmental changes, and the costs of its prevention could dwarf the costs of all other environmental regulatory programs. Essentially every country in the world is vitally interested in these negotiations, either as a potential victim of global warming or a source of greenhouse gas emissions (and often both).

One of the pivotal issues in the global climate negotiations has been the choice of regulatory instrument. The instruments available for regulating greenhouse gas emissions include technology standards, emissions taxes, fixed emissions targets, and tradeable emissions allowances. Substantial economic modeling of greenhouse gas policy options, and experience with regulatory instruments already in use, strongly suggest that from a collective global point of view, the most cost-effective instrument for regulating emissions would be either taxes or tradeable allowances. Compared to fixed national emissions targets aimed at capping or slightly reducing global emissions growth, tradeable allowances *774 would be 50%-70% less costly, implying aggregate global cost savings of perhaps \$1 trillion over the next three decades. [FN112] These cost savings would arise because the cost of greenhouse gas emissions abatement varies considerably from country to country, so that the flexibility to finance a given degree of abatement at the least- cost locations anywhere in the world would yield large aggregate cost savings. Developing countries, where the cost of GHG abatement is low, would be the likely recipients of these financing flows.

Aggregate global gains, however, do not necessarily generate political support for the adoption of international tradeable allowances. Political adoption depends on the distribution of gains and losses among the parties. [FN113] This is particularly true at the international level where regulatory treaties govern only those countries who consent. Thus, even a regulatory instrument which would produce large aggregate cost savings may be opposed by countries or interest groups who perceive greater gains to themselves from alternative instruments that impose higher global costs. Whether such rent-seeking can succeed at the international level remains to be seen.

Several parties have been vigorous advocates of international allowance trading, reflecting their perception that they will enjoy a significant share of the aggregate global gains provided by allowance trading. Countries concerned about the high cost of greenhouse gas abatement, such as the United States and Norway, have looked to allowance purchases as a lower-cost method of abatement. Meanwhile, countries with very low costs of abatement, such as Costa Rica, have

backed trading because they are interested in selling allowances at a profit. [FN114] In addition, private sector entrepreneurs keen to profit from the operation of an allowance trading market (such as brokers and financial institutions) have helped promote allowance trading in the United States and around the world. [FN115]

But numerous countries, especially those in the European Union and the G-77 developing country bloc, have vigorously opposed international allowance trading and have instead endorsed fixed national targets. [FN116] Even though provisions authorizing allowance trading among "Annex B" (industrialized) countries were included at U.S. insistence in the 1997 Kyoto Protocol, this system remains subject to guidelines yet to be negotiated and is (so far) inapplicable to developing countries. [FN117] The European Union continues to seek limits on the extent of allowance trading within Annex B. [FN118]

The causes of this opposition to the efficient regulatory instrument are not altogether clear. Why does Europe oppose a regulatory instrument that would make it far easier to control global GHG emissions? Why do developing countries oppose a system that would direct major new resource flows into their economies? There may be misunderstanding of allowance trading, and there may be genuine concern about the ability of allowance trading to succeed. [FN119] In addition, some participants may be less interested in cost-effective climate protection and may be more interested in other goals, such as moral condemnation of pollution. Beyond these considerations, there remains the possibility that opponents of allowance trading are pursuing other, parochial goals that would benefit them at a cost to others. If so, a coalition of Baptists and bootleggers could yield a global climate protection treaty employing a high-cost, perhaps ineffective, or even perverse regulatory design. This section explores the potential role of rent-seeking in the actual choice of regulatory instruments for global climate change. Several different factions may be combining to form a coalition for inefficiency.

First, the domestic experience of each country's regulatory system may predispose countries to favor familiar instruments at the international level. [FN120] At the national level, for example, legislators, lobbyists, industries and environmentalists may favor command-and-control (CAC) policies because they have acquired skills in manipulating such policies which would be lost under new non-CAC policies. [FN121] For global environmental issues such as greenhouse gases, there is no pre-existing global CAC policy in place. Thus allowance trading should face fewer obstacles when proposed against a tabula rasa. [FN122] Still, perhaps countries' domestic experience with CAC policies motivates them to resist learning about allowance trading at the global level. The U.S. domestic experience with allowance trading for sulfur dioxide, lead, CFCs, and other issues would then explain its favoring such policies at the global level, not so much in terms of the United States better realizing the truth of allowance trading's merits, but in terms of U.S. officials and firms having lower marginal costs of learning about allowance trading. [FN123] By contrast, as the Dutch Environment Minister said of tradeable greenhouse gas allowances: "That's not something that belongs to our European culture." [FN124] This hypothesis could be tested to some degree by comparing countries' positions on global allowance trading with their domestic experience with such instruments.

Second, some opponents of allowance trading may seek not climate protection but rather to engineer a societal transition from "hard path" to "soft path" energy technology systems in

industrialized countries. [FN125] This approach seeks social change for its cultural and socioeconomic significance, not for its environmental quality impacts; it corresponds to Wilson's notion of "ideological" rent-seeking. [FN126] Interest groups that have been fighting for decades to force industrialized countries to replace fossil fuels and nuclear energy with solar ⁷⁷⁷ power and energy conservation may now be seizing on the climate negotiations as another venue in which to press for their social agenda. These social engineers worry that allowance trading, by easing the costs on industrialized countries, would reduce the pressure to shift to alternative energy systems in industrialized countries. Hence the social engineers criticize tradeable allowances or try to limit the scope of overseas abatement activities to a small fraction of industrialized countries' compliance measures, arguing that industrialized countries should bear most of the costs at home. It is of less consequence to the social engineers that a cost-effective policy would protect the climate more effectively, because their main goal is social change, not climate protection. [FN127]

A third possible dynamic is that opposition to tradeable allowances might really be a move to exert leverage over the stringency of the regulatory constraint. Such games might be played on both sides of the table. Advocates of aggressive climate protection may be withholding support for allowance trading in order to exchange it for a more stringent cap on emissions. They may fear that trading is so complex or open to abuse that it will not result in effective emissions limits, or simply that their support can be used as a bargaining chip to extract concessions from advocates of trading. Even if these advocates of aggressive climate protection do favor trading, they may initially feign opposition as a ploy to twist the arms of those who dearly desire allowance trading. Meanwhile, skeptics of aggressive climate policy may fear the opposite, that cost-effective tradeable allowances would be an all-too-alluring "fast train to the wrong station." [FN128] They fear that the cost-saving claims of trading will entice countries to blithely adopt overly stringent quantity-based emissions caps which are then resistant to relaxation even as costs escalate. Thus, these skeptics would feign opposition to allowance trading--which they would actually endorse if a stringent cap were unavoidable--in order to make the entire regime appear so costly that it is rejected or delayed. Both gambits are risky: the climate protection advocates could block trading and get less assent to emissions abatement; the climate protection skeptics could block trading and get more costly emissions abatement. In combination, these two factions could discredit allowance trading even though both would favor it (if they could be sure the level of emissions control would be to their liking). Thus, these opposing groups of Baptists could unintentionally collaborate to forfeit major joint gains.

Fourth, opposition to allowance trading might arise from nations and industries attempting to impose higher-cost policies on their international rivals. These actors could treat the climate change treaty as a negotiation over competitive ⁷⁷⁸ advantage, not environmental protection. Nations that are low-cost greenhouse gas emissions abaters, for example, may favor high-cost policy designs because, even though such a policy would cost them something, it would cost their higher-abatement-cost trade rivals far more. These low-cost abater countries would be pursuing predation by regulation, seeking to exploit intra-industry heterogeneity in abatement costs for competitive gain. [FN129] Thus, European countries might be opposing allowance trading and pressing for a high-cost global climate policy in order to burden more heavily their trade rivals in the United States and Japan. [FN130] On this view, the European governments opposed globally tradeable allowances precisely because global trading would give every

country the same chance to find low-cost compliance options worldwide, depriving regulatory predators of the opportunity to gain an advantage over their rivals. Meanwhile, the European Union advocated both a European Union "bubble" and trading limited to industrialized countries ("Annex B") only, both of which were adopted in the Kyoto Protocol. [FN131] These more limited trading regimes would give Europe flexibility while barring the United States *779 and Japan from obtaining low-cost credits in developing countries. These positions strongly suggest that the European Union does advocate flexible allowance trading when its own interests warrant--in short, that the European Union opposition to global allowance trading is strategic rather than philosophical. As The Economist magazine put it just after the Kyoto negotiations:

The EU intended to achieve [the deep reductions in emissions it proposed at Kyoto] by assigning different targets to its 15 members. Under its "bubble," poorer Portugal could increase its emissions by up to 40%, while other [member] countries would make deeper cuts. But the flexibility of the bubble was for Europe alone: everyone else would have to accept a single target. For the Europeans, a legally binding emissions protocol was seen as a nifty way of nobbling the pesky Americans and hard-working Japanese. Emissions have been rising relatively slowly in the EU because of the collapse of coal-mining in Britain and the rundown of the smokestack industry in east Germany. The EU was also against the [global] trading of pollution credits because such measures diluted its own unique advantage. Having enjoyed nothing like America's heady economic growth since 1990, and being less reliant on coal, making cutbacks in emission levels was always going to be easier for the Europeans. But ... Japan tried to play honest broker ... its open hostility to the EU's bubble had much to do with its fear of individual European countries (such as France or Italy) getting off lightly and becoming an industrial threat...the UN conference ... always had more to do with the jockeying for individual trading advantage than preserving the global environment for future generations...." [FN132]

The predation strategy is complicated by the fact that under a tradeable allowances system, the low-cost abaters could also earn revenues from allowance sales. Thus, predation by opposing allowance trading makes sense for the low-cost abaters only if they would gain more from an inflexible policy's impacts on high-cost rivals than they would gain from a flexible policy's revenue prospects. This again suggests that the European Union strategy was rent-seeking rather than expressing a philosophical opposition to any allowance trading. Global greenhouse gas allowance trading, which the United States sought, would have directed allowance sale revenues to developing countries, especially China. A totally inflexible policy of fixed national targets would hurt the United States and Japan relative to Western Europe, but it would also prevent Europe from earning allowance sale revenues. The option the European Union favored, permitting trading only among European Union members, or at most only among industrialized countries ("Annex B"), would have kept the costs to the United States and Japan higher than under global trading, while *780 potentially directing allowance sale revenues to Europe. [FN133]

Thus, European opposition to cost-effective global allowance trading may derive from the preference of both European environmentalists and European industries for a less flexible, higher-cost policy design--a classic Baptists and bootleggers coalition that disguises rent-seeking distortions within purportedly general-interest regulation. If so, this opposition will be difficult to overcome. It would be couched in the moralist language of Baptists for public relations purposes but will conceal the predatory economic motives of industry.

Meanwhile, the creation of the Clean Development Mechanism (CDM) in the Kyoto Protocol [FN134] may reflect a strategy of international rent-seeking by developing countries (DCs). The DCs may hope to run the CDM as a credit sellers' cartel, charging monopoly prices and burdening industrialized countries. The replacement of decentralized "joint implementation" (JI) in the FCCC with the centralized CDM in the Kyoto Protocol suggests that centralization of power over abatement investments in DCs may be a key motivation for the creation of the CDM.

Fifth, a different form of rent-seeking which may explain opposition to allowance trading involves the struggle for power in domestic politics. Cost-effective climate policy may be opposed by the interests which stand to gain within their own countries from inflexible international policy designs. To maximize cost-effectiveness, allowance trading would assign to the private sector the role of transferring resources from industrialized countries to developing countries through myriad decentralized market transactions. But many countries are not as "market-friendly" as the United States, and some pivotal countries for climate change regulation, notably China, are not members of the World Trade Organization (WTO). Powerful interests in the domestic governments of both industrialized and developing countries may prefer to keep control over these global resource transfers in central government hands. This may be so even though centralized control of resources is less cost-effective and *781 may result in smaller transfers, higher costs for industrialized countries, smaller revenues for developing countries, and less global climate protection. Consider that the diplomats negotiating the climate treaty often come from the very government agencies and elite cliques which would be enlarged and enriched by the task of handling government-to-government resource transfers. [FN135] For these government elites, controlling and profiting from official aid flows may be much easier than trying to take a share of the rents from private sector transactions. [FN136] Worse, allowing the private sector to handle such flows of wealth might be seen as threatening to the domestic political position of governing elites.

In some developing countries, private market transactions, especially in land for carbon sequestration, might cut against deeply held suspicions of commerce. [FN137] Moreover, within some developing countries, the expansion of markets may promote the advancement of an ethnically distinct merchant class that is disfavored by the ethnic majority. [FN138] Adopting a market-based regime to protect the global environment could be interpreted as channeling income to these market entrepreneurs, which could appear threatening to majority political rulers. Such opposition would reflect a classic struggle of aristocrats versus merchants, feudalists versus capitalists--a struggle that has obstructed the development of markets for centuries. It is not surprising that this domestic political struggle could powerfully influence the negotiating positions of government delegates from developing countries and even industrialized countries as well. Indeed, without this factor, it is difficult to explain why developing countries would oppose the creation of an allowance trading system whose resource flows would represent an enormous expansion of investment in developing economies.

***782 D. RECONCILING THEORY AND PRACTICE**

If the voluntary assent voting rule for treaty law implies that regulatory rent-seeking should be sharply constrained at the international level, what are we to make of these instances of rent-

seeking activity?

The first answer is that these examples of global environmental rent-seeking are not necessarily inconsistent with the voluntary assent voting rule in international law. The voluntary assent voting rule does constrain rent-seeking, and in contrast to the history of successful rent extraction in national legislation, the efforts of rent-seekers to oppose international allowance trading have largely failed. Attempts at global rent-seeking have largely been rebuffed by powerful countries who have acted as holdouts for efficiency. The ardent opponents of greenhouse gas allowance trading, for instance, have largely been defeated by the United States' insistence on authorizing such trading, at least for Annex B countries, in the Kyoto Protocol. [FN139] This demonstrates the ability of individual countries to resist interest group pressures under the voluntary assent regime of international law. If the Kyoto treaty had been enacted under majority vote, the United States would undoubtedly have lost the battle and global climate regulation would have employed a much higher-cost regulatory instrument, such as fixed quantity targets. [FN140] On this view, the observed rent-seeking has been more attempted than real. In cases in which it has succeeded, as in the gambit of United States CFC manufacturers to support the Montreal Protocol, it has been aligned with real global environmental protection gains that made participation a net gain to all involved.

Although the voluntary assent voting rule for treaty law prevents any party from suffering a net loss as a result of participation, there can still be a battle over the distribution of the joint gains from collective action. That is, there can be a struggle to divide the space along the Pareto-efficient frontier within the contract zone. [FN141] Even if all parties would be made better off by a treaty, parties may be obstinate or engage in a high stakes gamble to extract more of the joint benefits for themselves. The value of the property rights to be created and assigned in a global GHG allowance trading system could be enormous, and the battle over the distribution of these rents could be pitched. Parties may not come to an agreement, because some parties may hold out and gamble to increase ***783** their share of the benefits by threatening to scuttle the entire treaty. [FN142] Similarly, parties may appear to be following strategies to seize as much of the net gains as possible from their rivals. Special-interest bargaining can still be visible, although no party would agree to accept net costs. For example, developing countries may be objecting to global allowance trading as a bargaining strategy to extract concessions from industrialized countries, including a larger assignment of valuable allowances when the developing countries ultimately do agree to join such a system.

A complication is that the adoption of any one treaty is not an isolated decision. The international community has multiple interdependencies, and defecting in one area can have repercussions in others. Simultaneous negotiation of multiple issues on which nation-states have interdependent interests can induce compliance on one issue even though the costs of compliance on that issue would appear to exceed the benefits of compliance on that issue alone. A broader definition of benefit is needed to capture the multi-issue rewards to strategic concessions on individual issues. [FN143] It is at least conceivable that the EU and developing countries might be opposing allowance trading, at a cost to themselves, in return for some as yet undisclosed bargaining gains in (nonclimate) negotiating fora.

A second answer is the reminder that international treaty negotiations are a two-level game,

[FN144] crucially shaped by the domestic politics of each nation-state. The "national interest" is a collage of plural interests within each country. If public choice theory is at least partly accurate about national majoritarian politics, then the negotiating position of the national government may be at odds with the general interest of its populace and may be serving the goals of special interests that dominate the national political system. For example, as just discussed, countries' negotiating opposition to global allowance trading may be driven by domestic special interests representing the bureaucracies who prefer official government aid to private investment flows, even though the countries' economies would be better off in general by participating in allowance trading.

Moreover, even though the voluntary assent rule prevents coercive extraction of rents at the international level, there may be domestic coercion acting upon those who negotiate international treaties. Politics within each country is conducted *784 not by a unanimity rule, but is typically ruled by the majority, an elite oligarchy, or by tyranny. Gaining voluntary assent to treaties really means gaining the requisite coercive coalition within each signatory nation. Coercive pressures enter the calculus to the extent that each nation-state permits coercion to be exerted in its domestic rule. If nation-states are treated as disaggregated political coalitions and sets of institutions rather than unitary monoliths, [FN145] then treaty adoption is a multi-level voting game. [FN146] A nation employing some version of majority or supermajority rule may vote to adopt a treaty when less than all of the nation's citizens assent. Thus, a treaty could be adopted by every country-- superficially reflecting unanimity--when in fact the treaty is opposed by large minorities within each. In this way, the voluntary assent rule at the international level can involve coercion of domestic dissenters. [FN147]

A third explanation admits the possibility that there may actually be some opportunities for real coercive cost-imposing rent-seeking at the international level. International lawmaking is even further removed from public scrutiny than national lawmaking, so regulatory details may be harder for "the public" to monitor. Bootleggers may have more room to maneuver. Countries may have a harder time monitoring treaty stratagems and thus a harder time realizing when they are getting skewered by technical choices in treaty content. [FN148] In short, the costs of information may contribute to a kind of bounded rationality in which nation-states are rationally ignorant--unwitting victims of their rivals' *785 rent-seeking. [FN149] On the other hand, treaties are generally shorter than statutes, [FN150] and may thus be easier to monitor. Compared with legislative sessions of Congress, treaty negotiation sessions are fewer and less frequent. Moreover, treaty negotiators are not full-time law drafters as are legislators, so there is less opportunity for extensive logrolling at the international level.

Meanwhile, there may be some coercive elements of international treaty law negotiations. Concern for international reputation can coerce countries into signing treaties that they otherwise would not. International norms regarding leadership, moral obligation, and conformity may pressure or shame a country into joining a treaty that it would otherwise calculate does not maximize its narrow national interest. Professor Rosenau argues:

States have the exclusive right, it is alleged, to reserve to themselves the final say [and to] veto any internal or external proposals with which they disagree. That is their sovereign right.... And, so it is said, the fact that they have and exercise this right means that policies designed to meet environmental challenges can succeed only to the extent that the policies do not violate the

minimal interests of the states involved. For if they do run counter to state interests, the policies will fall victim to the exercise of the state's sovereign right to reject them.... Formally and legally speaking, this formulation is sound and insightful. But considered informally and nonlegally, it is deeply flawed and highly misleading ... there are many points on the sovereignty continuum between its presence and its absence ... an at-the-convenience-of-states perspective [is being supplanted by] a states-are-obliged-to-go-along orientation ... the evidence [of this transition] is considerable, ranging from the many instances in which the UN Secretary General has used the politics of shame to get his way with member states, to the even more numerous instances in international regimes where member states feel obliged to go along rather than be responsible for scuttling a policy. [FN151]

The "politics of shame" and the discomfort of being held responsible for scuttling a treaty can be seen as informal coercive pressures on nation-states' decisions whether to join a treaty. These are the international manifestation of the social norms that can undergird communal management of common pool *786 resources. [FN152] These pressures are not codified in a majority voting rule but may nevertheless impel some erstwhile dissenters to accede. As Chayes and Chayes put it:

[F]or all but a few self-isolated nations, sovereignty no longer consists in the freedom of states to act independently ... but in membership in reasonably good standing in the regimes that make up the substance of international life. To be a player, the state must submit to the pressures that international regulations impose.... The need to be an accepted member in this complex web of international arrangements is itself the critical factor in ensuring acceptable compliance with regulatory agreements. [FN153]

Another deviation from the orthodoxy of a voluntary assent rule is found in coercive nontreaty forms of international law. Resolutions of the United Nations Security Council, for example, can be enforced with coercive military and economic sanctions. [FN154] "Customary international law," inferred from the actual practice and beliefs of nation-states, [FN155] can crystallize over time to become binding law. [FN156] But the official rule of strict liability for transboundary harms is rarely enforced, precisely because it is coercive and requires overriding the sovereignty of the dissenting state that is the source of the harm. [FN157]

Finally, nations can attempt coercion through economic bullying. Because the voluntary assent rule is not a strict unanimity rule--not every nation need consent, only those who would be bound by the treaty--an agreement among some nations can impose costs on nonparties. [FN158] The most prevalent coercive measure employed in the international environmental area has been the imposition of trade sanctions. [FN159] Trade sanctions are sometimes applied to block trade *787 with countries which have not assented to their imposition. For example, the Convention on International Trade in Endangered Species [FN160] and the Montreal Protocol [FN161] both restrict trade with nonparties. Individual countries sometimes unilaterally restrict the import of products because their production causes environmental harms that affect the utility of consumers in the importing country. For example, the United States has attempted to restrict the import of tuna caught with methods that kill dolphins, and of shrimp caught without sea turtle excluder devices, and the European Union has attempted to restrict the import of beef from cows fed synthetic bovine growth hormone. [FN162] Countries targeted by coercive trade sanctions may object that such sanctions invite disguised protectionism, or constitute unfair economic bullying. In response to complaints by countries targeted by the sanctions, international dispute

resolution panels have held that some coercive trade sanctions violate the GATT-WTO free trade rules. [FN163]

Specific trade restrictions on environmentally sensitive products are only effective in cases in which international commerce in specific items is closely related to environmental harm. Restricting international trade in wood products, for example, may affect only a small share of the harm done by total forest clearing. [FN164] Alternatively, individual countries or groups of countries acting under a multilateral agreement might use sanctions on general trade--not on specific environmentally harmful products--as penalties to induce compliance by countries injuring the global environment. General trade sanctions are enforced purely to induce reform in the target country by twisting its economic ***788** arm. Thus general trade sanctions may invite even greater worries about disguised protectionism. On the other hand, general trade sanctions may offer greater leverage to influence activities harming the global environment where those activities are not traded internationally and are thus not susceptible to influence by specific trade restrictions. [FN165]

These coercive features might enable rent-seekers to force some inefficient regulatory regimes on unwilling victims. Still, the global legal regime remains much closer to voluntary assent than to the kind of coercion found in national politics. Countries can always refuse to be bound despite international arm-twisting, as the United States recently did in refusing to sign the Land Mines Treaty. [FN166] The politics of shame may move some countries at the margin from defection to assent, but it cannot coerce large minorities in the way that national legislation can. To see the point, imagine that U.S. environmental law required the voluntary assent of polluters. Most would surely bargain for much less stringent regulation. Shame might encourage some voluntary compliance, but hardly close to the power of mandatory legislation to impose restrictions. At the international level, large countries such as the United States and China are unlikely to be shamed into costly restrictions on their economies. And there is little evidence that the politics of shame, customary international law, or trade sanctions have had any influence on the debates over the choice of regulatory instruments in the climate treaty negotiations. Far more important have been intra-industry rivalry, struggles over the distribution of joint gains, and the domestic politics of instrument choice in a two-level game. All of these are consistent with the basic structure of treaty adoption at the international level: voluntary assent, not majority rule. [FN167]

IV. CONCLUSIONS

Since neither public choice nor civic republican explanations of political behavior provides a fully satisfactory account of national environmental law, it is no surprise that they also fare poorly in explaining global environmental law. The most promising solution to the political puzzle of national environmental regulation is the hybrid theory of Baptists and bootleggers. On this view, the adoption of environmental law typically involves both high-minded republicanism and self-interested predation. Environmental protection originates from broad civic enthusiasm and entrepreneurial politicians, but its content, hidden in the details of regulatory policy, is distorted by rent-seeking special interest groups.

At the global level, all of these elements are different. The beneficiaries of ***789** regulation are

much more diffuse than at the national level. The planetary scale and cross-cultural nature of global regulation make the occurrence of civic republican movements much less likely. And there is less opportunity for rewards to political entrepreneurs. Perhaps most important, the voluntary assent voting rule for treaties makes global environmental regulation more difficult to mobilize than majoritarian national environmental regulation. Voluntary assent means that international environmental treaties are multiparty cooperative games in which parties face incentives to free-ride and there is no central state to compel the provision of public goods. At the same time, because the voluntary assent voting rule minimizes the coercive power of regulation, international politics are more insulated against rent-seeking by bootleggers than under the majority voting rule in national environmental regulation.

Global environmental law is often derided as "too slow" by environmentalists and as "not real law" by realists. Both critiques arise from the fact that international law under the voluntary assent voting rule is not coercive. Advocates of global environmental protection have repeatedly called for more rapid and more coercive majoritarian international lawmaking. [FN168]

But international law is law; it is just law with a different voting rule-- voluntary assent instead of majority rule. [FN169] There are advantages as well as disadvantages to the voluntary assent voting rule. The puzzle of politics in global environmental regulation requires recognition of the special characteristics of the voluntary assent voting rule. These special characteristics have both positive and normative elements.

A. POSITIVE ELEMENTS

More theoretical and empirical study of the political economy of global environmental regulation is needed to understand its different legal and institutional framework. There may be no single "thick" theory to explain global environmental regulation. As Professor Abbott says, "[i]nternational politics is *790 an inherently difficult subject for any theory to explain.... Multiple causes contribute to most events." [FN170] The present challenge is to develop and test one or more such theories. This essay has moved one step further in that process by examining the uses and shortcomings of the dominant explanations of the positive politics of national environmental regulation, and has tested their extrapolation to the global level.

The main implication of the present analysis is that the theories of national environmental regulation must be modified if they are to say anything useful at the global level. Global environmental regulation involves far more diffuse benefits, a more stringent voting rule facilitating nonparticipation and blocking, little room for political entrepreneurship, and no coherent global civic deliberative community. The better analogy for the emergence of global environmental regulation is probably not its national counterpart, but scenarios of the emergence of legal regimes governing common resources used by multiple actors not under any central authority. These scenarios have typically been developed at the local level--in stories of villages, fur traders, fisheries, and homeowners' associations. These local stories have helped scholars to understand the remarkable transition from unowned commons to established property rights. [FN171]

In short, the global legal system is more like a neighborhood than a nation; treaties are more

like voluntarily adopted restrictive covenants than they are like legislated statutes. The idea of a "global village" has legal as well as cultural resonance. The emergence of global environmental law may reflect a Demsetzian transition, as the costs of the global externality come to exceed the costs of creating a property rights regime to internalize the externality. Reducing the transaction costs of assessing global environmental externalities will help facilitate their internalization through new global property rights such as tradeable allowances. [FN172] If so, this transformation will offer a new opportunity to solve the puzzle of how legal regimes can be established despite the incentives to free ride that caused the problem of overuse of the global commons to begin with. [FN173]

***791** We should expect less rent-seeking in global environmental regulation than in national environmental regulation. The voluntary assent voting rule should restrain rent-seeking, as long as potential victims are alert and willing to hold out for more efficient policies. Key countries--particularly the United States, representing a large share of the world economy and with extensive experience in designing more efficient regulatory instruments--will likely try to holdout against rent-seekers in order to establish international regulation that is economically efficient.

But the devil will still find room in the details. Even though the voluntary assent voting rule will decrease rent-seeking activity, there are some coercive elements at the global level, and battles over the distribution of collective gains are possible. The climate change and ozone depletion treaties signed in Kyoto and Montreal illustrate the continued pressures for rent-seeking at the global level. Ostensibly "environmental" negotiations may turn out to be motivated by parochial interests. The climate change negotiations may be less about protecting the global climate and more about jockeying for the upper hand in global commerce by imposing predatory restraints on rivals both internationally and domestically. They may be more about political power than about electric power, more about GDP than about GWP.

B. NORMATIVE ELEMENTS

As a normative matter, calls for a more coercive and majoritarian "legislative" voting rule at the global level may speed the adoption of regulation, but may also risk delivering global environmental regulation into the hands of rent-seeking special interests. Compared to majority rule, the voluntary assent rule entails higher decision costs but decreases parochial rent-seeking. [FN174] Before rushing to establish more coercive global environmental governance, the risks of distortionary rent-seeking must be balanced against the decision costs of achieving regulatory action. Those impatient with the difficulty of establishing international environmental law under the voluntary assent voting rule should not endorse majoritarian global procedures without first accounting for the risk of increased rent-seeking distortions.

Because the voluntary assent rule does imply higher decision costs which can delay regulation, the global regulatory system should be strengthened through better administrative expertise and decisionmaking infrastructure to reduce the costs of analyzing and negotiating about global environmental issues without conceding power to rent-seekers. The global regulatory system reflects substantial ***792** underprovision of the public good of decisionmaking analysis itself. Investing in the creation of a global environmental regulatory analysis bureau--a sort of

"international OIRA" [FN175]--could yield joint gains to nations, in part by helping to avoid inefficient global regulatory initiatives and to select efficient regulatory instruments.

Global environmental regulation offers an interesting experiment in the political economy of instrument choice, and in particular a new vantage from which to resolve the schism between pessimists and optimists within the public choice camp. [FN176] On the one hand, the observed opposition to global emissions trading may well reflect Olson's pessimism that legislative coercion invites inefficient rent-seeking. [FN177] According to this view, the move from the voluntary assent rule toward a greater degree of coercion at the global level would encourage special interests to secure parochial advantages that subtract from global well-being. On the other hand, the observed inclusion of allowance trading in the Kyoto Protocol may reflect Becker's optimism that competition among interest groups can favor more efficient regulatory instruments. [FN178] The divergence between these two views has typically been debated in the context of national majority rule. But another way to test these two theories would be to ask whether variation in the voting rule favors one view or the other. The pessimistic view seems more likely to be true the closer the voting rule comes to autocracy, and the optimistic view seems more likely to be true the closer the voting rule comes to unanimity. The more costs that can be imposed on dissenters, the more rent-seekers can obtain parochial gains at net cost to society at large. The more that net costs on dissenters cannot be imposed (or must be matched by side payments to obtain the dissenters' assent), the more pressure there is to choose instruments that impose as few costs on dissenters as possible. If so, at a global level, the voluntary assent voting rule would be more likely than the national majority rule to encourage efficient regulatory instruments. [FN179]

***793** This being the case, advocates of environmental protection should not necessarily be so quick to seek a coercive, legislative model for the global arena. The voluntary assent rule may be a bit like the tortoise, slow but steady, unperturbed by the distracting demands of self-serving enthusiasts along the way. A coercive rule may be more like the hare, faster but more prone to stray from the straight and narrow. [FN180]

Meanwhile, skeptics of environmental regulation should not criticize global environmental treaties based on a political theory used to critique the national politics of majoritarian regulation; a different legal system is in operation on the international level. It is entirely consistent to critique the parochial inefficiencies of national environmental regulation and yet call for more environmental regulation at the global level. The economics of the voluntary assent voting rule suggest that global environmental regulation is likely to be both more severely underprovided, and better insulated against mischief, than is national environmental regulation.

Given the voluntary assent voting rule at the global level and the constraints it places on both overregulating and rent-seeking, skeptics of regulation should be more sanguine about global environmental regulation than they have been about national environmental regulation. Far from fearing the "black helicopters" of the United Nations flying over Idaho, skeptics should recognize that global environmental regulation is inherently likely to be more benign than coercive national regulation. Meanwhile, proponents of global environmental regulation, including hard-headed realists who recognize that global public goods are underprovided, should be wary of the decisionmaking costs of global negotiations under the voluntary assent rule. They

should work to strengthen the analytic capacity of the international regulatory system and to reduce the transaction costs of internalizing global public goods--to foster new property rights regimes that prevent overuse of the global commons.

All sides should be wary of the disguised rent-seeking that may try to sneak its way into global environmental negotiations. Self-serving distortions in global environmental regulation, such as the choice of inefficient regulatory instruments to address global climate change, could impose large global costs while derailing global environmental protection. Major players, in particular the *794 United States and thoughtful NGOs, should act as alert advocates for effective and efficient global regulatory policy. Expert analysis can assist by unmasking rent-seeking before it succeeds--in other words, by reducing the public's cost of monitoring the salient details of regulatory design.

There is no simple punchline to this tale. The politics of environmental regulation, at both the national and global levels, will remain an intriguing puzzle. As mysterious as national environmental regulation may be, global environmental regulation is even more so--seemingly outside the ken of the prominent theories of public choice and civic republican lawmaking. The first move in solving this puzzle is recognition that the pieces must fit into a different legal framework at the global level. From that realization we can begin to assemble a new positive politics of protecting the planet.

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[FN1]. For example, Richard Posner's early article on the politics of economic regulation expressly distinguished social regulation as a separate and unexplained phenomenon. See Richard A. Posner, *Theories of Economic Regulation*, 5 *BELL J. ECON. & MGMT. SCI.* 325, 355 (1974). See also E. Donald Elliott, Bruce A. Ackerman & John C. Millian, *Toward a Theory of Statutory Evolution: The Federalization of Environmental Law*, 1 *J.L. ECON. & ORG.* 313, 313 (1985) (finding environmental regulation largely unexplained by standard theories).

[FN2]. See UNITED NATIONS ENVIRONMENT PROGRAMME, *REGISTRY OF INTERNATIONAL ENVIRONMENTAL AGREEMENTS* (1996) (listing international environmental treaties); Robert W. Hahn & Kenneth R. Richards, *The Internationalization of Environmental Law*, 30 *HARV. INT'L L.J.* 423-27 (1989) (detailing growing internationalization of environmental issues).

[FN3]. See Robert W. Hahn & Albert M. McGartland, *The Political Economy of Instrument*

Choice: An Examination of the U.S. Role in Implementing the Montreal Protocol, 8 NW. U. L. REV. 592, 610-11 (1989) (concluding that the study of positive politics of international environmental law remains in its "infancy"); Detlef Sprinz & Tapani Vaahtoranta, The Interest-Based Explanation of International Environmental Policy, 48 INT'L ORG. 77, 77 (1994) (stating that interest-based theory of international environmental regulation is "missing from the literature"). More generally, positive political theory has not often been applied to international law of any kind. See Kenneth W. Abbott, Modern International Relations Theory: A Prospectus for International Lawyers, 14 YALE. J. INT'L L. 335, 348 (1989) ("Although this article does not undertake the project, analysis of the sources of international law and other important legal principles in light of social choice theory could prove highly fruitful.").

[FN4]. Montreal Protocol on Substances that Deplete the Ozone Layer, Sept. 16, 1987, 1522 U.N.T.S. 3, 26 I.L.M. 1550 (entered into force Jan. 1, 1989) [hereinafter Montreal Protocol].

[FN5]. United Nations Framework Convention on Climate Change, Report of the Conference of Parties on its Third Session, Held in Kyoto From 1 to 11 Dec. 1997, FCCC/CP/7/Add.1 (issued Mar. 25, 1998), reprinted at 37 I.L.M. 22 (1998) (without certain technical corrections, e.g., Article 17 remains "Article 16 bis") [hereinafter Kyoto Protocol].

[FN6]. Although origin and content are obviously interrelated, it is analytically useful to distinguish between them. By the origin of environmental law, I mean its elevation on the political agenda to the point that some legislation does emerge. By the content of environmental law, I mean its policy design: the regulatory instruments, institutions, and other operating systems that make the law function in one way or another.

[FN7]. See Robert D. Putnam, Diplomacy and Domestic Politics: The Logic of Two-Level Games, in DOUBLE-EDGED DIPLOMACY: INTERNATIONAL BARGAINING AND DOMESTIC POLITICS 431, 431-68 (Peter B. Evans et al. eds., 1993).

[FN8]. *Id.* at 435.

[FN9]. *Id.* at 443.

[FN10]. See generally MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS (rev. ed. 1971).

[FN11]. See generally OLSON, *supra* note 10; GEORGE J. STIGLER, THE CITIZEN AND THE STATE: ESSAYS ON REGULATION 114-41 (1975); George J. Stigler, The Theory of Economic Regulation, 2 BELL J. ECON. & MGMT. SCI. 3 (1971). An early version is ARTHUR F. BENTLEY, THE PROCESS OF GOVERNMENT (1908). Later approaches include ANTHONY DOWNS, AN ECONOMIC THEORY OF DEMOCRACY (1957); GABRIEL KOLKO, RAILROADS AND REGULATION (1960); THEODORE LOWI, THE END OF LIBERALISM: THE SECOND REPUBLIC OF THE UNITED STATES (2nd ed. 1979); DAVID B. TRUMAN, THE GOVERNMENTAL PROCESS (1951); Sam Peltzman, Toward a More General Theory of Regulation, 19 J.L. & ECON. 211 (1976); Posner, *supra* note 1.

[FN12]. See generally DOWNS, *supra* note 11.

[FN13]. See Daniel A. Farber, *Politics and Procedure in Environmental Law*, 8 J.L. ECON. & ORG. 59, 60 (1992) ("The Olson paradigm appears to have a straightforward implication for environmental legislation: there should not be any.... [T]he two basic predictions [of Olson's model] are that environmental groups will not organize effectively and that environmental statutes will not be passed."); Richard L. Revesz, *The Race to the Bottom and Federal Environmental Regulation: A Response to Critics*, 82 MINN. L. REV. 535, 542, 561 (1997) ("it is difficult to explain, in public choice terms, why there would be any environmental regulation at all.").

[FN14]. 42 U.S.C. §§ 4231-4370(a) (1988).

[FN15]. 42 U.S.C. §§ 7401-7642 (1988).

[FN16]. 33 U.S.C. §§ 1311-1314 (1988).

[FN17]. 16 U.S.C. §§ 1531-1544 (1988).

[FN18]. 15 U.S.C. §§ 2061-2629 (1988).

[FN19]. 42 U.S.C. §§ 6901-6987 (1988).

[FN20]. See Elliott et al., *supra* note 1, at 321 (finding public choice theory unable to explain the origin of modern environmental law); Farber, *supra* note 13, at 65-66 (similar); Peter H. Schuck, *Against (And For) Madison: An Essay in Praise of Factions*, 15 YALE L. & POL'Y REV. 553, 566 (1997) (the emergence of modern environmental law is a "major predictive error of the new public choice theorists").

It may be that public choice theory, as economists often joke about macroeconomic theory, does an excellent job of predicting only the preceding thirty years. The public choice model was essentially fully developed by the mid- to late-1960s, before the avalanche of modern environmental law was adopted in 1969-1975. Public choice theory was aimed at understanding the economic regulation of the preceding decades--how railroads and other industries managed to "capture" rents from public legislation--and not the social regulation which had not yet occurred.

[FN21]. See ROBERT BRITT HORWITZ, *THE IRONY OF REGULATORY REFORM* (1989).

[FN22]. See R. DOUGLAS ARNOLD, *THE LOGIC OF CONGRESSIONAL ACTION* 10 (1990) (arguing that entrepreneurial politicians discern and appeal to the "potential preferences" of otherwise uninvolved voters); James Q. Wilson, *The Politics of Regulation*, in *THE POLITICS OF REGULATION* 357, 370-71 (James Q. Wilson ed., 1984) (arguing that skilled policy entrepreneurs who associate legislation with widely shared values may be able to confer general benefits even when costs are concentrated on a small segment of society). Denzau & Munger's public choice model shows how the latent preferences of unorganized voters can play

an important role in influencing political outcomes through entrepreneurial politicians. See Arthur T. Denzau & Michael C. Munger, *Legislators and Interest Groups: How Unorganized Interests Get Represented*, 80 AM. POL. SCI. REV. 89 (1986).

[FN23]. See, e.g., Elliott et al., *supra* note 1. The authors explain the early environmental legislation as the result of both industry efforts to replace patchwork state environmental laws with harmonized federal regulation, and a "politician's dilemma" competition between President Nixon and Senator Muskie to "race to the top" with ever more stringent legislative proposals. But the article leaves the underlying sources of these dynamics unexplained. Why were states passing environmental laws to begin with, and why were Nixon and Muskie racing to the top rather than to the bottom? The answer must depend on a rising voter demand for environmental protection, in state and federal elections respectively, and in turn on the ability of entrepreneurial politicians (e.g., Nixon and Muskie) to perceive and capitalize on these unorganized voters' tastes notwithstanding concentrated industry's opposition to greater stringency. Cf. William N. Eskridge, Jr., *Politics Without Romance: Implications of Public Choice Theory for Statutory Interpretation*, 74 VA. L. REV. 275, 285 (1988) (explaining public goods legislation through political entrepreneurship). For an excellent synthesis of the manner in which voter tastes and entrepreneurial politicians can produce general-interest environmental legislation without violating the public choice model, see Christopher H. Schroeder, *Rational Choice Versus Republican Moment Explanations for Environmental Laws, 1969-71*, 9 DUKE ENVTL. L. & POL'Y F. 29 (forthcoming Fall 1998).

[FN24]. See Schroeder, *supra* note 23, at 57-59 (pointing out that political entrepreneurship and republican moment theories converge toward a unified theory; political entrepreneurship depends on changing public attitudes, and public deliberation representative politicians); *infra* notes 37-38 and accompanying text discussing civic republican thesis.

[FN25]. See Eskridge, *supra* note 23, at 285 (suggesting that the political system "systematically" yields too little public interest legislation, and too much rent-seeking legislation); Robert D. Tollison, *Public Choice and Legislation*, 74 VA. L. REV. 339, 367 (1988) ("The [low cost of compliance] firms seek cost-increasing regulations that drive some of the [high-cost of compliance] firms out of the industry, raise industry price, and increase the quasi-rents accruing to the low-cost firms"). Cf. Einer R. Elhauge, *Does Interest Group Theory Justify More Intrusive Judicial Review?*, 101 YALE L.J. 31, 43 (1991) (arguing that "disproportionate influence of well organized interest groups is disturbing" and that rent-seeking is socially wasteful); The theory of industry subgroups attempting to impose burdens on their rivals was developed by Steven C. Salop et al., *A Bidding Analysis of Special Interest Regulation: Raising Rivals' Costs in a Rent Seeking Society*, in *THE POLITICAL ECONOMY OF REGULATION: PRIVATE INTERESTS IN THE REGULATORY PROCESS* 102, 119-21 (1984); Steven C. Salop & David T. Scheffman, *Raising Rivals' Costs*, 73 AM. ECON. REV. 267, 274 (1983).

[FN26]. See Robert D. Tollison, *Regulation and Interest Groups*, in *REGULATION: ECONOMIC THEORY AND HISTORY* 59, 72 (Jack High ed., 1991).

[FN27]. Fred S. McChesney, *Toward a More Dynamic Economic Theory of Regulation*, in *THE POLITICAL ECONOMY OF REGULATION: PRIVATE INTERESTS IN THE*

REGULATORY PROCESS 150, 150 (1984) (emphasis added).

[FN28]. See James Q. Wilson, Foreword to ENVIRONMENTAL POLITICS: PUBLIC COSTS, PRIVATE REWARDS ix (Michael S. Greve & Fred L. Smith, Jr. eds., 1992).

[FN29]. See BRUCE A. ACKERMAN & WILLIAM T. HASSLER, CLEAN COAL / DIRTY AIR 31 (1981) (noting that scrubber requirements in 1977 Clean Air Act protected eastern coal at the expense of western coal); Ann P. Bartel & Lacy Glenn Thomas, Predation through Regulation: The Wage and Profit Effects of the Occupational Safety and Health Administration and the Environmental Protection Agency, 30 J.L. & ECON. 239, 243 (1987) (arguing that OSHA and EPA regulations protect large firms and rust-belt firms against smaller firms and sunbelt firms); B. Peter Pashigian, Environmental Regulation: Whose Self-Interests are Being Protected?, 23 ECON. INQUIRY 55 (1985) (arguing that "prevention of significant deterioration" (PSD) provision in 1977 Clean Air Act was adopted by rustbelt states over dissenting votes of sunbelt states in order to suppress economic growth in, and industry relocation to, sunbelt). For a review of the literature on intra-industry predation through regulation, see Tollison, *supra* note 26, at 64-66.

[FN30]. 42 U.S.C. §§ 7470-7479 (1988). See ACKERMAN & HASSLER, *supra* note 29; Pashigian, *supra* note 29.

[FN31]. See Elliott et al., *supra* note 1; Schroeder, *supra* note 23; cf. Nathaniel O. Keohane et al., The Choice of Regulatory Instruments in Environmental Policy, 22 HARV. ENVTL. L. REV. 313, 318 (1998) (applying interest-group theory to explain the design of regulatory context, but expressly declining to apply the theory to explain the origin of environmental legislation).

[FN32]. See James M. Buchanan & Gordon Tullock, Polluters' Profits and Political Response: Direct Controls Versus Taxes, 65 AM. ECON. REV. 139, 139-41 (1975) (explaining industry preference for command-and-control standards rather than taxes); Donald N. Dewees, Instrument Choice in Environmental Policy, 21 ECON. INQUIRY 53, 53-55 (1983) (analyzing effects on industry of different effluent charge or effluent rights schemes); Howard K. Gruenspecht, Differentiated Regulation: The Case of Automobiles, 71 AM. ECON. REV. 328 (1982) (explaining preference of current industry for restrictions on new sources); Robert W. Hahn, Economic Prescriptions for Environmental Problems: Not Exactly What the Doctor Ordered, in THE POLITICAL ECONOMY OF GOVERNMENT REGULATION 131 (Jason F. Shogren ed., 1989) (reviewing the use of marketable permit and emission charge schemes and examining the theory of instrument choice); Robert W. Hahn, The Political Economy of Environmental Regulation: Towards a Unifying Framework, 65 PUB. CHOICE 21, 21-37 (1990) (exploring models of instrument choice and theories of environmental standard-setting); Keohane et al., *supra* note 31, at 325-62 (surveying rent-seeking related to instrument choice and new source restrictions).

[FN33]. Roger G. Noll, Economic Perspectives on the Politics of Regulation, in 2 HANDBOOK OF INDUSTRIAL ORGANIZATION 1253, 1277 (Richard Schmalensee & Robert D. Willig eds., 1989).

[FN34]. Thomas Romer & Howard Rosenthal, Modern Political Economy and the Study of Regulation, in PUBLIC REGULATION: NEW PERSPECTIVES ON INSTITUTIONS AND POLICIES 73, 108 (Elizabeth E. Bailey ed., 1987). See also Edward L. Rubin, Beyond Public Choice: Comprehensive Rationality in the Writing and Reading of Statutes, 66 N.Y.U. L. REV. 1 (1991) (critiquing empirical claims of public choice theory and offering alternative explanations of legislators' behavior).

[FN35]. See STEPHEN G. BREYER, REGULATION AND ITS REFORM 388 n.38 (1982).

Interest group theories, as causal explanations of either the historical origins of regulation or the actions of regulators, suffer several drawbacks. Where they are limited to producers [i.e., industry], they are often inaccurate. They cannot fully explain environmental, health, [and] safety regulation.... If the theory is expanded beyond producers, it risks becoming nonpredictive and nonexplanatory. All regulatory rules and programs benefit some group or other.

Id. See also JERRY L. MASHAW, GREED, CHAOS AND GOVERNANCE 203 (1997) (criticizing public choice theory for the fallacy of "post hoc, ergo propter hoc" inferences); Stephen Breyer, Roundtable Discussion, in THE POLITICAL ECONOMY OF REGULATION: PRIVATE INTERESTS IN THE REGULATORY PROCESS, 282, 282 (1984) (stating that interest group theory is uninteresting where it is true, and untrue where it is interesting).

[FN36]. See Paul L. Joskow & Richard Schmalensee, The Political Economy of Market-Based Environmental Policy: The U.S. Acid Rain Program, 41 J.L. & ECON. 37, 44-45 (1998).

[FN37]. See Elhauge, *supra* note 25. See also OLSON, *supra* note 10; MANCUR OLSON, THE RISE AND DECLINE OF NATIONS (1982); Tollison, *supra* note 25.

[FN38]. See Gary S. Becker, A Theory of Competition Among Pressure Groups for Political Influence, 98 Q.J. ECON. 371 (1983); Gary S. Becker, Public Policies, Pressure Groups, and Dead Weight Costs, 28 J. PUB. ECON. 329 (1985). See also DONALD WITTMAN, THE MYTH OF DEMOCRATIC FAILURE: WHY POLITICAL INSTITUTIONS ARE EFFICIENT (1995); Tyler Cowen et al., Rent Seeking Can Promote the Provision of Public Goods, 6 ECON. & POL. 131 (1994).

[FN39]. For attempts to reconcile Becker with the mainstream scholars such as Olson, see DENNIS MUELLER, PUBLIC CHOICE II, at 244 (1989) (arguing that competition in nonprice markets, such as politics, can impose more costs than benefits); Douglass C. North, A Transaction Cost Theory of Politics, 2 J. THEORETICAL POL. 355, 356-57 (1990) (arguing that Becker's model is inapposite, and that pessimists are correct, where transaction costs make political influence difficult and unevenly available); John R. Lott, Jr., Does Political Reform Increase Wealth?, 91 PUB. CHOICE 219 (1997) (arguing that the disagreement between Becker and the pessimists about rent-seeking boils down to an empirical question of the elasticities of supply of interest group pressure). See also Hahn, *supra* note 32, at 173-75 (arguing that Becker's optimism has not been borne out empirically in environmental regulation, where inefficient instruments have often dominated the field).

[FN40]. See Farber, *supra* note 13, at 59-60, 66-67; James Gray Pope, Republican Moments: The Role of Direct Popular Power in the American Constitutional Order, 139 U. PA. L. REV. 287,

311 (1990).

[FN41]. See Pope, *supra* note 40, at 311, 361.

[FN42]. As Professor Pope states:

In creedal politics, the republican ideals of direct participation and socially-situated moral discourse prevail over liberal counterparts [i.e., special-interest bargaining]. Creedal politics tend to be 'idealistic rather than materialistic, reform-minded rather than status-quo oriented, and formulated in terms of right and wrong rather than more or less.' Practitioners of creedal politics appeal to deeply held values, eschewing the politics of self-interest. In contrast to liberal pluralism's emphasis on party, electoral, and interest group politics, creedal politics are characterized by protest, exposure, and reform propelled by 'passionate drives to expose evil, to protest evil, and to reform evil.'

Id. at 306-07 (citing SAMUEL HUNTINGTON, *AMERICAN POLITICS: THE PROMISE OF DISHARMONY* 105, 180).

[FN43]. This moralist viewpoint is described (not endorsed) by Howard Margolis as seeing polluters:

as intrinsically evil. So of course whatever these actors want to do should be impeded: probably whatever they want to do is bad, and, even if on this occasion it is not, undercutting their claims to legitimacy and authority is a good thing anyway. And since the by-products of these disgusting institutions are profoundly polluting, it is implausible that they can really be cleaned up at all and downright wrong to suppose that they can be cleaned up easily--that is, without some significant expiation of the sin they represent.

HOWARD MARGOLIS, *DEALING WITH RISK* 25 (1996).

[FN44]. See Schroeder, *supra* note 23, at 57.

[FN45]. An interesting project would be the marriage of republican moment theory with the psychology of risk perception. In particular, the "availability" or "salience" heuristic, which leads people to exaggerate the importance of recent adverse events such as automobile accidents and oil spills, has been fingered by psychologists as one source of overly absolutist popular demands for regulatory responses. See MARGOLIS, *supra* note 43; James E. Krier & Roger Noll, Some Thoughts on the Implications of Cognitive Psychology for Risk Regulation, 19 *J. LEGAL STUD.* 747 (1990). Perhaps it is these outlier events, such as the burning of the Cuyahoga River, the discovery of wastes at Love Canal, and the Exxon Valdez oil spill, which unleash republican moments. If so, the "creedal" absolutism of republican moments could outstrip their "deliberative" quality, and the predictive side of civic republican theory would become an effort to forecast unusually inflammatory incidents by coupling the tools of statistical risk analysis with the psychology of public risk perception.

[FN46]. Bruce Ackerman identifies the founding of the republic (and adoption of the Constitution), the Civil War reconstruction, and the New Deal as the three instances of "republican moments" in American history. See BRUCE ACKERMAN, *WE THE PEOPLE* 58 (1991); Pope, *supra* note 40, at 304-05. Perhaps the 1960s and the Great Society represent another such fundamental turning point, but unless the entire period 1968-1998 is considered one long republican moment, that leaves unexplained the steady addition of environmental laws from

1976 to the present, including Superfund, Pub. L. No. 96-510, 94 Stat. 2767 (codified in scattered sections of 26 U.S.C., 42 U.S.C. (1980)); Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. No. 99-499, 100 Stat. 1613 (1986) (codified in scattered sections of 26 U.S.C., 42 U.S.C.); and the Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990) (codified as amended in scattered sections of 42 U.S.C., 29 U.S.C.); and Oil Pollution Act of 1990 (OPA), Pub. L. No. 101-380, 104 Stat. 484 (1990) (codified as 33 U.S.C. §§ 2701-19, 43 U.S.C. §§ 1642, 1656, 46 U.S.C. §§ 3703(a), 7505).

[FN47]. See Bruce Yandle, *Bootleggers and Baptists in the Market for Regulation*, in *THE POLITICAL ECONOMY OF GOVERNMENT REGULATION* 29-54 (Jason F. Shogren ed., 1989).

[FN48]. See *id.*; cf. Schroeder, *supra* note 23, at 58 (positing that a theory of "mixed motives" is required to explain key environmental statutes; both rational choice and republican deliberation combine to shape the origin and content of legislation).

[FN49]. See ACKERMAN & HASSLER, *supra* note 29, at 42-58; Bartel & Thomas, *supra* note 29, at 257-59; Michael T. Maloney & Robert E. McCormick, *A Positive Theory of Environmental Quality Regulation*, 25 *J.L. & ECON.* 99, 106-07 (1982); Pashigian, *supra* note 29, at 553, 580-81; Revesz, *supra* note 13, at 542-44, 556; Thomas S. Ulen, *Comments on Daniel A. Farber, Politics and Procedure in Environmental Law*, 8 *J.L. ECON. & ORG.* 82, 84-88 (1992). But see John S. Hughes et al., *The Economic Consequences of the OSHA Cotton Dust Standards: An Analysis of Stock Price Behavior*, 29 *J.L. & ECON.* 29, 58 (1986) (concluding that the regulations analyzed by Maloney & McCormick did not benefit certain intra-industry groups at the expense of others).

[FN50]. See Wilson, *supra* note 22, at ix.

[FN51]. One might reply that the international environmental negotiations involve only 150 or so national governments, and often many fewer, rendering the benefits of global protection not so diffuse. But just as in its analysis of legislative representatives within nations, the logic of collective action would hold that the ultimate individual beneficiaries are so diffuse that they will not mobilize to influence their representatives (or at least will be outlobbied by their concentrated interest opponents).

[FN52]. See Richard L. Revesz, *Federalism and Interstate Environmental Externalities*, 144 *U. PA. L. REV.* 2341, 2342 (1996).

[FN53]. Treaties require the voluntary assent of sovereign nation-states. See Daniel A. Farber, *Environmental Federalism in a Global Economy*, 83 *VA. L. REV.* 1283, 1314 (1997) ("The basic principle of international law, after all, is that it binds states only with their own consent") (footnote omitted); Michael Hoel & Kerstin Schneider, *Incentives to Participate in an International Environmental Agreement*, 9 *ENVTL. & RESOURCE ECON.* 5, 65-67 (1997) ("When global environmental problems are at stake, no country can be forced to adhere to an internationally announced level of abatement. Only voluntary participation in an agreement is possible."); John K. Setear, *An Iterative Perspective on Treaties: A Synthesis of International*

Relations Theory and International Law, 37 HARV. INT'L L.J. 139, 158-59 (1996) ("a State is not subject to any external authority unless it has voluntarily consented to such authority.") (quoting Louis Henkin, *International Law: Politics, Values and Functions*, 26 RECUEIL DES COURS D'ACADEMIE DE DROIT INT'L (RCADI) 27 (1989)); Setear, *supra*, at 175-76 (noting that "a centralized authority with coercive powers [can] produce pure public goods in a national economy," but that, "[i]n the realm of international relations, however, no world government exists to force nations to pay taxes for pure public goods," and that international treaties therefore require voluntary assent induced by the prospect of net gains from cooperation). Cf. TODD SANDLER, *GLOBAL CHALLENGES* 2- 4 (1997) (contrasting national authority to tax and regulate environmental externalities with the absence of such compulsory authority over nations at the global level).

[FN54]. See DUNCAN BLACK, *THE THEORY OF COMMITTEES AND ELECTIONS* 143-48 (1958); JAMES M. BUCHANAN & GORDON TULLOCK, *THE CALCULUS OF CONSENT: LOGICAL FOUNDATIONS OF CONSTITUTIONAL DEMOCRACY* 61-62, 109, 115, 143 (1962); DENNIS C. MUELLER, *PUBLIC CHOICE II*, at 50-52 (1989).

[FN55]. See, e.g., SANDLER, *supra* note 53 (applying game theory to international environmental law); Abbott, *supra* note 3, at 354-75 (summarizing game theory of international law).

[FN56]. See Adam L. Aronson, *From 'Cooperator's Loss' to Cooperative Gain: Negotiating Greenhouse Gas Abatement*, 102 YALE L.J. 2143, 2144 (1993); Jonathan Baert Wiener, *Global Environmental Regulation: Instrument Choice in Legal Context*, 108 YALE L.J. 677 (1999).

[FN57]. See Abbott, *supra* note 3, at 384-85 & 385 n.257 (analogizing hegemonic stability theory to the theory of political entrepreneurship within countries, as regards the provision of public goods).

[FN58]. See GARETH PORTER & JANET BROWN WELSH, *GLOBAL ENVIRONMENTAL POLITICS* 19-22 (1996).

[FN59]. See TONY BRENTON, *THE GREENING OF MACHIAVELLI: THE EVOLUTION OF INTERNATIONAL ENVIRONMENTAL POLITICS* 256-57 (1994) ("[B]eing heavily internationally oriented, some of them in their formal organization and some of them through fraternal links, [NGOs] will continue to act as a powerful force for international cohesion on environmental matters, and cohesion oriented in a 'green' direction." However, "this does not mean that NGO influence is decisive.").

[FN60]. Brenton writes:

International environmental discussions are uniquely distinguished from other types of international business by the presence and involvement of these large non-governmental pressure groups, not only in the negotiations themselves but also in the business of public agenda-setting and monitoring of agreements. Nor is their influence only political. Northern NGOs now distribute more funds in the developing countries than the World Bank.

Id. at 257.

[FN61]. See *id.* at 7-8.

[FN62]. See Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 *YALE L.J.* 2039, 2104 (1993). See also BRENTON, *supra* note 59, at 256-57 (from the beginning of international environmental negotiation, the 1954 International Convention for the Prevention of Oil Pollution, through the so-called 'Oslo Convention' of 1972 and beyond, "a key motivation driving ... parties to seek progress through international agreement rather than domestic legislation was their determination that [they] ... should not be placed at a competitive disadvantage by being subjected to tougher domestic regulation than that imposed by other countries ... in the standard sporting cliché, to 'keep the playing field level"). The same dynamic is evident within the European Union. See *id.* at 110 (describing the "level playing field" rationale for pro-environment governments to seek multinational controls). See also DAVID VOGEL, *TRADING UP: CONSUMER AND ENVIRONMENTAL REGULATION IN A GLOBAL ECONOMY* 269-70 (1995) ("[T]he powerful nation's willingness to demand that trade liberalization be accompanied by the maintenance or strengthening of ... environmental standards is in large measure due to the influence of its domestic NGOs and, in many cases, its domestic producers"). Vogel's examples of this phenomenon include California's upward pressure on auto emissions standards leading to the stricter 1990 Clean Air Act standards; the increase in the European Union's environmental standards driven by Germany, which has Europe's most powerful environmental movement and auto producers who want to serve the California market; and, the greening of the NAFTA in response to "powerful domestic environmental constituencies" in the United States. *Id.*

[FN63]. See Elliott et al., *supra* note 1.

[FN64]. See *id.* at 327-28.

[FN65]. See *supra* notes 4-5.

[FN66]. This is the thrust of Professor Farber's argument that Mancur Olson's Logic does not apply to national environmental legislation. See Farber, *supra* note 13, at 59.

[FN67]. See Harold Demsetz, *Toward a Theory of Property Rights*, 57 *AM. ECON. REV.* 347 (1967).

[FN68]. See Abbott, *supra* note 3, at 346-54 (stating modern international relations theory views nation-states as rational egoists). See also BRENTON, *supra* note 59, at 239:

Moreover, as long as environmental agreements are negotiated by nation states it seems certain that national interest will play a large part in deciding the outcome. Examples abound ..., from Brazil's exclusion of Principle 20 from the conclusions of Stockholm through French resistance to any mention of radioactive pollution in the Mediterranean agreements to Malaysia's evisceration of forest controls, and America's evisceration of carbon dioxide emission controls, at Rio. A particular and enduring instance, highly relevant to the future prospects of global environmental collaboration, has been the resistance of the developed countries--at Stockholm, through the NIEO, and at Rio--to demands that they increase their financial and technological

transfers to the developing world over and above what they see as being necessary to tackle environmental problems directly relevant to themselves.

[FN69]. See BRENTON, *supra* note 59, at 239.

[FN70]. See *id.* at 110-11.

[FN71]. See *id.* at 121:

[The] UN Conference on Desertification (UNCOD) in Nairobi in 1977 ... was promoted principally by developing countries threatened by desertification. It produced a 'plan of action' to being to tackle the problem, but left funding voluntary. As a result, and given that the developed countries themselves did not feel much threatened by desertification, little was forthcoming. A follow-up conference seven years later noted that virtually nothing had been done and that the problem had in fact grown worse.

[FN72]. See *id.* at 182-83.

[FN73]. As President Boumediene of Algeria said in early 1970s: "If improving the environment means less bread for Algerians then I am against it." See *id.* at 97 (citing PETER M. HAAS, *SAVING THE MEDITERRANEAN* 72 (1990)).

[FN74]. See Steven Kelman, *Cost-Benefit Analysis--An Ethical Critique*, 5 *REGULATION* 33 (1981); Cass R. Sunstein, *Preferences and Politics*, 20 *PHIL. & PUB. AFF.* 3 (1991).

[FN75]. See Abbott, *supra* note 3, at 375; Robert O. Keohane, *The Demand for International Regimes*, in *INTERNATIONAL REGIMES* 141, 146-47 (Stephen D. Krasner ed., 1983).

[FN76]. See Putnam, *supra* note 7, at 435 (viewing the state as a "they," not an "it," and describing the domestic level of the "two-level game" in public choice terms).

[FN77]. Pope, *supra* note 40, at 291.

[FN78]. *Id.* at 311.

[FN79]. See BRENTON, *supra* note 59, at 256-57.

[FN80]. See *id.* at 126; see also *id.* at 174-75 ("[In Japan, p]ublic opinion did not make itself felt as strongly ... as elsewhere in the developed world, and there was no green party threat (or, at that time, any threat) to the political hegemony of the ruling Liberal Democratic Party.").

[FN81]. See *id.* at 258.

[FN82]. See *id.*

[FN83]. See *id.* at 258-59.

[FN84]. Japan, for example, feared trade sanctions if it stayed out of the Montreal Protocol. See

BRENTON, *supra* note 59, at 140. More generally, even under the voluntary assent voting rule, linkage of diverse issue areas can attract accessions that considered in isolation would seem irrational, and nation-states do sometimes face quasi-coercive pressures to join treaties. See *infra* Part III.

[FN85]. See Frank I. Michelman, *Law's Republic*, 97 *YALE L.J.* 1493, 1530 (1988).

[FN86]. See Frank I. Michelman, *Foreword: Traces of Self-Government*, 100 *HARV. L. REV.* 4, 74 (1986) ("[T]he courts, and especially the Supreme Court, seem to take on as one of their ascribed functions the modeling of active self-government that citizens find practically beyond reach."); Cass R. Sunstein, *Interest Groups in American Public Law*, 38 *STAN. L. REV.* 29, 69-72 (1985). See also Schroeder, *supra* note 23, at 59 (encouraging attention to deliberative democracy in "representative assemblies").

[FN87]. See Peter M. Haas, *Do Regimes Matter? Epistemic Communities and Mediterranean Pollution Control*, 43 *INT'L ORG.* 377 (1989). But see Martin List & Volker Rittberger, *Regime Theory and International Environmental Management*, in *THE INTERNATIONAL POLITICS OF THE ENVIRONMENT* 85, 103-05 (Andrew Hurrell & Benedict Kingsbury eds., 1992)(doubting the ability of epistemic communities to create international regimes).

[FN88]. Gross Domestic Product.

[FN89]. Global Warming Potential.

[FN90]. See *supra* notes 4-5.

[FN91]. See Dennis C. Mueller, *Survey on Public Choice*, 15 *J. ECON. LITERATURE* 395, 401-02 (1976).

[FN92]. Posner, *supra* note 1, at 344. See also Peltzman, *supra* note 11 (public choice models of regulation assume that all regulation is a zero-sum coercive transfer of wealth from losers to winners).

[FN93]. Richard A. Posner, *Power in America*, *PUB. INTEREST*, Fall 1971, at 114, 116, 119, 121 (book review). See also Richard A. Posner, *Taxation by Regulation*, 2 *BELL J. ECON.* 22 (1971) (describing coercive redistribution via regulation).

[FN94]. See BLACK, *supra* note 54, at 141 ("The requirement of unanimity ensures that all of the major powers 'benefit' from any change made."); BUCHANAN & TULLOCK, *supra* note 54, at 61-62, 89; Mueller, *supra* note 91, at 401 ("The unanimity rule leads to Pareto-preferred public good quantities and tax shares and is the only rule certain to do so.").

[FN95]. See Abbott, *supra* note 3, at 375; Keohane, *supra* note 75, at 146-47.

[FN96]. Mueller, *supra* note 91, at 403 n.9 (citing BLACK, *supra* note 54, at 140-55) (emphasis added). Mueller adds a caveat that there may be distributional battles over the joint gains from

cooperation. See *id.* Similarly, see the discussion *infra* Part IIID regarding explanations for global regulatory rent-seeking.

[FN97]. Terry M. Moe, *Political Institutions: The Neglected Side of the Story*, 6 *J.L. ECON. & ORG.* (1990) 213, 221, 222 n.9 (1990).

[FN98]. MUELLER, *supra* note 54, at 107.

[FN99]. Tollison, *supra* note 25, at 344.

[FN100]. *Id.* at 355.

[FN101]. Keohane, *supra* note 75, at 147.

[FN102]. See *id.* at 142-43.

[FN103]. See Tollison, *supra* note 25, at 343 ("The supply of legislation is, therefore, grounded in the unorganized or relatively less organized members of society"); *id.* at 343 n.24 ("Supply' as used in this context is not the ordinary concept of voluntary supply at higher prices...It is not voluntary in the sense that the state is a coercive mechanism."). See also Keohane et al., *supra* note 31 (analyzing demand-side, supply-side, and equilibrium models of national environmental regulation); Tollison, *supra* note 26, at 62-64.

[FN104]. See BRENTON, *supra* note 59, at 175.

[FN105]. See *supra* note 5.

[FN106]. See Jonathan H. Adler, *Politics--Green but Dirty*, 16 *POL. ECON. RES. CTR. REP.*, Sept. 1998, at 6 ("The Business Council of Sustainable Energy," a "coalition of wind, solar, natural gas, and geothermal producers," joined with the NRDC and "other environmental groups to prod the Clinton administration into action....These companies have a clear economic stake in global warming policy. They would benefit from restrictions on fossil fuels, whether through a tax on carbon-based energy, controls on the supply of these fuels, or other regulations."); Bruce Yandle, *Bootleggers, Baptists, and Global Warming*, *POL. ECON. RES. CTR. POL'Y SERIES*, Nov. 1998, at 10-11 (natural gas and oil companies may support greenhouse gas controls in order to impose burdens on coal companies).

[FN107]. See Yandle, *supra* note 47 (describing efforts of bootlegger vendors to impose regulation on their commercial rivals). See also *Hazardous Waste Treatment Council v. EPA*, 886 F.2d 355 (D.C. Cir. 1989), cert. denied, 111 S. Ct. 139 (1990); PETER S. MENELL & RICHARD B. STEWART, *ENVIRONMENTAL LAW AND POLICY* 607-12 (1994) (suggesting that HWTC's incentive to press for exceedingly stringent treatment standards under RCRA served its own interests as a technology vendor but was not in the broader public interest).

[FN108]. See BRENTON, *supra* note 59, at 16-17 (International Convention for the Prevention

of Oil Pollution reflects efforts by already-regulated countries to level the playing field); VOGEL, *supra* note 62 (in general, several examples); Elliott et al., *supra* note 1, at 326 (federal Clean Air Act of 1970 reflects industry response to environmentalist success at state level); Daniel F. McInnis, Ozone Layers and Oligopoly Profits, in ENVIRONMENTAL POLITICS: PUBLIC COSTS, PRIVATE REWARDS 129 (Michael S. Greve & Fred L. Smith eds., 1992) (U.S. CFC producers feared further U.S. unilateral controls and therefore sought international controls to cover their competitors as well).

[FN109]. See 143 CONG. REC. S8113-05 (daily ed. July 25, 1997) (Byrd-Hagel Resolution, adopted in July 1997); John H. Cushman, Jr., Senate Urges U.S. to Pursue New Strategy on Emissions, N.Y. TIMES, July 26, 1997, at A7.

[FN110]. See John M. Broder, Clinton Insists on Third World Role in Global Warming Pact, N.Y. TIMES, Dec. 12, 1997, at A1.

[FN111]. See KAREN T. LITFIN, OZONE DISCOURSES: SCIENCE AND POLITICS IN GLOBAL ENVIRONMENTAL COOPERATION 108 (1994); James K. Hammit & Kimberly M. Thompson, Protecting the Ozone Layer, in THE GREENING OF INDUSTRY: A RISK MANAGEMENT APPROACH 43 (1997); McInnis, *supra* note 108, at 129.

[FN112]. See INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC), CLIMATE CHANGE: ECONOMIC AND SOCIAL DIMENSIONS (James P. Bruce et al. eds., 1996) [hereinafter IPCC]; Wiener, *supra* note 56.

[FN113]. See Dewees, *supra* note 32, at 53.

[FN114]. Advocates of global greenhouse gas allowance trading include the United States, Norway, Japan, Canada, Australia, and New Zealand, all countries which appear to be high-cost abaters and would prefer a cost-minimizing policy design. See IPCC, *supra* note 112, at 254, 318. Advocates also include some low-cost abaters with market-oriented economies who seek the resource flows from allowance sales, such as Costa Rica, Argentina, Poland, the Czech Republic, and possibly Russia, Mexico and South Korea. One recent simulation exercise, asking Swedish experts on particular countries to predict the responses of those countries, found that 8 of 12 rich countries and 9 of 17 "non-rich" countries, together representing 50% of global carbon emissions, would likely agree to a system of tradeable greenhouse gas emissions allowances. See Peter Bohm, Are Tradable Carbon Emission Quotas Internationally Acceptable? An Inquiry with Diplomats as Country Representatives, NORDIC COUNCIL OF MINISTERS, NORD 1997, at 23. The "non-rich" countries whose Swedish experts declined to adopt allowance trading included China, India, Mexico, Poland, the Czech Republic, and Russia, *id.*, which seems at odds with the actual behavior of countries such as Mexico, Poland, the Czech Republic, and Russia who are already participating in cooperative international "joint implementation" (JI) projects to reduce GHG emissions. Several of the "no" responses seemed to be for reasons other than the merits of allowance trading; for example, the Swedish expert on Russia said he declined in part because of the indignity of being placed in the "non-rich" category, and the Swedish experts representing Denmark, Mexico and the Czech Republic appeared to misunderstand the tradeable allowance policy. See *id.* at 25-26, 48, 51.

[FN115]. A notable example is the work of Richard Sandor of Centre Financial Products. Sandor helped get sulfur dioxide allowances (created by the 1990 Clean Air Act amendments) listed on commodities exchanges in the U.S., and is now working with UNCTAD to create a GHG allowance trading market worldwide.

[FN116]. See John J. Fialka, *Global Warming Treaty is Approved*, WALL ST. J., Dec. 11, 1997, at A2; John J. Fialka, *Preliminary Talks on Global Warming End with Differences Still Unresolved*, WALL ST. J., Nov. 3, 1997, at B12A.

[FN117]. See Kyoto Protocol, *supra* note 5, arts. 3, 6, 17.

[FN118]. See Cheryl Hogue, *EU Proposal on Emission Trading System Would Cap Amount Nations Can Buy, Sell*, 29 Env't Rep. (BNA) 352 (June 12, 1998).

[FN119]. For a more complete discussion of the merits of alternative global environmental regulatory instruments, see Wiener, *supra* note 56. For example, developing countries may be opposing allowance trading because they fear any limits on their future emissions, but economic models suggest that a GHG trading system could be designed to yield large net benefits to developing countries, even over the status quo. See *id.* at 719-23, 778-80, 794-95.

[FN120]. For the view that the United States' domestic experience with regulatory institutions shaped its plan for the new international regime created after World War II, see Anne-Marie Burley [Slaughter], *Regulating the World: Multilateralism, International Law, and the Projection of the New Deal Regulating State*, in MULTILATERALISM MATTERS 125 (J.G. Ruggie ed., 1993).

[FN121]. See Robert W. Hahn & Roger Noll, *Barriers to Implementing Tradeable Air Pollution Permits: Problems of Regulatory Interaction*, 1 YALE J. ON REG. 63 (1983); Keohane et al., *supra* note 31, at 323 n.52.

[FN122]. See Keohane et. al., *supra* note 31, at 365-66.

[FN123]. This would be a modern extension of the argument in Burley, *supra* note 120, at 142-47, that U.S. regulators have historically sought to project their latest domestic regulatory reinvention ideas onto the international stage.

[FN124]. *A Warming World*, ECONOMIST, June 28, 1997, at 41. See also Milo Mason, *Interview: Stuart E. Eizenstat*, 3 NAT. RESOURCES & ENV'T 430, 433 (1998) ("When we first proposed these type [sic] of market-based mechanisms in Kyoto, it was almost a foreign concept to the other governments. They had no experience.") (quoting U.S. Chief Negotiator Stuart E. Eizenstat); Jonathan Golub, *Introduction and Overview*, in NEW INSTRUMENTS FOR ENVIRONMENTAL POLICY IN THE EU at 1, 19 (Jonathan Golub ed., 1998) ("Compared to the US, where [tradeable] permit systems have been widely used with considerable economic success, the EU has limited experience with this type of new instrument....") (citation omitted).

[FN125]. See Denton E. Morrison, *The Soft, Cutting Edge of Environmentalism: Why and How the Appropriate Technology Notion is Changing the Movement*, 20 NAT. RESOURCES J. 275, 286-98 (1980) (documenting the "technology movement" as a driving force of modern environmentalism). The "soft path" movement opposes "hard technology systems [that are] capital-intensive, complex, large-scale, centralized, resource intensive, resource depleting, resource degrading, and resource exogenous" technologies, and favors "soft" technologies that are "small in scale, decentralized, resource conserving, and resource indigenous." *Id.* at 288-89. Advocates of the "soft path" include Barry Commoner, Amory B. Lovins, and E.F. Schumacher. See BARRY COMMONER, *THE POVERTY OF POWER* (1976); AMORY B. LOVINS, *SOFT ENERGY PATHS: TOWARD A DURABLE PEACE* (1977); E.F. SCHUMACHER, *SMALL IS BEAUTIFUL* (1973).

[FN126]. See Wilson, *supra* note 28, at ix.

[FN127]. Some cynics at the climate change treaty negotiations, observing these pseudo-environmentalist social engineering lobbyists, dubbed them "Watermelons"--"Green on the outside, Red on the inside."

[FN128]. The "fast train to the wrong station" epithet is frequently uttered at meetings of global climate economists, but I have found no one willing to claim credit for originating the phrase. The notion has a long history in policy analysis. See, e.g., JEFFREY L. PRESSMAN & AARON B. WILDAVSKY, *IMPLEMENTATION: HOW GREAT EXPECTATIONS IN WASHINGTON ARE DASHED IN OAKLAND* 47 (1984) ("A fast train is worse than a slow one if it takes you in the wrong direction.").

[FN129]. See *supra* notes 25-29, 49. For a discussion of how less efficient firms (low-cost pollution abaters) could afford to secure predatory regulation protecting them against more efficient firms (high-cost abaters), see Jack High, *Can Rents Run Uphill? A Note on the Theory of Regulation*, 65 PUB. CHOICE 229 (1990).

[FN130]. The evidence for this hypothesis includes industry-level ("bottom-up") studies suggesting that industries in Europe would face lower costs of carbon dioxide emissions abatement than would the United States and Japan. See IPCC, *supra* note 112, at 318, 321. For a given percentage reduction in emissions from 1990 levels, the Europeans may believe they may face lower abatement costs than their United States rivals, and especially their Japanese rivals, because the Europeans were less efficient until about 1990 when they began renovating or closing down older facilities and switching fuels, at less cost per ton of carbon dioxide abated than their more efficient rivals, especially in Japan, would now have to spend. See Kevin Sullivan & Mary Jordan, *The Challenge: Incorporating Many Nations' Needs Into One Treaty*, WASH. POST, Nov. 15, 1997, at A20:

Germany may also have the easiest time looking like a leader at Kyoto. In 1990, the selected benchmark year for emissions levels, Germany had just absorbed the dirty Soviet-style factories of the East Germany. The air was so filthy then that cleaning up significantly was relatively easy. Germany's carbon dioxide emissions dropped nearly 10 percent from 1990 to 1991. The same situation is true for England, which relied mainly on coal for heat in 1990 and since has switched largely to cleaner natural gas. Its CO₂ emissions fell 3 percent in the same period.

Russia and the former Soviet republics are in much the same situation. Russian officials say that because their industrial production has shrunk significantly since the fall of the Soviet Union, their carbon dioxide emissions are now 30 percent lower than they were in 1990.... Japan comes to the negotiating table with the opposite problem. By 1990, it had already done more than most nations to clear up excessive carbon dioxide.... It shifted much of its energy production to nuclear plants, which produce no greenhouse gas. So Japanese leaders say cuts now are more painful. Their analogy: It's easier for a fat person to lose weight than a skinny one.

Id. Hence the Europeans may occupy the position analogous to that of the rustbelt firms and eastern coal interests in the U.S. that imposed predatory constraints on sunbelt firms and western coal interests through the Clean Air Act. See *supra* note 29.

Macroeconomic "top-down" studies tend to show lower overall abatement costs in the United States than in Europe. But the rent-seeking industries may be more impressed with the bottom-up studies because those relate more closely to industry costs than to economy-wide costs. The European industries may be targeting particular rivals in the U.S. and especially in Japan (which has the highest abatement costs in both top-down and bottom-up studies).

[FN131]. Kyoto Protocol, *supra* note 5, arts. 3, 17.

[FN132]. Global Warming: Rubbing Sleep from their Eyes, *ECONOMIST*, Dec. 13, 1997, at 38-39 (emphasis added). I had made a similar argument about a week earlier. See Jonathan Baert Wiener, *Designing Global Climate Policy: Efficient Markets vs. Political Markets*, *POL'Y STUDY* 143, at 33-35 (CENTER FOR THE STUDY OF AMERICAN BUSINESS, WASHINGTON UNIV.-ST. LOUIS, Dec. 1997).

[FN133]. Another example of European rent-seeking involves the scope of gases and sectors covered by the climate treaty. In the negotiations on the 1992 Framework Convention on Climate Change (FCCC) (the treaty to which the Kyoto Protocol adds), the European Union had favored a narrow scope regulating only carbon dioxide from the energy sector, and had opposed the "comprehensive approach" favored by the United States that would encompass multiple greenhouse gases (e.g., carbon dioxide, methane, nitrous oxide), and all sources and sinks (e.g., energy, agriculture, forests). The European Union's narrow approach was significantly more costly (forfeiting opportunities to abate the least costly greenhouse gases and sectors first) and potentially posed perverse environmental effects (via cross-gas and cross-sector leakage to unregulated areas). See Richard B. Stewart & Jonathan B. Wiener, *The Comprehensive Approach to Global Climate Policy: Issues of Design and Practicality*, 9 *ARIZ. J. INT'L & COMPAR. L.* 85 (1992); Jonathan Baert Wiener, *Protecting the Global Environment*, in *RISK VS. RISK: TRADEOFFS IN PROTECTING HEALTH AND THE ENVIRONMENT* 193 (John D. Graham & Jonathan Baert Wiener eds., 1995). The European Union's advocacy of the narrow energy-carbon-dioxide-only approach may have been motivated by its desire to impose a higher-cost regulatory regime on the U.S. and Japan. Ultimately the U.S. insistence on the comprehensive approach prevailed in the FCCC, and was retained in the Kyoto Protocol.

[FN134]. See Kyoto Protocol, *supra* note 5, art. 12.

[FN135]. Cf. WILLIAM A. NISKANEN, JR., *BUREAUCRACY AND REPRESENTATIVE GOVERNMENT* (1971) (arguing that government agencies may seek to increase their own

budgets and power rather than to serve social efficiency).

[FN136]. There may also be competition within governments, such that the diplomats in the Foreign Ministry could control official development aid (or at least get political credit for managing such aid) whereas the Finance Ministry, or others, would control or get credit for bringing in private sector allowance trading investments. If so, and if the Foreign Ministry dominates the country's delegation to the international climate treaty talks, then the country's expressed opposition to allowance trading would not be surprising even if macroeconomic studies showed the country's economy to be a net winner from allowance trading.

[FN137]. See, e.g., Yeltsin Defies Hard-Liners on Land Auction, RALEIGH NEWS & OBSERVER, Mar. 7, 1998, at 4A (reporting that the Russian old guard resists the development of a market in agricultural land). Rural land would be a prime location for low-cost carbon-sequestering afforestation projects under global greenhouse gas allowance trading.

[FN138]. See Amy L. Chua, The Privatization-Nationalization Cycle: The Link Between Markets and Ethnicity in Developing Countries, 95 COLUM. L. REV. 223 (1996) (finding that ethnic minority groups have systematically captured market leadership in several developing countries, and that ethnic majorities have responded by using their political dominance to expropriate these markets). Cf. ALEXANDER GERSCHENKRON, EUROPE IN THE RUSSIAN MIRROR: FOUR LECTURES IN ECONOMIC HISTORY (1970) (suggesting that in developing countries, ethnic minorities may be systematically more likely than the majority culture to capitalize on emerging markets because entrepreneurial market activities provide an economic opportunity for ethnic minorities who are excluded from advancement in the traditional social structure; drawing on the experience of the religious minority in early modern Russia). I am grateful to Gianni Toniolo for discussion of the economic history on this point.

[FN139]. The limitation of allowance trading in the Kyoto Protocol to Annex B countries may yet be relaxed, if developing countries are allowed to join the Annex B cap-and-trade system and if the U.S. Senate will not ratify the Protocol until key developing countries adopt caps. See William K. Stevens, Argentina Joins Effort to Curb Gases Linked to Global Warming, N.Y. TIMES, Nov. 12, 1998, at A7 (reporting Argentina's bid to join the cap-and-trade system); see *supra* notes 109-10 and accompanying text (U.S. Senate ratification contingent on developing country participation).

[FN140]. In this connection, the absence of formal allowance trading from the Montreal Protocol deserves further research. Its inclusion would have yielded significant efficiency gains, yet it is unclear why it was omitted. See Peter Bohm, Efficiency Issues and the Montreal Protocol on CFCs, in 2 THE ENVIRONMENT AND EMERGING DEVELOPMENT ISSUES 308, 311, 318-19 (Partha Dasgupta & Karl-Goran Maler eds., 1997).

[FN141]. See Mueller, *supra* note 91, at 401.

[FN142]. See BLACK, *supra* note 54, at 145-47:

The real root of the difficulty in international relations is not that nations are selfish, but that the solution to the problem is indeterminate.... There are prizes to be won; and if they do not fall

readily to skilful diplomacy, they may still be compelled by obstinacy. A nation may refuse to move from its more-preferred positions, in the hope that it may thereby force the others to make concessions....[I]f...nations remain obstinate, no agreement at all may be reached. Then, in retrospect, the nation or nations concerned may look back on the conference as a gamble which had failed; but looked at prospectively, and perhaps up to the last minute, the gamble may have seemed worth while.

[FN143]. See ROBERT O. KEOHANE, *AFTER HEGEMONY: COOPERATION AND DISCORD IN THE WORLD POLITICAL ECONOMY* 104 (1984).

[FN144]. See Putnam, *supra* note 7.

[FN145]. See Robert O. Keohane & Joseph S. Nye, *Transgovernmental Relations and International Organizations*, 27 *WORLD POL.* 39 (1974); Anne-Marie Slaughter, *The Real New World Order*, *FOREIGN AFF.*, Sept.-Oct. 1997, at 183.

[FN146]. See Putnam, *supra* note 7. This perspective combines what Waltz called the "third image" (interstate relations) and "second image" (intrastate relations) approaches. See KENNETH N. WALTZ, *MAN, THE STATE, AND WAR: A THEORETICAL ANALYSIS* 12 (1959); Abbott, *supra* note 3, at 342-46 (describing Waltz's model); *id.* at 410 ("Perhaps the most fruitful empirical approach would combine third and second image analyses by exploring how international norms and commitments figure in domestic decision-making...") (citation omitted).

[FN147]. Brenton writes:

One other point about the nation state of which it is easy to lose sight in books about international politics is that it is not monolithic. Phrases like 'the UK decided...' and 'Brazil was persuaded...', are in fact shorthand for the outcome of the arguments between the various interest groups and other political players within the state concerned.... [A] lot of the international environmental action which we will examine must be seen for what it is: different national environmental ministries and lobbies establishing common cause in international fora so as better to be able to overcome counter- environmental pressures within their own administrations.

BRENTON, *supra* note 59, at 8. See also Henry Lee, *Overcoming Obstacles to a Successful Climate Convention*, in *SHAPING NATIONAL RESPONSES TO CLIMATE CHANGE: A POST-RIO GUIDE* 14 (Henry Lee ed., 1995) ("There are numerous cases in which experts in different countries with similar interests formed de facto transnational coalitions, or what some refer to as 'epistemic communities.' Often these coalitions have enormous influence on the policy positions that are eventually taken by international organizations and governments.").

[FN148]. This may be one reason why the Congress has been sending observer delegations to the climate change treaty negotiations.

[FN149]. On information costs and bounded rationality, see EJAN MACKAAY, *ECONOMICS OF INFORMATION AND THE LAW* (1982); HERBERT A. SIMON, *ADMINISTRATIVE BEHAVIOR: A STUDY OF DECISION-MAKING PROCESSES IN ADMINISTRATIVE ORGANIZATION* (3d ed. 1976).

[FN150]. The Kyoto Protocol, for example, is 28 brief articles covering 24 double-spaced pages, as compared to the Clean Air Act which is over 200 sections or CERCLA which is over 50 sections covering 200 pages. See Kyoto Protocol, *supra* note 5; 42 U.S.C. §§ 7401-7642 (1988) (CAA); 42 U.S.C. §§ 9601-75 (1988) (CERCLA).

[FN151]. James N. Rosenau, Global Environmental Governance: Delicate Balances, Subtle Nuances, and Multiple Challenges, in *INTERNATIONAL GOVERNANCE ON ENVIRONMENTAL ISSUES* 19, 51-52 (Mats Rolen et al. eds., 1997). Rosenau also argues that the increasing frequency and severity of global environmental problems over time will itself undermine the authority of nation-states and shift authority to international organs of governance. See *id.* at 43-44.

[FN152]. See ROBERT ELLICKSON, *ORDER WITHOUT LAW* (1985); ELINOR OSTROM & ROBERT O. KEOHANE, *LOCAL COMMONS AND GLOBAL INTERDEPENDENCE* (1996).

[FN153]. ABRAM CHAYES & ANTONIA HANDLER CHAYES, *THE NEW SOVEREIGNTY: COMPLIANCE WITH INTERNATIONAL REGULATORY AGREEMENTS* 27 (1995). Accord A.A. Cancado Trindade, The Implications of Global Change for the International Legal System, in *ENVIRONMENTAL CHANGE AND INTERNATIONAL LAW: NEW CHALLENGES AND DIMENSIONS* 315 (Edith Brown Weiss ed., 1992).

[FN154]. A recent example is the Gulf War and subsequent sanctions against Iraq.

[FN155]. See *STATUTE OF THE INTERNATIONAL COURT OF JUSTICE*, art. 38(1)(b); LAKSHMAN GURUSWAMY ET AL., *INTERNATIONAL ENVIRONMENTAL LAW AND WORLD ORDER* 79- 80 (1994); Patricia Birnie, International Environmental Law: Its Adequacy for Present and Future Needs, in *THE INTERNATIONAL POLITICS OF THE ENVIRONMENT* 51, 57-61 (A. Hurrell & B. Kingsbury eds., 1992).

[FN156]. Birnie notes that it usually takes "a considerable time for evidence to accumulate that the practice is so widely and consistently followed" that it becomes binding customary international law. Birnie, *supra* note 155, at 57. Other observers argue that customary international law has so far done little to regulate transboundary pollution. See Thomas W. Merrill, Developments in the Law: International Environmental Law, 104 *HARV. L. REV.* 1484, 1492-94 (1991); Thomas W. Merrill, Golden Rules for Transboundary Pollution, 46 *DUKE L.J.* 932-34, 958-67 (1997).

[FN157]. See Merrill, *supra* note 156 at 931, 959.

[FN158]. See Keohane, *supra* note 75, at 152 (citing cartels and other trade restrictions as examples).

[FN159]. Trade restrictions adopted among parties to a treaty are not in themselves coercive. For example, the Convention on International Trade in Endangered Species (CITES) bans

international trade in the body parts of endangered species. The International Whaling Convention restricts trade in whale parts. The Basel Convention restricts shipments of hazardous wastes. The International Tropical Timber Agreement restricts international trade in wood products. All of these apply to trade among parties to the treaty, who have assented to these restrictions. See generally James Cameron, *The GATT and the Environment*, in *GREENING INTERNATIONAL LAW* 100 (Phillippe Sands ed., 1994).

[FN160]. See Convention on International Trade in Endangered Species of Fauna and Flora (CITES), Mar. 3, 1973, 12 I.L.M. 1085 (entered into force July 1, 1975), art. 10 (restricting trade with nonparties).

[FN161]. See Montreal Protocol, *supra* note 4, art. 4 (banning trade in CFCs with nonparties).

[FN162]. See World Trade Organization, Report of the Panel, EC Measures Concerning Meat and Meat Products (Hormones), GATT Doc. DS26/R (submitted to the parties Aug. 18, 1997); John H. Cushman, Jr., Trade Group Strikes Blow at U.S. Environmental Law, *N.Y. TIMES*, Apr. 7, 1998, at C1 (describing U.S. restriction on shrimp); Marina Wheeler, Greening the EC Treaty, in *GREENING INTERNATIONAL LAW* 87, 89 (Phillippe Sands ed., 1994) (describing tuna-dolphin case and other environmental trade restriction cases).

[FN163]. See World Trade Organization, Report of the Panel, United States-- Restrictions on Imports of Tuna, GATT Doc. DS29/R (submitted to the parties May 20, 1994); Cushman, *supra* note 162, at C1 (reporting on WTO panel decision finding U.S. restriction on shrimp to violate free trade law). The Tuna-Dolphin panel opinion suggested that multilateral trade sanctions restrictions may violate the GATT-WTO as well. See generally Cameron, *supra* note 159; Howard F. Chang, *An Economic Analysis of Trade Measures to Protect the Global Environment*, 83 *GEO. L.J.* 2131, 2131-32, 2136-45 (1995).

[FN164]. See David Schneider, Good Wood, *SCI. AM.*, June 1996, at 36 (reporting a United Nations study finding that "logging contributes only modestly to [tropical] deforestation:...9 out of 10 tropical trees are felled for agriculture or cattle ranching. Most trees cut for their wood are used locally for fuel; only 4 percent are taken for timber, and less than a third of that material ever enters international markets."). If so, less than one-half of one percent of tropical deforestation is associated with international timber trade.

[FN165]. See Scott Barrett, Building Property Rights for Transboundary Resources, in *RIGHTS TO NATURE* 265, 280-82 (Susan Hanna et al. eds. 1996) (demonstrating that the threat of trade sanctions can induce treaty participation).

[FN166]. See Raymond Bonner, Land Mine Treaty Takes Final Form Over U.S. Dissent, *N.Y. TIMES*, Sept. 18, 1997, at A1.

[FN167]. See *supra* note 53.

[FN168]. To address global environmental threats, some have argued that a coercive voting rule, like that used for national legislation, is needed to overcome the inertia of nation-state consent.

An early example is ARNOLD D. MCNAIR, *LAW OF TREATIES* (1961).

[W]e touch here one of the weakest spots in the now existing system of States, and it must be admitted that no national society which is not equipped with legislative and administrative machinery for effecting changes could hope to hold together for long. International society is clearly groping its way towards the creation of some escape from the present effect of the rule requiring the consent of all the parties affected by a change....

Id. at 534. More recent examples include RICHARD FALK, *A STUDY OF FUTURE WORLDS* (1975); RICHARD FALK, *THIS ENDANGERED PLANET: PROSPECTS AND PROPOSALS FOR HUMAN SURVIVAL* (1971); DAVID HUMPHREYS, *FOREST POLITICS* 171 (1996); William R. Moomaw, *International Environmental Policy and the Softening of Sovereignty*, 21 *FLETCHER F. WORLD AFF.* 7, 14-15 (1997); Geoffrey Palmer, *New Ways to Make International Environmental Law*, 86 *AM. J. INT'L L.* 259, 264 (1992); A. Dan Tarlock, *Exclusive Sovereignty Versus Sustainable Development of a Shared Resource: The Dilemma of Latin American Rainforest Management*, 32 *TEX. INT'L L.J.* 37 (1997). An even more urgent advocate of supranational coercion to protect the global environment--going beyond majoritarianism to urge authoritarianism--is WILLIAM OPHULS, *ECOLOGY AND THE POLITICS OF SCARCITY* (1977).

[FN169]. BUCHANAN & TULLOCK, *supra* note 54.

[FN170]. Abbott, *supra* note 3, at 404.

[FN171]. See Demsetz, *supra* note 67. See also ELLICKSON, *supra* note 152; OSTROM & KEOHANE, *supra* note 152.

[FN172]. See Demsetz, *supra* note 67.

[FN173]. If the problem is that collective action problems prevent resource users from cooperating voluntarily to protect the global environment, it is unclear how they could cooperate to establish coercive legal rule. See Andrew Hurrell & Benedict Kingsbury, *The International Politics of the Environment: An Introduction*, in *THE INTERNATIONAL POLITICS OF THE ENVIRONMENT* 7, 8 (Andrew Hurrell & Benedict Kingsbury eds., 1992); James E. Krier, *The Tragedy of the Commons, Part Two*, 15 *HARV. J.L. & PUB. POL'Y* 325, 338 n.44 (1992); Frank Michelman, *Ethics, Economics, and the Law of Property*, 24 *NOMOS* 3, 30-31 (1982). Cf. Joseph E. Stiglitz, *On the Economic Role of the State*, in *JOSEPH E. STIGLITZ ET AL., THE ECONOMIC ROLE OF THE STATE* 56 (Arnold Heertje ed., 1989) ("the Public Good is a public good"); *LOCAL COMMONS AND GLOBAL INTERDEPENDENCE* (Robert O. Keohane & Elinor Ostrom eds., 1996) (comparing collective action problems at local and global levels). At the very least, it could take a very long time to establish a coercive voting rule at the global level--potentially far too long to be of use in addressing global environmental issues. See Hurrell & Kingsbury, *supra*, at 8; see also ALLEN L. SPRINGER, *THE INTERNATIONAL LAW OF POLLUTION: PROTECTING THE GLOBAL ENVIRONMENT IN A WORLD OF SOVEREIGN STATES* 51-52 (1983):

[I]t is precisely because of the imperative nature of ecological pressures that this book focuses on the contemporary international system. States remain the basic units in this system, and ... whatever erosion in their powers may be occurring is unlikely to depose them of their privileged

position on the international level or to undermine their internal control in a relevant time frame. Any attempt to create a comprehensive framework for international environmental law must recognize this reality.

[FN174]. See BUCHANAN & TULLOCK, *supra* note 54, at 63-91.

[FN175]. OIRA is the Office of Information and Regulatory Affairs, the part of the Office of Management and Budget (OMB) that reviews proposed regulations in the U.S. Government.

[FN176]. See *supra* notes 37-39.

[FN177]. See OLSON, *supra* note 10; OLSON, *supra* note 37; Tollison, *supra* note 25.

[FN178]. See *supra* note 38.

[FN179]. Testing this proposition could help reconcile Becker and Olson. Becker has responded to Olson's pessimistic claim (that political rent-seeking drags down prosperity) by arguing that economies grow more rapidly in democracies than in autocracies. See Gary S. Becker, *Political Competition Among Interest Groups*, in *THE POLITICAL ECONOMY OF GOVERNMENT REGULATION* 13, 22-25 (Jason F. Shogren ed., 1989). Becker draws the inference that democracy is good for economic growth, not bad for growth (as he takes Olson to have argued). See *id.* But Becker has the comparison backwards--democracy (majority rule) may be saddled with interest groups, but autocracy is a special interest state. Becker even makes this point: "In totalitarian systems ... a few groups can more readily [than in democracies] use the state to raise substantially their well-being because other groups are not permitted to form effective opposition." *Id.* at 23. Thus, as Olson argues, it is the societies closer to autocracy which should grow more slowly, and the societies closer to the unanimity voting rule which should grow faster, with majoritarian democracies in the middle. See Christopher Clague et al., *Property and Contract Rights in Autocracies and Democracies*, 1 *J. ECON. GROWTH* 243 (1996). Becker's finding that democracies grow faster than tyrannies is thus consistent with Olson's theory: as the voting rule shifts from autocracy to majority rule, the power of rent-seeking special interests declines and thus growth improves. Then, as the voting rule moves beyond majority rule toward unanimity, the power of rent-seekers to secure parochial gains declines even further, and efficient policy choice becomes even more likely.

A countervailing factor is that the higher decisionmaking costs of the unanimity voting rule slow down the provision of public goods, including the legal system that undergirds a market economy. So at some point on the way toward total unanimity the society could become too shapeless and this could inhibit economic growth. The optimal voting rule would minimize the sum of rent-seeking distortionary costs and decisionmaking delay costs. See BUCHANAN & TULLOCK, *supra* note 54 (optimal voting rule minimizes sum of external costs of collective action and costs of decisionmaking).

[FN180]. Global coercion would also pose other problems, among them that it could conflict with principles of self-determination and accountability (especially for newly emancipated developing countries). See Hurrell & Kingsbury, *supra* note 173, at 7-8.

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