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THE DEVELOPMENT OF ENVIRONMENTAL GOVERNANCE REGIMES: A CHINESE-INSPIRED RECONSTRUCTION

Roda Mushkat*

Abstract

The challenge of protecting the biosphere has both salient academic and policy dimensions. On the academic side, persistent efforts have been made in the field of socio-legal studies to enhance the understanding of the complex processes involved, in the domestic arena and on the international front, in the formation and transformation of the elaborate institutional arrangements designed to contribute to this goal. The scholars engaged in those efforts have pursued divergent paths, but one school of thought has moved decisively to the forefront. China's experience does not cast doubt on its relevance, or even prominence, yet it suggests that multi-pronged research strategies may prove more effective.

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I. Introduction

The notion of governance has long loomed large on the legal and social science research agendas. In 1975, it metamorphosed into a broader analytical construct, when the idea of a regime was floated.[1] The latter was defined by a researcher in the field of international relations as a "set of mutual expectations, rules and regulations, plans, organizational energies, and financial commitments, which have been accepted by a [relevant] group of [participants in the political process]."[2] The concept of a governance regime has subsequently gained currency.[3] For the past three decades or so, it has generally been viewed as a useful vehicle for conveying the existence of elaborate institutional mechanisms whose purpose is to consistently influence the actions of players in the political arena, both domestic and international.[4]

The initial definition merely served as a starting point in a quest to render it meaningful and workable. As theory-building efforts and empirical testing expanded in scope and assumed a more diverse form, it became apparent that a slightly wider and a somewhat less elastic formula would be needed. A definition better meeting the growing requirements of the large number of scholars from divergent disciplinary backgrounds who opted to focus on the subject emerged at an academic conference devoted to systematically exploring the fundamental attributes of governance regimes.[5] A consensus crystallized that they constitute:

> [S]ets of implicit or explicit principles, norms, rules, and decision making procedures around which actors' expectations converge in a given [political domain]. Principles are beliefs of fact, causation, and rectitude. Norms are standards of behavior. Rules are specific prescriptions or proscriptions for action. Decision-making procedures are prevailing practices for making and implementing collective choice.[6]

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1. *See* John G. Ruggie, *International Responses to Technology: Concepts and Trends*, 29 INT'L ORG. 557, 570–73 (1975) (discussing the concept, purposes, and functions of international regimes).

2. *Id.* at 570.

3. *See infra* note 21 (exemplifying the growing literature on governance regimes).

4. *See infra* note 21 (providing examples of both domestic and international governance regimes).

5. *See* Krasner, *infra* note 6, at 2–5 (exploring the different perspectives of contributory authors regarding definition of regime and regime change). *See also* Young & Osherenko, *infra* note 60, at 1 (providing discussion about the relevant academic conference).

6. Stephen D. Krasner, *Structural Causes and Regime Consequences: Regimes as Intervening Variables*, *in* INTERNATIONAL REGIMES 1, 2 (Stephen D. Krasner ed., 1983).

The new formulation consists of four key components: "principles, norms, rules, and decision-making procedures."[7] The differences are subtle and may be easier to grapple with at the theoretical level than in practical settings. The overall hierarchical structure however seems to be viable, involving an orderly stepwise progression from the general/strategic to the specific/operational elements. While a certain degree of ambiguity and incompleteness persists, this definition continues to feature prominently in the literature on governance regimes and firmly underpins much of the varied research pursued in this area.[8]

Such research displays a pronounced normative orientation. The principal goal is to identify regime characteristics that may improve well-being in the domestic and international arenas, transform them into effective institutional instruments and ensure that the prescriptive edifice is adhered to. Some of the studies undertaken in this field however are primarily geared toward enhancing the understanding of regime anatomy (description) and physiology (explanation).[9] A recent empirical project that falls into this category is an examination of the relationship between governance regimes, corruption, and economic growth.[10]

The definition of a governance regime adopted by economists/political scientists has been applied across the policy spectrum, including in the environmental domain.[11] Given the practical orientation displayed by scholars concerned with ecological issues, they have however tended to decompose this formula, bring into focus its individual components, and

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7. *Id. See also* Young & Osherenko, *infra* note 63, at 1 (discussing the key components of governance regimes).

8. *See* William H. Meyer & Boyka Stefanova, *Human Rights, the UN Global Compact, and Global Governance*, 34 CORNELL INT'L L.J. 501, 514 (2001) (recognizing the most common definition of regime as "[p]rinciples, norms, rules, and decision-making procedures around which actor expectations converge in a given issue-area"). *See generally* Anne-Marie Slaughter, Book Review, 89 AM. J. INT'L L. 454 (1995) (reviewing REGIME THEORY AND INTERNATIONAL RELATIONS (Volker Rittberger et al. eds.,1993)) (examining literature on regime theory and international relations).

9. *See infra* Part II (discussing regime anatomy and physiology).

10. *See* Toke Aidt, Jayasri Dutta, & Vania Sena, *Governance Regimes, Corruption, and Growth: Theory and Evidence*, 36 J. COMP. ECON. 195, 195 (2008) (assessing "the role of political accountability as a determinant of corruption and economic growth.").

11. *See* Oran R. Young & Marc A. Levy, *The Effectiveness of International Environmental Regimes*, *in* THE EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL REGIMES: CAUSAL CONNECTIONS AND BEHAVIORAL MECHANISMS 1, 1 (Oran R. Young ed., 1999) (" [R]egimes are 'social institutions consisting of agreed upon principles, norms, rules, procedures, and programs that govern the interactions of actors in specific . . . areas.'" (quoting Marc A. Levy, Oran R. Young & Michael Zürn, *The Study of International Regimes*, 1 EUR. J. INT'L REL. 267, 274 (1995))).

draw a distinction between prevailing orders and regimes in the strict sense of the term.[12]

The former are regarded as "broad, framework arrangements governing the activities of all (or almost all) the members of [domestic or] international society over a wide range of specific issues."[13] By contrast, the latter are viewed as "more specialized arrangements that pertain to well-defined activities, resources, or geographical areas and often involve only some subset of the members of [domestic or] international society."[14] Again, in light of their practical disposition, environmental researchers have predominantly explored institutional configurations akin to regimes rather than widely-based/higher-level orders.[15]

The notion of an environmental governance regime, as outlined here, has been subject to extensive theoretical and empirical exploration.[16] Substantial descriptive, explanatory, and prescriptive insights have been generated by researchers studying the subject.[17] Chinese attitudes and behavior however have been accorded scant attention, despite the size of the country, its growing economic and political prominence, the massive ecological degradation it has witnessed, and the inadequate measures it has embraced to cope with the problem.[18] The purpose of this paper is to selectively shrink the gap by using certain China-specific experiences as a platform for offering some analytical observations about the development of environmental governance regimes.

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12. *See* ORAN R. YOUNG, INTERNATIONAL COOPERATION: BUILDING REGIMES FOR NATURAL RESOURCES AND THE ENVIRONMENT 13 (1989) [hereinafter YOUNG, INTERNATIONAL COOPERATION] ("[S]tudents of international affairs . . . divide the category of international institutions into two more or less distinct subsets: international orders and international regimes.").

13. *Id*.

14. *Id.*

15. *See* YOUNG, INTERNATIONAL COOPERATION, *supra* note 12, at 13 ("[S]tudents of international affairs . . . divide the category of international institutions into two more or less distinct subsets: international orders and international regimes."); Young & Levy, *supra* note 11, at 1 (quoting Marc A. Levy, Oran R. Young & Michael Zürn, *The Study of International Regimes*, 1 EUR. J. INT'L REL. 267, 274 (1995)) ("[R]egimes are 'social institutions consisting of agreed upon principles, norms, rules, procedures, and programs that govern the interactions of actors in specific . . . areas.'") [Again, see my comment/explanation at Note 11.]

16. *Infra* Part II.

17. *Infra* Part II.

18. *Infra* Part III.

II. Conceptual Foundations

A. Competing Paradigms

The prolonged search for a satisfactory definition may be attributed to intellectual birth pangs rather than merely a combination of the inherent complexity of the underlying phenomenon and methodological thoroughness.[19] The initial phases of the evolution of the academic work devoted to regimes, including those ecologically-centered, were characterized by a degree of doubt, tension, and uncertainty. These features persist, but on a much more modest scale, and the studies currently undertaken are marked by a considerable measure of continuity, connectivity, and overall direction. They may be considered as part of a coherent, integrated, and ongoing scholarly enterprise.[20]

In the environmental domain, this enterprise is systematically geared toward shedding light on regime attributes, regime types/variations, regime formation, regime change, and regime effectiveness/consequences.[21] The attention accorded to each individual dimension has shifted over time.[22] As theoretical knowledge has accumulated and a meaningful body of empirical

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19. YOUNG, INTERNATIONAL COOPERATION, *supra* note 12, at 12.

20. *See infra* note 21 (providing examples of current scholarly research related to governance regimes).

21. *See generally* GLOBAL GOVERNANCE: DRAWING INSIGHTS FROM THE ENVIRONMENTAL EXPERIENCE (Oran R. Young ed., 1997) (further assessing international regime governance); INSTITUTIONS AND ENVIRONMENTAL CHANGE: PRINCIPAL FINDINGS, APPLICATIONS, AND RESEARCH FRONTIERS (Oran R. Young, Leslie A. King & Heike Schroeder eds., 2008) (evaluating the relationship between institutions and regimes); REGIME CONSEQUENCES: METHODOLOGICAL CHALLENGES AND RESEARCH STRATEGIES (Arild Underdal & Oran R. Young eds., 2004) (assessing regime effectiveness); ORAN R. YOUNG, CREATING REGIMES: ARCTIC ACCORDS AND INTERNATIONAL GOVERNANCE (1988) [hereinafter YOUNG, CREATING REGIMES] (providing examples of international regime creation); ORAN R. YOUNG, THE INSTITUTIONAL DIMENSION OF ENVIRONMENTAL CHANGE: FIT, INTERPLAY, AND SCALE (2002) (discussing the role of institutions with regard to environmental change); YOUNG, INTERNATIONAL COOPERATION, *supra* note 12 (providing an overarching analysis of regime building); ORAN R. YOUNG, INTERNATIONAL GOVERNANCE: PROTECTING THE ENVIRONMENT IN A STATELESS SOCIETY (1994) [hereinafter YOUNG, INTERNATIONAL GOVERNANCE] (analyzing international regime governance); ORAN R. YOUNG, RESOURCE REGIMES: NATURAL RESOURCES AND SOCIAL INSTITUTIONS (1982) [hereinafter YOUNG, RESOURCE REGIMES] (assessing resource regimes in an environmental context); POLAR POLITICS: CREATING INTERNATIONAL ENVIRONMENTAL REGIMES (Oran R. Young & Gail Osherenko eds., 1993) (providing an overview of international regime creation); JORGEN WETTESTAD, DESIGNING EFFECTIVE ENVIRONMENTAL REGIMES: THE KEY CONDITIONS (1999) (discussing the elements essential to environmental regime creation); ENVIRONMENTAL REGIME EFFECTIVENESS (Edward L. Miles et al. eds., 2002) (considering the elements necessary for effective environmental regimes); Young & Levy, *supra* note 11 (discussing the effectiveness of international regimes in an environmental context).

22. *See supra* note 21 and accompanying text (providing a breadth of literature on regime formation, identification, and effectiveness).

findings has emerged, researchers have naturally started placing less emphasis on description (attributes and types/variations) than explanation (formation and change) and evaluation (effectiveness/consequences).[23] The rapid deterioration in ecological conditions, coupled with the perception that policy responses are inadequate, has lately turned the issue of effectiveness/consequences into the principal intellectual concern.[24]

Because of its intricate nature, this is a more resource-intensive issue than the others, which has compounded the crowding-out problem.[25] That said, the interest in regimes attributes, types/variations, formation and change has merely diminished rather than disappeared altogether.[26] These facets of environmental regime structure and dynamics, particularly the last two, continue to loom on the scholarly agenda.[27] There is no reason to assume that this pattern is likely to reverse itself as many relevant questions pertaining to description and explanation remain unanswered.[28] The focus in the present paper on regime development (formation and change, but primarily the former) is thus by no means misplaced.

It should be noted at the outset that some regimes, in the ecological domain and elsewhere, are self-generating or spontaneous entities.[29] Like in the unfettered marketplace, the expectations of the players involved converge, despite the absence of a conscious effort to this effect or occasionally even consciousness, and shape their behavior without recourse to formal coordination.[30] This is an elusive phenomenon whose essence cannot be readily captured.[31] A relatively successful attempt by a prominent libertarian economist has produced the following succinct observation: "[some regimes are] the products of the action of many men but…not the result of human design."[32]

The processes giving rise to spontaneous governance systems have not been satisfactorily accounted for.[33] Socio-biological explanations are

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23. *See supra* note 21 and accompanying text (same).
24. *See supra* note 21 and accompanying text (same).
25. *See supra* note 21 and accompanying text (same).
26. *See supra* note 21 and accompanying text (same).
27. *See supra* note 21 and accompanying text (same).
28. *See supra* note 21 and accompanying text (same).
29. *See, e.g.*, 1 FRIEDRICH A. HAYEK, LEGISLATION, AND LIBERTY: RULES AND ORDER 37 (1973) (discussing the distinction and differences between exogenous and endogenous orders).
30. *Id.*
31. *See id.* at 38 ("[S]uch orders . . . do not obtrude themselves on our senses but have to be traced to our intellect. We cannot see, or otherwise intuitively perceive, this order of meaningful actions, but are only able mentally to reconstruct it by tracing the relations that exist between the elements.").
32. *Id.* at 37. *See also* ARILD VATN, INSTITUTIONS AND THE ENVIRONMENT 169–191 (2005) (discussing institutional establishment and change).
33. *See* YOUNG, INTERNATIONAL COOPERATION, *supra* note 12, at 85 ("The processes through which spontaneous arrangements arise are not well-understood.").

regarded as excessively mechanical and those derived from social psychology as overly static.[34] Game theorists have explored methodical coordination between interdependent actors in situations where explicit communication is not possible or does not take place.[35] The ideas generated by them are not without theoretical appeal, although in themselves they fall significantly short of furnishing a comprehensive analytical framework, due to the parsimonious nature of the models employed and the narrow lens through which social interaction is dissected.[36]

Negotiated governance regimes are easier to trace chronologically and outline conceptually. Such comparatively transparent institutional arrangements are "characterized by conscious efforts to agree on their major provisions, explicit consent on the part of the individual participants, and formal expression of the results."[37] A number of distinctions are commonly drawn in this context (e.g., between "constitutional contracts" and "legislative bargains," and "comprehensive … and partial or piecemeal" regimes[38]).[39] They are broadly relevant, but not essential for accounting for every conceivable aspect of regime development, and will thus not be pursued any further here.

Imposed regimes, such as those forced on China in the wake of the Opium Wars,[40] stand in sharp contrast to self-generating or spontaneous ones in that they are deliberately conceived and asymmetrically structured.[41] The source of the initiative is typically a dominant power or a

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34. *See id*. at 85–86 ("The propositions of sociobiology are not sufficient to provide a satisfactory account of the formation of institutional arrangements that take such diverse forms and change so rapidly. And social psychology offers no comprehensive theoretical account of interactive learning relevant to the emergence of social conventions.").

35. *See generally* ROBERT M. AXELROD, THE COMPLEXITY OF COOPERATION: AGENT-BASED MODELS OF COMPETITION AND COLLABORATION (1997) (discussing various models of cooperation) ROBERT M. AXELROD, THE EVOLUTION OF COOPERATION (1984) (analyzing the theory of cooperation, with particular reference to the Prisoner's Dilemma); THOMAS C. SCHELLING, THE STRATEGY OF CONFLICT (1980) (providing a comprehensive analysis of conflict theories and strategies).

36. *See* YOUNG, INTERNATIONAL COOPERATION, *supra* note 12, at 85–86 (discussing regime development).

37. *Id.* at 86.

38. *See* YOUNG, INTERNATIONAL COOPERATION, *supra* note 12, at 86–87 ("Such regimes may take the form either of constitutional contracts or legislative bargains . . . . It is useful, as well, to distinguish between comprehensive negotiated regimes and those that can be described as partial or piecemeal.").

39. *Id.*

40. *See* Alfred W. McCoy, *From Free Trade to Prohibition: A Critical History of the Modern Opium Trade*, 28 FORDHAM URB. L.J. 307, 310 (discussing the two different Western governance regimes forced on China in the wake of the narcotics trade).

41. *See* YOUNG, INTERNATIONAL COOPERATION, *supra* note 12, at 88 ("Imposed arrangements differ from self-generating or spontaneous regimes in that they are fostered deliberately by dominant powers or consortia of dominant powers.").

group of players with superior resource capabilities.[42] The means employed may consist of some combination of coercion, cooptation, and material manipulation.[43] Since no consent of subordinate parties is sought and effective operation does not hinge on formal expression, this type of regime also differs fundamentally in both theory and practice from negotiated arrangements.[44] Again, that is a subject that will not be examined in any detail in the present paper.

The choice not to delve into the workings of spontaneous and imposed regimes is not a reflection of their rare occurrence. Quite the contrary, it should be acknowledged that the incidence/prevalence of such arrangements is far greater than suggested in the literature on the subject, which is heavily influenced by schools of thought that possibly overstate the role played by conscious design in institutional development and are ill-disposed toward organic conceptions of society (as a spontaneously organized system) because of their apparent illiberal underpinnings.[45] Both spontaneous and imposed regimes are common phenomena, particularly in international settings, but they are just not highly relevant as distinct entities in this specific context.

Environmental researchers portray regime development as a multi-phase iterative cycle.[46] Those who focus on the domestic arena typically identify for purposes of analysis six separate stages, each with its own unique characteristics, through which the players involved move in a loosely sequential fashion: agenda setting, policy formulation, policy adoption, policy implementation, policy evaluation, and policy adjustment.[47] The last step in the process (i.e. adjustment) may entail merely changes in the status quo or may feature more decisive action such as outright termination.[48]

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42. *Id.*

43. *See id*. at 88 ("In short, imposed regimes are established deliberately by dominant powers who succeed in getting others to conform to the requirements of these arrangements through some combination of coercion, cooptation, and the manipulation of incentives.").

44. *See id*. ("[S]uch regimes typically do not involve explicit consent on the part of subordinate actors, and they often operate effectively in the absence of any formal expression").

45. *Id.* at 90–92.

46. *See generally* MICHAEL HOWLETT, M. RAMESH, & ANTHONY PERL, STUDYING PUBLIC POLICY: POLICY CYCLES AND POLICY SUBSYSTEMS (3rd ed. 2009) (elaborating on the six stages of the public policy cycle); MICHAEL E. KRAFT & SCOTT R. FURLONG, PUBLIC POLICY: POLITICS, ANALYSIS, AND ALTERNATIVES (2nd ed. 2006) (providing a broad overview of the field of public policy).

47. *See* HOWLETT, *supra* note 46, at 91–211 (discussing the six public policy stages); KRAFT & FURLONG, *supra* note 46, at 71–84 (analyzing the six stages of public policy).

48. *See* HOWLETT, *supra* note 46, at 197–211 (providing an overview of patterns of policy change); KRAFT & FURLONG, *supra* note 46, at 71–72, 84 (analyzing the six stages of public policy).

The international arena is more decentralized than its domestic counterpart[49] and this necessitates a somewhat different approach. Fewer phases are commonly singled out and less emphasis is normally placed on semi-structured iteration within a clearly-defined cyclical framework.[50] The number of stages identified seldom exceeds three (e.g., pre-negotiation, negotiation, and post-negotiation; or, alternatively, agenda setting, negotiation, and operationalization)[51] and the overall process has a linear quality to it, although it may be protracted in nature and may involve lengthy pauses, extended sideways drifting, and sharp retreats.[52] The core phase "begins with the initiation of direct and focused negotiations and ends with the signing of an agreement."[53] Additional interrelated activities precede and follow it:

> The pre[-]negotiation stage encompasses the process through which an issue initially finds its way onto the international agenda, gets defined or framed as a topic for international consideration, and reaches a sufficiently prominent place on the agenda to justify expending the time and effort involved in explicit negotiations. The post[-]negotiation stage covers all those steps needed to transform an international agreement signed by the parties who have agreed on its terms into an actual institutional arrangement in place. Among other things, this entails ratification by the signatories and implementation within the domestic jurisdiction of the individual members.[54]

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49. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 12–13 (analyzing international regime governance).

50. *See generally* YOUNG, CREATING REGIMES, *supra* note 23, at 4–27 (providing examples of international regime creation); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 82–84 (analyzing international regime governance); Ho-Won Jeong, *Dynamics of Environmental Negotiations*, *in* GLOBAL ENVIRONMENTAL POLICIES: INSTITUTIONS AND PROCEDURES 101, 102–105 (Ho-Won Jeong ed., 2001) (discussing environmental regimes in the context of negotiation).

51. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 83 ("[I]t is helpful to divide the overall sequence into at least three stages: pre[-]negotiation, negotiation, and post[-]negotiation.").

52. *See* YOUNG, CREATING REGIMES, *supra* note 23, at 4–27 (providing examples of international regime creation); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 82–84 (analyzing international regime governance).

53. YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 83.

54. *Id.*

Table 1: Key Features of Principal Phases of Regime Development

1. ***Driving forces***: Ideas are particularly prominent during agenda setting; interests dominate the stage of negotiation; material conditions become increasingly significant in the course of the shift from paper to practice.
2. ***Players***: There are no discernible changes from one stage of regime development to another in the roles played by organizations. However, in the case of individuals, intellectual leadership is crucial during agenda setting, entrepreneurial leadership looms large in the course of negotiation, and structural leadership is vital throughout the entire process.
3. ***Collective-action problems***: Gridlock is the classic collective-action problem of the negotiation stage; miscommunication is the standard pitfall of agenda setting; asymmetries in levels of effort are the typical hazard of operationalization.
4. ***Context***: Broad shifts in the political environment affect agenda setting; more specific exogenous events impinge on negotiations; domestic constraints influence operationalization.
5. ***Tactics***: The concern with threats and promises is most pronounced during negotiation; efforts to shape the framing of the problem manifest themselves in the course of agenda setting; administrative/bureaucratic maneuvers gain momentum during operationalization.
6. ***Design perspectives***: Agenda setting is the time for considering the big picture; negotiation gives rise to a preoccupation with the language to be included in the agreements; operationalization heightens sensitivity to the domestic repercussions of policy action and dampens enthusiasm for international cooperation.

Adapted from Young, *Creating Regimes: Arctic Accords and International Governance*, *supra* note 7, at 21.

The academic literature on the development of domestic governance regimes is characterized by a greater degree of coherence than that on their international counterparts.[55] This may be attributed to structural differences

55. *See generally* DANIEL J. FIORINO, MAKING ENVIRONMENTAL POLICY (1995) (assessing policy formation); SALWA S. GOMAA, ENVIRONMENTAL POLICY MAKING IN EGYPT (1997) (providing an analysis of policy making with particular reference to policy making in Egypt); MICHAEL R. GREENBERG, ENVIRONMENTAL POLICY ANALYSIS AND PRACTICE (2008) (providing a general overview of policy making in an environmental context); JOHN B.

stemming from divergent authority patterns.[56] As indicated, political power is centralized (albeit not uniformly) within States but not beyond their confines (again, there are variations in this respect).[57] Given the broad regularities observed, environmental researchers have thus been content to undertake domestically-centered studies without stretching the established analytical boundaries,[58] while pushing the conceptual envelope on the international front.[59] For the same reasons, this paper has a similar bias, although an attempt is made to draw on China's experience at home as well.

Scholars who explore the development of negotiated international environmental regimes embrace a number of competing theoretical perspectives.[60] Those who derive their inspiration from microeconomics favor utilitarian explanations of the behavioral patterns observed in the global arena.[61] The fundamental assumption is that these patterns are the

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LOOMIS & GLORIA E. HELFAND, ENVIRONMENTAL POLICY ANALYSIS FOR DECISION MAKING (2001) (considering how policy and decision making intertwine); MIRANDA A. SCHREURS, ENVIRONMENTAL POLITICS IN JAPAN, GERMANY, AND THE UNITED STATES (2002) (comparing Japanese, German, and American approaches to environmental policy making); ALBERT WEALE ET AL., ENVIRONMENTAL GOVERNANCE IN EUROPE: AN EVEN CLOSER ECOLOGICAL UNION (2000) (discussing regime governance in Europe); RUDIGER K.W. WURZEL, ENVIRONMENTAL POLICY-MAKING IN BRITAIN, GERMANY, AND THE EUROPEAN UNION: THE EUROPEANIZATION OF AIR AND WATER POLLUTION CONTROL (2002) (providing examples of British and German policy making in the European Union).

56. *See supra* note 55 (providing general background information of comparative policy making).

57. *See supra* note 55 (same).

58. *See supra* note 55 (same).

59. *See generally* POLAR POLITICS: CREATING INTERNATIONAL ENVIRONMENTAL REGIMES, *supra* note 23(providing an overview of international regime creation); YOUNG, CREATING REGIMES, *supra* note 23 (providing examples of international regime creation); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23 (analyzing international regime governance).

60. *See generally* GABRIELLA KUTTING, ENVIRONMENT, SOCIETY, AND INTERNATIONAL RELATIONS: TOWARDS MORE EFFECTIVE INTERNATIONAL ENVIRONMENTAL AGREEMENTS 14–15 (2000) (analyzing social organizations in an environmental context); KATE O'NEILL, THE ENVIRONMENT AND INTERNATIONAL RELATIONS 7–20 (2009) (discussing global environmental issues and how they may be addressed); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 91–95 (analyzing international regime governance); Ho-Won Jeong, *Politics for Global Environmental Governance*, *in* GLOBAL ENVIRONMENTAL POLICIES: INSTITUTIONS AND PROCEDURES, *supra* note 52, at 3, 15–20 (providing insight on political issues with regards to international environmental governance regimes); Matthew Paterson, *Theoretical Perspectives on International Environmental Politics*, *in* PALGRAVE ADVANCES IN INTERNATIONAL ENVIRONMENTAL POLITICS 54, 55–59 (Michele M. Betsill, Kathryn Hochstetler, & Dimitris Stevis eds., 2006) (providing a general overview of international political theory); Oran R. Young & Gail Osherenko, *The Formation of International Regimes: Hypotheses and Cases*, *in* POLAR POLITICS: CREATING INTERNATIONAL ENVIRONMENTAL REGIMES, *supra* note 23, at 1, 11–13 (providing international regime case studies).

61. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 91–95 (discussing the utilitarian model of regime formation).

product of actions taken by players motivated by a desire to maximize benefits and minimize costs (including transaction costs).[62] The logic extends to inter-party cooperation, which has material consequences, some positive and some negative.[63] When the joint gains potentially exceed the losses by a comfortable margin, cooperation may lead to regime formation.[64]

Another school of thought, the realist variant, is grounded in traditional-style political science, which is primarily concerned with the exercise of power, or who gets what, when and how.[65] Its worldview rests on an unambiguously pessimistic perception of human nature that is underpinned by Machiavellian/Hobbesian philosophy.[66] States are believed to be principally driven by considerations of national interest/power.[67] The relentless quest for power lies at the root of international conflict/war.[68] The emergence of powerful States/hegemons however may exert a stabilizing influence/bring about hegemonic stability, paving the way for regime formation (reflecting power asymmetries but not necessarily amounting to a forceful imposition by one party over another).[69]

Neorealist accounts diverge in some respects from this analytic configuration.[70] The international system is thought to be far more decentralized and feature much less inequality among States.[71] It is also regarded as considerably more fluid and significantly less resistant to

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62. *See id.* (discussing the utilitarian model of regime formation).

63. *See id.* (same).

64. *See id.* (same).

65. *See generally* KUTTING, *supra* note 63, at 12–13 (providing an overview of realism); HAROLD D. LASSWELL, POLITICS: WHO GETS WHAT, WHEN, AND HOW (1990) (providing a critical understanding of political actors' methods and results); O'NEILL, *supra* note 63, at 7–29 (discussing various schools of thought related to international environmental politics); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 87–91 (assessing realism); Young & Osherenko, *The Formation of International Regimes: Hypotheses and Cases*, *supra* note 63, at 9–11 (discussing power-based hypotheses).

66. *See* KUTTING, *supra* note 63, at 12 ("It takes a pessimistic view of human nature grounded in Machiavellian and Hobbesian philosophy.").

67. *See id.* ("Because of its emphasis on the political sphere, the realist perspective reduces analysis of the relationship between states to issues of power and self-interest, i.e. national interest.").

68. *See id.* ("The drive to maximize power leads to war as states compete for power.").

69. *Id.* at 12–14.

70. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 87–91 (discussing neorealism); KUTTING, *supra* note 63, at 13 (providing an assessment of the neorealist philosophy); O'NEILL, *supra* note 63, at 7–20 (discussing various school of thought related to international environmental politics).

71. *See* KUTTING, *supra* note 63, at 13 ("[I]nternational systems are decentralized and anarchic.").

change because of frequent shifts in State capabilities.[72] The implications for regime development however are relatively modest.[73] Greater attention is accorded, typically in game-theoretic terms, to the provision of public goods in an inherently anarchic global setting, but inter-party cooperation/regime formation still hinges on the presence of a hegemonic power/State.[74]

Cognitivist/psychological-style formulations constitute a genuine departure from the rationalist characterizations of behavior witnessed in the international arena.[75] Inter-party cooperation/regime formation is not portrayed as the result of deliberate moves by unitary players methodically weighing the benefits and costs of alternative institutional arrangements in a synoptic fashion.[76] Those involved in the process seldom possess a clearly-defined and a highly-stable preference function/structure.[77] Rather than calmly and consistently resorting to a sophisticated utility/power calculus, they are subject to a plethora of complex influences (e.g., belief systems, cultural mores, decision styles, and predispositions toward risk and uncertainty)[78] and centrifugal forces.[79]

This leads to an emphasis on the role of social learning, ultimately culminating in a convergence of views among key participants, as a factor facilitating regime development.[80] In itself that may prove to be an overly weak formulation, because social learning in a decentralized global setting is fundamentally a spontaneous process lacking a strong engine to propel it

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72. *See id.* ("[T]he structure of the international system is determined by the capabilities of the states/units in the system. Capabilities can change and therefore the composition or balance of the international system can change.").

73. *See id.* ("[E]ven neorealism only accounts for short-lived and purely interest-oriented cooperation. Therefore it cannot explain the web of international environmental cooperation that has developed in this century.").

74. *Id.* at 13–14.

75. *See* O'NEILL, *supra* note 63, at 7–20 (discussing various schools of thought related to international environmental politics); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 95–98 (elaborating on cognitivist philosophy).

76. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 95 ("The cognitivists . . . do not accept the characterization of the parties to regime formation as unitary actors weighing the costs and benefits of alternative institutional options in a synoptic manner.").

77. *See id.* ("The cognitivists . . . reject the idea that the participants in the process of regime formation possess well-defined preference structures that are not subject to change during the course of the process.").

78. *See id.* ("[T]he cognitivists . . . see forces at work in efforts to form international regimes or governance systems that cannot be captured in the calculations of the power theorists or the utilitarians. These forces include belief systems, decision cultures or styles, and attitudes toward risk and uncertainty.").

79. *Id.*

80. *See id.* at 95–96 ("One prominent theme is the role of a form of social learning that can give rise to consensual knowledge . . . . On this account, a convergence of views among the principal participants is a prerequisite for success in the process of regime formation.").

forward.[81] For this reason, the notion of epistemic communities is invoked by those who subscribe to the cognitivist paradigm.[82] Such communities consist of coalitions of professional experts and policy makers, normally transnational in scope, who share a common understanding of the underlying problem and the remedies called for.[83] They go to great lengths to convert their knowledge and convictions into appropriate institutional arrangements/governance regimes.[84]

The application of these three theoretical perspectives in environmental contexts has not been a resounding success.[85] As noted earlier, one difficulty associated with the utilitarian model lies in the assumption that the preference orderings of participants in institutional processes is comprehensively known and completely invariant.[86] To complicate matters, it is unrealistically posited that their identity may be established at the outset and remains intact in the course of the negotiations; the alternatives/ strategies available to them are fully specified; and the outcome of each potential course of action is beyond doubt.[87]

Realist constructions may generate useful insights in policy domains (e.g., economic and military affairs) where power is the dominant factor shaping behavior.[88] This is not thought to be the case in the environmental sphere.[89] Hegemonic impulses seem to have been relatively muted in that area. Moreover, the apparently omnipotent States have often played a

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81. *See id.* at 96 ("[T]his line of thought . . . seems to rely on a spontaneous process that has no engine to drive it.").

82. *See id.* ("Concern with this problem has given rise to a growing literature on the role that epistemic communities play in the process of regime formation.").

83. *See id.* ("On this account, epistemic communities are coalitions of scientists and policymakers—usually transnational in scope—who share a common understanding of the nature of the problem and appropriate solution and who make a concerted effort to inject their point of view into the process of regime formation.").

84. *See id.* at 95–98 (elaborating on cognitivist philosophy); KUTTING, *supra* note 63, at 20–21 (providing an assessment of epistemic communities); O'NEILL, *supra*, note 63, at 7–20 (discussing various schools of thought related to international environmental politics).

85. *See* KUTTING, *supra* note 63, at 14–15 (critiquing the neorealist approach); O'NEILL, *supra* note 63, at 7–20 (discussing various schools of thought related to international environmental politics); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 91–95 (analyzing international regime governance); Young & Osherenko, *supra* note 63, at 11–13 (discussing interest-based hypotheses).

86. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 93 (discussing assumptions related to utilitarian modes of regime formation).

87. *Id.*

88. *See* KUTTING, *supra* note 63, at 12–13 (providing an overview of realism); O'NEILL, *supra* note 63, at 7–20 (assessing various schools of thought related to international environmental politics); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 87–91 (discussing attributes of realism); Young & Osherenko, *supra* note 63, at 9–11 (elaborating on power-based hypotheses).

89. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 87–91(discussing attributes of realism).

limited role in regime development, allowing intergovernmental organizations and/or international nongovernmental organizations to exercise leadership or at least act as the principal catalyst for change.[90]

Despite their appeal as an antidote to reductionist utilitarian and realist formulations, cognitivist models are not without shortcomings.[91] They may have not served ecological researchers well by proving excessively ambiguous, notoriously difficult to operationalize, and of little practical value.[92] Where operationalization has presented a surmountable problem, the evidence has generally not supported the arguments put forth with respect to environmental governance regimes.[93] Cognitivists have also treated the use of expert/policy knowledge as a strictly normative and technical issue, stripping the process of its political dimensions.[94]

B. A Dominant Perspective?

Neoliberal institutionalism purports to overcome the limitations of the three basic approaches outlined above. The liberal element reflects a worldview that is more open to acknowledging the extent to which cooperation prevails in the global arena, and embrace the logic underpinning this phenomenon, than the conceptually more restrictive (utilitarian, realist, and neorealist) perspectives.[95] The fundamental thesis is that States are highly interdependent and thus have a powerful incentive to collaborate in order to obtain joint, or absolute, benefits for the international community as a whole.[96]

In the absence of an overarching sovereign authority, the threat of anarchy is a looming danger for global society and a potentially costly prospect for its members.[97] The high degree of decentralization makes it

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90. *Id*.

91. *See* KUTTING, *supra* note 63, at 20–21 (providing an assessment of epistemic communities); O'NEILL, *supra* note 63, at 7–20 (discussing various schools of thought related to international environmental politics); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 95–98 (assessing the cognitivist model); Young & Osherenko, *supra* note 63, at 19–20 (elaborating on knowledge-based hypotheses).

92. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 23, at 95–98 (assessing the cognitivist model).

93. *Id.*

94. *Id*.

95. *See* O'NEILL, *supra* note 60, at 10–11 ("[Liberal theorists believe that] [i]n a world where countries depend on one another for mutual peace and prosperity, there is a strong incentive to work together to achieve joint, or absolute, gains for the international community.").

96. *See* Paterson, *supra* note 60, at 55–59 ("[F]or liberal institutionalists, interdependence . . . makes it rational in many instances to cooperate.").

97. *See* O'NEILL, *supra* note 60, at 10 ("For theorists in the neoliberal institutionalist tradition, anarchy is a problem in that the absence of a sovereign authority makes it easy—and desirable—for states to cheat on mutual agreements.").

tempting and easy for States not to enter into collective accords and renege on their commitments.[98] Specifically, a single State may free-ride on international agreements, capturing the benefits derived therefrom without incurring any material obligations.[99] Under this scenario, inter-party cooperation is a remote possibility.[100] Precisely for that reason, recognizing their dependency upon each other in a complex yet fragile global setting, States seek to collaborate with the aim of realizing mutual gains and avoiding the consequences of parochial maneuvering.[101]

Institutional-building is the principal strategy employed to this end. Elaborate organizational mechanisms are created to perform a variety of stability-enhancing functions such as increasing transparency, reducing the transaction costs of cooperation, monitoring compliance, undertaking enforcement, and preventing cheating.[102] The institutions that result from this collective effort "are social practices consisting of easily recognized roles coupled with clusters of rules or conventions governing relations among the occupants of these roles. The rules that link institutionalized roles and . . . form the superstructure of institutions ordinarily encompass sets of rights or entitlements . . . as well as sets of behavioral prescriptions."[103]

International law, which is rooted in Grotian philosophy, embodies the characteristics of an institutional approach, in the neoliberal sense of the term, to the study of ecological degradation.[104] It addresses descriptively, analytically, and prescriptively the principles, norms, and rules that govern relations between States.[105] It blends static and dynamic perspectives, and

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98. *See* Stephen D. Krasner, *AEI Conference Trends in Global Governance: Do They Threaten American Sovereignty?*, 1 CHI. J. INT'L L. 231, 233 (2000) (discussing the power dynamic between the United States and other countries).

99. *See* O'NEILL, *supra* note 60, at 10 ("Thus, a single state can free-ride on an international agreement, and receive the benefits from it without paying any costs of adjustment.").

100. *See id.* ("Under this scenario, no state cooperates, hoping instead to free-ride on the actions of others.").

101. *See id.* ("Therefore, neoliberal institutionalists look for ways to mitigate these problems.").

102. *See id.* ("They see international cooperation succeeding when states can work together to realize joint gains, and when institutions are set up that can monitor compliance, increase transparency, reduce the transactions costs of cooperation, and prevent most, if not all, cheating.").

103. YOUNG, INTERNATIONAL COOPERATION, *supra* note 12, at 32.

104. *See* KUTTING, *supra* note 60, at 15 ("The legal approach has been included under the neoliberal institutionalist rubric because of its shared origins in the Grotian philosophy of international law.").

105. *See id.* ("International law is defined as a system of rules and principles that govern the international relations between states. These rules are created by states for states and cover almost any aspect of inter-state relationships." (citations omitted)) .

focuses on actor behavior and processes.[106] It seems to promote orderly collaboration in the global arena through institutional channels, albeit in accordance with a predominantly legal logic (i.e., by incorporating few insights from other academic disciplines).[107]

A somewhat broader form of neoliberal institutionalism is the modified realist/ structuralist variant, which eclectically draws on several intellectual sources.[108] The overall orientation is rationalist, but with less attention to pure power politics, and greater emphasis on inter-party cooperation.[109] The approach is not rigidly State-centric (an attribute it shares with cognitivism) in that the role played by other actors (e.g., civil society) in regime development is duly recognized.[110] While negotiated governance systems, in the environmental domain and elsewhere, are regarded as the product of bargaining/negotiation (although involving at times a degree of coercive diplomacy), they are not dissected within a tight game-theoretic framework.[111]

The modified realist/structuralist perspective has a number of salient features. The number of players engaged in bargaining typically exceeds two.[112] It may amount to a merely handful of participants (such as the four States that negotiated the fur seal regime) or constitute a larger group but one relatively modest in size (such as the sixteen contracting parties to the regime for Antarctic marine living resources or the twenty-seven signatories to the 1987 protocol to the ozone depletion convention).[113] In certain circumstances, a very substantial number of participants (e.g., over 150, as in the efforts to forge a governance structure for deep seabed mining in the context of the law of the sea negotiations) may contribute to the process of the development of an institutionally-grounded environmental

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106. *See id.* at 16 ("As compared to various [International Relations] approaches, the international law perspective analy[z]es processes as well as actor behavio[]r.").

107. *See id.* at 15–17 (explaining the legal approach of neoliberal institutionalism).

108. *See id.* at 17 (suggesting that the concept of regime was first introduced in the 1970s by Ruggie, and later narrowed down by Krasner in the 1980s).

109. *See id.* at 18 ("The modified/structuralist view of regime theory . . . moves away from the idea of pure power politics to more functional areas of international cooperation . . . .").

110. *See id.* ("The basic approach of the modified realist view is state-centric although it takes into account the existence of non-state actors . . . .").

111. *See id.* ("Regimes are seen as the result of bargaining and negotiations and these results are often, but not necessarily, analy[z]ed in a game theoretical framework.").

112. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 21, at 99 ("Although there may be disagreement . . . regarding the identity of the actors that participate in specific cases, efforts to devise international regimes generally involve several autonomous parties.").

113. *See id.* ("There may be only a handful, such as the four states that negotiated the fur seal regime, or a modest number, such as the sixteen parties to the regime for Antarctic marine living resources or the twenty-seven parties to the 1987 protocol to the ozone depletion convention.").

management system.[114] The corollary is that, "analytic constructs closely tied to a two-party view of the world, like the Edgeworth box, cannot carry us far in coming to terms with the politics of international regime formation."[115]

By the same token, the multilateral bargaining that takes place in such broadly-based and loosely-organized settings does not offer ample scope for generating insights derived from rigorous game-theoretic treatments of *n*-party situations which are geared toward identifying winning coalitions as well as those most likely to come into existence.[116] Unlike in other institutional circumstances, where this type of problem structuring and conceptual manipulation is potentially relevant and useful, attempts to establish environmental governance regimes are normally aimed at arriving at arrangements acceptable to as many parties involved in the negotiations as possible.[117] The pertinent criterion guiding behavior is a consensus rule rather than one founded on majoritarian principles.[118] Parties likely to impede progress may be sidelined or excluded from the process altogether.[119]

The likelihood of success in such a milieu is typically greater than envisioned by game theorists operating within the confines of highly stylized models. The reason lies in the fact that player interactions in the environmental domain provide considerable scope for integrative (or productive) bargaining as distinct from distributive (or positional) give-and-take.[120] Since the parties involved in this type of mixed-motive maneuvers do not embark on a search for a satisfactory outcome with a fixed and invariant negotiation set (or contract curve), they are better motivated to

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114. *See id.* ("In extreme cases, more than 150 states may be involved, as in the efforts to work out a deep seabed mining regime in the context of the law of the sea negotiations.").

115. *Id.*

116. *See id.* ("[T]he multilateral interactions involved in regime formation do not lend themselves well to analysis in terms of the usual game-theoretic treatments of *n*-party situations which center on the identification of winning coalitions coupled with efforts to single out those coalitions that are most likely to form.").

117. *See id.* ("Unlike the situation prevailing in most municipal legislatures, efforts to form international regimes generally focus on the formulation of arrangements acceptable to as many of those engaged in the negotiations as possible.").

118. *See id.* at 99–100 ("This is tantamount to saying that institutional bargaining in international society operates on the basis of a consensus rule in contrast to a majoritarian rule or some other decision rule justifying a focus on the development of winning coalitions.").

119. *See id.* at 100. ("Those negotiating the terms of international regimes may seek to exclude parties deemed likely to object to any reasonable institutional arrangements or threaten to go forward with particular arrangements regardless of the opposition of one or more parties.").

120. *See id.* ("The resultant negotiations are saved from certain failure because regime formation in international society typically provides considerable scope for integrative (or productive) bargaining in contrast to distributive (or positional) bargaining.").

engage in exploratory exchanges designed to pinpoint opportunities for striking mutually beneficial deals.[121]

The participants in this open-ended process may never unambiguously identify the locus of the negotiation set (or the actual shape of the contract curve) and they may consequently, and inelegantly by game-theoretic standards, arrive at solutions that are Pareto-inferior in the sense that they leave feasible joint games on the table.[122] Be that as it may, those players are less likely to become embroiled in lengthy and unfruitful negotiations that produce recurrent and unbreakable gridlocks stemming from recourse to strategic behavior and committal tactics whose purpose is to secure advantages for one party or another.[123]

The development of environmental governance regimes is an uncertain enterprise in that the participants confront an ill-defined and fluid picture or, in technical parlance, a "veil of uncertainty"[124] that renders it difficult for them "to foresee how the operation of institutional arrangements will affect their interests over time."[125] Paradoxically, this is deemed to be a positive feature of a highly challenging and seemingly intractable situation, for the inability of individual parties to predict with any precision the impact of a set of potential arrangements on their own welfare predisposes them, in a Rawlsian fashion,[126] toward seeking configurations that are broadly equitable, increasing the probability of an outcome emerging that is acceptable to all.[127]

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121. *See id.* at 100–01 ("Negotiators who do not start with a common understanding of the contours of the contract curve or the locus of the negotiation set . . . have strong incentives to engage in exploratory interactions to identify opportunities for devising mutually beneficial deals."); YOUNG, CREATING REGIMES, *supra* note 21, at 11–15 (explaining the negotiation phase of international regime formation); Young & Osherenko, *supra* note 21, at 13 ("[T]he thicker the veil of uncertainty, the easier it will be for parties to approach the problem under consideration as an integrative exercise.").

122. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 21, at 101 ("Such negotiators may never discover the actual shape of the contract curve or locus of the negotiation set, and they may consequently end up with arrangements that are Pareto-inferior in the sense that they leave feasible joint gains on the table.").

123. See *id.* ("At the same time, however, they are less likely to engage in negotiations that bog down into protracted stalemates brought about by efforts to improve the outcome for one party or another through initiatives involving strategic behavior and committal tactics.").

124. *See id.* at 101–02 (explaining the "veil of uncertainty").

125. Young & Osherenko, *supra* note 21, at 13.

126. *See generally* JOHN RAWLS, A THEORY OF JUSTICE 136–42 (1971) (stating that society should be built in a way that is fair for everyone).

127. *See* YOUNG, CREATING REGIMES, *supra* note 21, at 11–15 ("The participants seldom have a clear picture of the payoff possibility set when they embark on negotiations; much of the negotiation process is exploratory in nature and involves efforts to expand the range of possibilities available."); YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 21, at 101–02 (discussing the "veil of uncertainty"); Young & Osherenko, *supra* note 21, at 13 ("Individual parties' inability to predict a regime's impact on their welfare increases

The flexible and restrained mixed-motive bargaining conducted under a veil of uncertainty, in scenarios bearing the hallmarks of neoliberal institutionalism, has a number of additional noteworthy characteristics. Elaborate inter-party negotiations coincide with extensive intra-party give-and-take.[128] In recognition of the relevance of some ideas put forth by cognitivists, the transnational environmental and scientific (i.e., epistemic) communities are seen as playing a tangible, albeit one not readily amenable to unequivocal specification, role in shaping developments on the international ecological front.[129]

The inter-party and intra-party connection is merely one of a number of significant cross-area/cross-event linkages that complicate the bargaining process. Unlike in the more parsimonious utilitarian models, negotiations revolving around environmental issues are not comfortably self-contained.[130] According to neoliberal institutionalists, they are often undertaken in a wider context where there are close linkages to other items on the domestic and/or international agendas.[131] This may impede or facilitate the development of an ecologically-centered governance regime, depending on prevailing circumstances and capabilities of the players involved.[132]

Given the pervasiveness of such intricate structural patterns, success may elude the architects of a negotiated environmental governance regime, possibly for a meaningful period of time. It is posited that a satisfactory outcome is more likely to materialize when the following conditions prevail: (1) the issues at stake lend themselves to treatment in a contractarian mode[133]; (2) arrangements are available that all participants

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incentives to formulate provisions that are fair or equitable, which raises the probability that the parties can come up with institutional arrangements that are acceptable to all.").

128. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 21, at 104 ("Internal splits between industrialists and environmentalists are common in connection with most pollution-control arrangements.").

129. *See id.* at 103–05 ("[I]t would be a serious mistake to overlook the role of transnational alliances among influential interest groups in developing and maintaining governance systems at the international level.").

130. *See id.* at 105–06 ("Whereas the vision of negotiation incorporated in the mainstream utilitarian models emphasize self-contained interactions, institutional bargaining in the formation of international governance systems almost always features a rich array of linkages to other events occurring in the socioeconomic or political environment.").

131. *See id.* (providing examples of various ways in which negotiations may link domestic or international agendas).

132. *See id.* ("Sometimes these linkages pose more or less serious problems for those seeking to establish institutional arrangements at the international level . . . . In some cases, however, linkages work in favor of efforts to form international regimes.").

133. *See id.* at 107–09 ("Institutional bargaining can succeed only when the issues at stake lend themselves to treatment in a contractarian mode." (emphasis omitted)).

may accept as equitable[134]; (3) salient solutions (or focal points) describable in simple terms may be identified[135]; (4) clear-cut and reliable compliance mechanisms may be devised[136]; (5) exogenous shocks galvanize the players involved into action[137]; and (6) relevant entrepreneurial leadership manifests itself.[138]

In addition to endeavoring to shed light on the formation of environmental governance regimes, neoliberal institutionalists have sought to explain their change over time/transformation, or "significant alterations in a regime's structure of rights and rules, the character of its social-choice procedures, and the nature of its compliance mechanisms."[139] They have generally divided the factors accounting for regime dynamics into endogenous and exogenous.[140] The former are inherent in specific institutional arrangements.[141]

Attempts have been made in this context to construct models capturing the essence of endogenous transformation.[142] Some have been directed at establishing the extent to which the key components of a regime may be displaced before the whole structure unravels rather than shifts back toward a point of equilibrium.[143] This approach builds upon the reaction-process models devised by social scientists exploring the evolution of arms races.[144] An alternative form of rigorous conceptualization has reflected systems thinking predicated on the assumption that the internal contradictions leading to regime transformation may be effectively dissected by embracing

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134. *See id.* at 109–10 ("The availability of arrangements that all participants can accept as equitable is necessary for institutional bargaining to succeed." (emphasis omitted)).

135. *See id.* at 110–11 ("The identification of salient solutions . . . describable in simple terms increases the probability of success in institutional bargaining." (emphasis omitted)).

136. *See id.* at 111–12 ("The probability of success in institutional bargaining rises when clear-cut and reliable compliance mechanisms are available." (emphasis omitted)).

137. *See id.* at 112–14 ("Exogenous shocks or crises increase the probability of success in efforts to negotiate the terms of governance systems." (emphasis omitted)).

138. See *id.* at 114–15 ("Institutional bargaining cannot succeed in the absence of effective entrepreneurial leadership on the part of individuals." (emphasis omitted)).

139. YOUNG, INTERNATIONAL COOPERATION, *supra* note 12, at 96.

140. *See id.* at 96–100 ("These processes sometimes revolve around factors that are endogenous to specific institutional arrangements . . . . An alternative type of process leading to regime transformation places greater emphasis on factors that are exogenous to specific institutional arrangements.").

141. *See id.* at 96–97 ("Some regimes harbor internal contradictions that eventually lead to serious failures and mounting pressures for major alterations.").

142. *See id.* at 97 ("Several approaches to the analysis of these internal contradictions seem worth pursuing.").

143. *See id.* ("[By] treating any given regime as a system of action, we can ask how far its central elements can be displaced before the system blows up rather than moves back toward a point of equilibrium.").

144. *See id.* ("Perhaps the best known example of this approach at the international level involves the reaction-process models devised by Richardson for the analysis of arms races.").

a holistic perspective (e.g., some type of dialectical reasoning geared toward identifying system-wide tensions responsible for institutional instability, as well as a host of related socio-physical phenomena).[145]

Other approaches to regime transformation focus on factors that are exogenous to specific institutional arrangements. This may include shifts in the structure of power,[146] adjustments in the nature and distribution of technology,[147] substantial shifts in domestic priorities,[148] and changes in consumer/ producer demand.[149]

Environmental governance regimes do not function in a strategic vacuum. The corollary is that meaningful adjustments in the structure and modus operandi of one set of institutional arrangements may impinge on those of another.[150] The accentuation of this type of interdependence is a salient feature of the neoliberal institutional paradigm. It remains to be seen if and to what extent the experience of contemporary China may lend selective support to the assumptions underlying this school of thought.

III. Chinese Lessons

A. Looking Inward

The first observation to be made in this context is that China's ecological history since the Communist Revolution suggests that the concept of an environmental governance regime is less readily amenable to analytical manipulation in circumstances where domestic issues are grappled with than in situations involving international questions. It is not easy to discern well-defined institutional patterns on the home front that may have become entrenched for a period of time and trace with

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145. *See id.* ("Alternatively, it may prove helpful to examine internal contradictions leading to regime transformation in terms of the holistic perspective associated with dialectical reasoning.").

146. *See id.* at 98 ("There can be no doubt . . . that . . . changes in the regime set forth in the International North Pacific Fisheries Convention emerged directly from the expanding influence of the United States over the marine fisheries of the region.").

147. *See id.* at 99 ("[T]he advent of large stern trawlers and factory ships after World War II decisively undermined many unrestricted property regimes governing marine fisheries, which had performed at least tolerably for a long time.").

148. *See id.* at 100 ("There can be no doubt . . . that growing attachments to policies aimed at full employment and social welfare at the domestic level have played a significant role in rendering fixed exchange rates unworkable in the international monetary regime.").

149. *See id.* ("Much the same is true of major increases in demand for certain renewable resources arising from overall populating growth or sharp shifts in tastes among consumers.").

150. *See id.* ("[A]ny success in efforts to modify the existing regime for whaling that have the effect of encouraging the growth of stocks of great whales will have important implications for arrangements governing the harvest of renewable resources such as krill, in the Southern Ocean.").

considerable precision the transformation of these patterns. Domestic governance regimes appear to lack the compactness and transparency of their international counterparts.

It would be tempting to conclude that attention should focus on attributes of institutional constellations that reflect fundamental attitudes toward society's relationship with nature.[151] It could thus be tentatively posited that since 1949, Chinese environmental policies were initially pursued within a strategic framework underpinned by the principle of coordinated development (whereby ecological impulses need to be aligned with economic ones),[152] and that at some later juncture this has given way to greater commitment to the goal of sustainable development.[153]

The implication would be that policy content (or overall policy thrust) is the defining characteristic of a domestic environmental governance regime.

The strength of the commitment to sustainable development is a moot point. Strategic rhetoric notwithstanding, the present policy constellation is at best akin in its focus to ecological modernization rather than a governance regime with more lofty environmental aspirations. Those who shape it may increasingly, albeit by no means vigorously, seek compatibility between ecological preservation and economic growth, harnessing modern technology in the process, without blatantly subjugating the former to the latter.[154] This is a more balanced approach to the relationship between

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151. *See* ULRICH BRAND ET AL., CONFLICTS IN ENVIRONMENTAL REGULATION AND THE INTERNATIONALIZATION OF THE STATE: CONTESTED TERRAINS 9–52 (2008) (describing the regulation of nature in post-Fordism).

152. *See* Michael Palmer, *Environmental Regulation in the People's Republic of China: The Face of Domestic Law*, 156 CHINA Q. 788, 791–92 (1998) ("The conceptual device for the [Chinese] attitude to environmental protection was the principle of *xietiao fazhan* or 'co-ordinated development,' under which environmental protection is given the same importance as the development of the national economy."). *See also* Ouyang Kang & Meng Xiaokang, *Environmental Protection: The Theory, Technological Policies and Practice in China*, *in* ASIAN DEVELOPMENT AND PUBLIC POLICY 97, 100 (Stuart S. Nagel ed., 1994) ("Since the founding of People's Republic in 1949, the Chinese government has acknowledged the importance of environmental protection and has accordingly formulated a series of related policies, laws and regulations, including the 'comprehensive utilization of industrial rubbish' directive of 1956.").

153. *See* ELIZABETH C. ECONOMY, THE RIVER RUNS BLACK: THE ENVIRONMENTAL CHALLENGE TO CHINA'S FUTURE 95–182 (2010) (describing China's environmental problems and the consequent measures that its leaders have since implemented) ; GEOFFREY MURRAY & IAN G. COOK, GREEN CHINA: SEEKING ECOLOGICAL ALTERNATIVES 178–224 (2002) (describing China's recent environmental policies) .

154. *See* Peter Ho, *Trajectories for Greening in China: Theory and Practice*, 37 DEV. & CHANGE 3, 3–28 (2006) ("China is showing clear signs of greening as new institutions and regulations are created, environmental awareness increases and green technologies are implemented."); Arthur P.J. Mol, *Equipment and Modernity in Transitional China: Frontiers of Ecological Modernization*, 37 DEV. & CHANGE 29, 29–56 (2006)

society and nature than that witnessed during the 1949 to 1978 revolutionary era and the early phases of the post-1978 reform period, but it does not amount to a solid commitment to sustainable development.

Environmental governance regimes may also be characterized in terms of the regulatory instruments relied upon by those who oversee them.[155] The commonly available classifications may be employed for this purpose. The mechanisms typically highlighted in that context, which are not necessarily mutually exclusive, encompass command-and-control systems, self-regulation, enforced self-regulation, incentive-based strategies, market-harnessing controls, disclosure procedures, direct action, rights and liabilities, and public insurance/compensation schemes.[156]

The regulatory architecture in China has been shifting in this respect. The penchant for command-and-control mechanisms has diminished and more flexible/indirect/versatile systems are being resorted to on a meaningful scale.[157] Again, however, the patterns emerging (or, for that

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("[E]nvironmental reforms in contemporary China can be interpreted as ecological modernization.").

155. *See, e.g.*, IAN BAILEY, NEW ENVIRONMENTAL POLICY INSTRUMENTS IN THE EUROPEAN UNION: POLITICS, ECONOMICS, AND THE IMPLEMENTATION OF THE PACKAGING WASTE DIRECTIVE 7–9 (2003) (introducing the effect of legislative instruments on environmental policies for EU countries); 'NEW' INSTRUMENTS OF ENVIRONMENTAL GOVERNANCE? NATIONAL EXPERIENCES AND PROSPECTS 81 (Andrew Jordan et al. eds., 2003) (examining the support and criticism for use of policy instruments in regulatory reform); NEW INSTRUMENTS FOR ENVIRONMENTAL POLICY IN THE EU 16–17 (Jonathan Golub ed., 1998) (discussing generally the pivotal role of instrument design in environmental governance regimes);

156. *See, e.g.*, ROBERT BALDWIN & MARTIN CAVE, UNDERSTANDING REGULATION: THEORY, STRATEGY, AND PRACTICE 34–62 (1999) (analyzing different regulatory techniques in the form of industrial, economic, and social activities, e.g., commanding, deploying wealth, harnessing markets, control of information, acting directly, and conferring protected rights.); ANTHONY I. OGUS, REGULATION: LEGAL FORM AND REGULATORY THEORY 121–261 (2004) (describing the different forms of social regulation and their application); BRONWEN MORGAN & KAREN YEUNG, AN INTRODUCTION TO LAW AND REGULATION: TEXT AND MATERIALS 79–150 (2007) (focusing the discussion on control mechanisms in the scheme of regulatory reform).

157. *See generally* CHINA'S ENVIRONMENT AND THE CHALLENGE OF SUSTAINABLE DEVELOPMENT (Kristen A. Day ed., 2005) [hereinafter SUSTAINABLE DEVELOPMENT] (discussing the recent changes to China's environmental regulatory scheme and how they have affected "the relationship between development and the environment," focusing specifically on the shift from trading environmental damage for the sake of its own development); ENVIRONMENTAL GOVERNANCE IN CHINA (Neil T. Carter & Arthur P. J. Mol eds., 2007) [hereinafter ENVIRONMENTAL GOVERNANCE] (evaluating the current steps under way to deal with challenges in the area of Chinese environmental policy in light of the accelerated economic development); XIAOYING MA & LEONARD ORTOLANO, ENVIRONMENTAL REGULATION IN CHINA: INSTITUTIONS, ENFORCEMENT, AND COMPLIANCE (2000) (discussing the lack of improvement in environmental quality in the face of actually improving regulatory structure and actual government commitment); Jolene Lin Shuwen, *Assessing the Dragon's Choice: The Use of Market-Based Instruments in Chinese Environmental Policy*, 16 GEO. INT'L ENVTL. L. REV. 617 (2004) (examining the change in

matter, to have emerged) are not marked, at least at this juncture, by a high degree of coherence.[158] It should be acknowledged by those who dissect these patterns that to paint them unambiguously would constitute a challenging task, in all likelihood an impossible one. The corollary is that the subject may be conceptualized tentatively but perhaps not methodically.

Another strategy for addressing this issue centers on the prevalent form of environmental policy implementation. Indeed, it has long been featured in the study of Chinese ecological management, albeit in an intermittent and selective fashion.[159] As soon as the dust began to settle on the revolutionary era and reformist initiatives started to gain credibility, three contrasting public program execution modes, embraced to one degree or another during various periods by environmental planners in the country, were proposed: the bureaucratic-authoritative, campaign-exhortation, and market-exchange types.[160] As the appreciation of the institutional nuances

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China's environmental protection scheme from command-and-control policies to the "market-based instruments" proven successful in the United States).

158. *See generally* ECONOMY, *supra* note 1533 (discussing recent improvements in China with regard to environmental protection: the drive for green technology, activism of the country's citizens, and the government's to create eco-cities throughout the country); MURRAY & COOK, *supra* note 1533 (analyzing, along with their historical, political, economic, and cultural causes, current problems with China's environment and the potential effects that the switch to a market-oriented economy will have on them); Roda Mushkat, *Contextualizing Environmental Human Rights: A Relativist Perspective*, 26 PACE ENVTL. L. REV. 119 (2009) [hereinafter Mushkat, *Contextualizing Environmental Human Rights*] (looking at the possibility of a worldwide environmental governing body and what its existence means to global environmental governance); Roda Mushkat, *Implementing Environmental Law in Transitional Settings: The Chinese Experience*, 18 S. CAL. INTERDISC. L.J. 45 (2008) [hereinafter Mushkat, *Implementing Environmental Law*] (attempting to give more substance to the legal analysis on Chinese ecological governance by providing background into the policy implementation that led that country to where it is today).

159. *See generally* LESTER ROSS, ENVIRONMENTAL POLICY IN CHINA 11–24 (1988) (laying out the framework for three policy implementation types: bureaucratic-authoritative, campaign-exhortation, and market-exchange) [hereinafter ROSS, ENVIRONMENTAL POLICY IN CHINA]; Mushkat, *Implementing Environmental Law*, *supra* note 158, at 75–78 (summarizing Ross's three policy implementation types); Christopher Tracy, *Listening For Sounds of Fallen Trees: The Principles on Forests and Lessons from Germany and China*, 3 DET. J. INT'L L. & PRAC. 469, 489–90 (1994) (citing to Ross's book, but going further and equating an administrative scheme with each policy implementation type: state with bureaucratic-administrative; collectivization with campaign-exhortation; and private with market-exchange).

160. *See* ROSS, ENVIRONMENTAL POLICY IN CHINA, *supra* note 159, at 11–23 (identifying the three "policy implementation type[s]"); Lester Ross, *The Implementation of Environmental Policy in China: A Comparative Perspective*, 15 ADMIN. & SOC'Y 489, 490–91 (1984) [hereinafter Ross, *The Implementation of Environmental Policy in China*] (introducing the "taxonomy of implementation types found in China").

involved developed further, administrative decentralization was added to this analytical set.[161]

Bureaucratic-authoritative implementation is characterized by a substantial measure of centralization, is comprehensive in scope, is driven by the ruling party, features obedience to authoritative commands, and is underpinned by a structure of State/collectively-focused property rights.[162] Execution of ecological strategies via campaign-exhortation is a centralized, uneven, ruling party-orchestrated, normatively-inspired (but coercion is also resorted to in order to secure compliance), and collectively-oriented (verging on self-abnegation) affair.[163] Implementation through market channels follows a decentralized, comprehensive, and materially-incentivized model which, by definition, relegates the ruling party to the policy periphery and derives its vigor from the private ownership of resources.[164]

Administrative decentralization should not be equated with genuine marketization. On several occasions, including the early phases (pre-1994) of the reform era, power has been transferred from the political center in Beijing to the provinces (and other sub-national units) without any meaningful economic restructuring.[165] Even the empowerment of State-

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161. *See* JINGLIAN WU, UNDERSTANDING AND INTERPRETING CHINESE ECONOMIC REFORM 44–57 (2005) (giving background information for the period of "Administrative Decentralization" that occurred from 1958 to 1978) [hereinafter JINGLIAN WU]; Mushkat, *Contextualizing Environmental Human Rights*, *supra* note 158, at 153 (discussing, briefly the fiscal decentralization that occurred during "the early stages of the post-1978 restructuring process"); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 76–77 (concluding that the "tripartite typology" established earlier by Ross is missing a crucial fourth implementation mode: administrative decentralization, a policy structure embraced by Mao himself).

162. *See* ROSS, ENVIRONMENTAL POLICY IN CHINA, *supra* note 159, at 11–15 (outlining the first of the three policy implementation types—bureaucratic-authoritative implementation).

163. *See id.* at 15–20 (describing the second of the three policy implementation types—campaign-exhortation implementation).

164. *See id.* at 20–23 (outlining the final policy implementation type—market-exchange implementation).

165. *See generally* ROSS, ENVIRONMENTAL POLICY IN CHINA, *supra* note 159 (giving general background information on Chinese environmental policy from the 1950s to the late 1980s, and suggesting ways that policy can be tailored in the future to better suit environmental needs); JINGLIAN WU, *supra* note 161, at 43–89 (identifying the three periods of Chinese ecological reform: "Administrative Decentralization (1958 to 1978)"; "Incremental Reform (1979-1993)"; and "[the] Strategy of 'Overall Advance' (1994 to present)"); Mushkat, *Contextualizing Environmental Human Rights*, *supra* note 158, at 156–65 (analyzing the effects of Chinese ecological reforms on the environment itself); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 77 (concluding that "[p]ower has markedly shifted from the center to the periphery, even more so in practice than in theory" in "the Chinese ecological governance architecture"); Ross, *The Implementation of Environmental Policy in China*, *supra* note 160 (analyzing Chinese environmental policy

owned enterprises (SOEs) does not amount to economic decentralization if market channels are not restored and allowed to function autonomously. It has been argued, albeit not conclusively, that market-exchange is the most effective system for implementing ecological strategy in China and that alternative models should be jettisoned.[166]

Policy execution patterns and regulatory instruments are not independent of each other. The movement away from command-and-control techniques in the Chinese context has been associated with a shift toward less bureaucratic/authoritarian forms of environmental policy implementation.[167] Yet a rigidly top-down approach was not the sole strategy execution mechanism even during periods marked by intense revolutionary fervor (when recourse to campaign-exhortation and administrative decentralization was common).[168] By the same token, the

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implementation first in the three policy implementation types, then by its effects on changes in strategy, and concluding that market-based implementation is the most favorable).

166. *See* ROSS, ENVIRONMENTAL POLICY IN CHINA, *supra* note 159, at 184–87 (advocating for a market-exchange approach to deal with environmental policy issues in China); JINGLIAN WU, *supra* note 161, at 415–16 (arguing that a market-enhancing view is favorable over the market-friendly or developmental-state views); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 75–78 (discussing generally the application of the three different models for policy implementation); Ross, *The Implementation of Environmental Policy in China*, *supra* note 160, at 508–12 (arguing that while bureaucratic and campaign based implementation types are more politically acceptable, the market-exchange implementation model is more flexible, efficient, and innovative, and has a substantially wider application in practice).

167. *See* ECONOMY, *supra* note 153, at 135–75 (discussing the new political environment in China's environmental policy landscape and introducing three influential activists and the specific changes that they have made); KENNETH LIEBERTHAL, GOVERNING CHINA: FROM REVOLUTION THROUGH REFORM 279–88 (2d ed. 2004) [hereinafter LIEBERTHAL, GOVERNING CHINA] (discussing Chinese environmental reform after 1978 and the current state of environmental policy); MURRAY & COOK, *supra* note 153, at 210–24 (predicting a number of future possibilities for China's environmental policy, ranging from "Rosy" to "Doomsday"); BARRY NAUGHTON, THE CHINESE ECONOMY: TRANSITIONS AND GROWTH 502–03 (2007) (discussing the increased incidence of civilian input in the environmental policy decision-making process, signifying a shift away from an authoritarian policy decision-making process); Mushkat, *Contextualizing Human Rights*, *supra* note 158, at 66 (quoting a survey of policy shifts that show a change from "command and control methods to one primarily relying . . . on market-harnessing techniques"); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 20–23 (arguing for economic and governmental decentralization as a solution for policy implementation issues).

168. *See* LIEBERTHAL, GOVERNING CHINA, *supra* note 167, at 282–84 (discussing China's "move away from centralized planning" and its positive effects on environmental policy). *See generally* ECONOMY, *supra* note 153, at 91–175 (discussing the economic impact of Chinese environmental issues along with proposals for how China should proceed in developing a sound, effective environmental policy regime); MURRAY & COOK, *supra* note 153, at 178–224 (analyzing a variety of Chinese environmental policies and how they were implemented); NAUGHTON, *supra* note 167 (giving a recent history of China's economy, focusing specifically on how it has affected the environment, and proposing alternatives that will better both China's economy and the environment); Mushkat,

post-1978 configuration has been a hybrid and this is likely to remain the case for the foreseeable future.[169]

A new analytical tool for capturing the essence of environmental governance regimes is the concept of regulatory style. It has been applied intensively in the European context where the tension between centripetal and centrifugal forces has not abated despite the presence of substantial unifying impulses.[170] In this politico-geographic domain:

> "[e]ach nation has a distinct regulatory style, which is a function of its more general policy style, and which causes the environment to be regulated very much in the same way as other areas of corporate conduct. . . . It can sometimes be more difficult to define a common EU policy given such differences in regulatory traditions, than it is to reconcile different opinions about the level of environmental protection."[171]

The notion of regulatory style has been decomposed along two dimensions. First, it has been assumed that a government's approach to problem solving may range from reactive (e.g., United Kingdom) to anticipatory (e.g.,

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Contextualizing Human Rights, *supra* note 158 (discussing international proposals for environmental law reform, with detail paid to China for a specific example of how Northern and Western reformist schemes can be particularly beneficial); Mushkat, *Implementing Environmental Law*, *supra* note 158 (concluding that failed execution has led to failures in the Chinese environmental governance scheme, but suggesting that certain reforms have and will continue to be successful in improving Chinese environmental regulation).

169. *See* ECONOMY, *supra* note 153, at 95–133 (discussing the different ways that China is changing its environmental policies in its various branches of government, ranging from system-wide changes to specific mid-level changes in the legal system, Environmental Protection Bureaus, and the judiciary); LIEBERTHAL, GOVERNING CHINA, *supra* note 167, at 282–84 (summarizing the different post-1978 reforms and their positive and negative effects on the environment); MURRAY & COOK, *supra* note 153, at 178–224 (evaluating the more recent state of environmental policy in China and looking at the different modern reforms that have been made and their effects on the overall policy and environment as a whole); NAUGHTON, *supra* note 167, at 487–503 (discussing the intersection between the Chinese economic changes over the last 30 years and air and water pollution levels); Mushkat, *Contextualizing Human Rights*, *supra* note 158, at 160–65 (evaluating recent economic and political changes in China's economy and the corresponding increases in ecological problems); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 63–74 (discussing the period after 1978 and the variety of changes that have been implemented in China's environmental legal regime).

170. *See* Mikael Skou Andersen & Duncan Liefferink, *Introduction: The Impact of Pioneers on EU Environmental Policy*, *in* EUROPEAN ENVIRONMENTAL POLICY: THE PIONEERS 1, 3–7 (Mikael Skou Andersen & Duncan Liefferink eds., 1997) (identifying "'[e]xamples' and 'models'" for environmental policy, including the United States, Japan, and other EU countries).

171. *Id.* at 6.

Germany).[172] Second, it has been posited that a government's relationship with other core non-governmental players may vary between consensual (e.g., United Kingdom) and impositional (e.g., Germany, other than in areas where corporatist structures facilitate input from employers and unions).[173] It has thus been poignantly noted that:

> "British legislation must appear to our fellow Europeans to be pragmatic, piecemeal, *ad hoc*, the product of expedience, not principle: a policy to be described as a non-policy. Yet British policy has deep roots in history. It is the product of nearly two centuries of evolution in which impracticable ideas have been eliminated, Utopian aspirations have been discarded, and the policies which have survived have been proved to work."[174]

While fundamentally appealing, the concept of regulatory style has posed considerable practical challenges because of dynamic shifts and sectoral differences (e.g., "[b]road generalizations about a national style of policy-making tend to obscure historical changes over time, variations between fields of policy and the differences in the roles of various parties").[175] This has prompted some researchers to seek more specific patterns within well-defined areas of government activity (but ones that are not necessarily stable, which is analytically less problematic than sectoral differences). In the European context, the focus has thus moved from universal categories toward concretely expressed environmental standard-setting approaches.[176]

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172. *See generally* POLICY STYLES IN WESTERN EUROPE (Jeremy Richardson ed., 1982) (discussing, in various articles, environmental policies in Western European countries, including Germany, Norway, Great Britain, France, Sweden, and the Netherlands).

173. *Id.*

174. ERIC ASHBY & MARY ANDERSON, THE POLITICS OF CLEAN AIR 152–53 (1981). *See also* DAVID VOGEL, NATIONAL STYLES OF REGULATION: ENVIRONMENTAL POLICY IN GREAT BRITAIN AND THE UNITED STATES 269–76 (1986) (discussing historical British policy style, which is characterized by five elements: "sectorization, clientelism, consultation/negotiation, the institutionalization of compromise, and the development of exchange relationships").

175. KLAUS VON BEYME, *Policy-Making in the Federal Republic of Germany: A Systematic Introduction*, *in* POLICY AND POLITICS IN THE FEDERAL REPUBLIC OF GERMANY 1, 18 (Klaus von Beyme & Manfred G. Schmidt eds., Eileen Martin trans., 1985).

176. *See generally* TANJA A. BÖRZEL, ENVIRONMENTAL LEADERS AND LAGGARDS IN EUROPE: WHY THERE IS (NOT) A 'SOUTHERN PROBLEM' (2003) (comparing environmental policy in Germany, seemingly the EU leader, with Spain, one of the problem countries with respect to compliance with EU environmental laws); PETER J. MAY ET AL., ENVIRONMENTAL MANAGEMENT AND GOVERNANCE: INTERGOVERNMENTAL APPROACHES TO HAZARDS AND SUSTAINABILITY (1996) (discussing policy changes in the United States, New Zealand, and Australia and how they have affected the environment and governmental landscape surrounding them, specifically as they relate to human interactions and governmental roles);

The broadly based typology may not be entirely irrelevant for China in that its ecological strategies may have not yet acquired the degree of specificity observed elsewhere. The policy framework is evolving in a more anticipatory and consensual (or, alternatively, less reactive and impositional) direction. Yet, the picture is complex and fluid.[177] The question arises again to what extent methodical (different from tentative) generalizations are possible for vast countries undergoing rapid socio-economic transformation in an uneven fashion and whether any single concept (such as regulatory style) may adequately reflect the emerging patterns.

A dimension of environmental governance regimes which has attracted virtually no scholarly attention, but which has been a salient feature of the Chinese domestic scene, is the degree of outward orientation. During much of the revolutionary era the ecological management system, if any, was self-contained.[178] It was intermittently and selectively opened to outside influences but seldom other than in an ad hoc manner and on a modest scale.[179] The situation has changed materially, albeit gradually, following the adoption of reformist strategies emphatically favoring foreign investment and foreign trade.[180] A policy of ecological

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WURZEL, *supra* note 55 (comparing British and German environmental policy since 1972, with specific references to case studies on water and air pollution regulation).

177. *See* ECONOMY, *supra* note 153, at 95–105 (outlining changes in the environmental policy framework over the last 30 years within the specific context of China's participation in a number of international environmental conferences); LIEBERTHAL, GOVERNING CHINA, *supra* note 167, at 290–91 (concluding that China's environmental reforms can, over time, lead to a more efficient economy with substantially less environmental impact with the introduction of environmental education programs but that the current reforms will lead to *increased* environmental impact throughout the 1990s and early 2000s); BENJAMIN VAN ROOIJ, REGULATING LAND AND POLLUTION IN CHINA: LAWMAKING, COMPLIANCE, AND ENFORCEMENT 45–49 (2006) (discussing the process by which China makes laws: "Top-Down, From Abstract and Weak to Specific and Strict"); Carlos Wing-Hung Lo et al., *Changes in Enforcement Styles Among Environmental Enforcement Officials in China*, 41 ENV'T & PLAN. A 2706–23 (2009) (examining the ways that environmental enforcement officials changed styles from 2000 to 2006); Arthur P.J. Mol & Neil T. Carter, *China's Environmental Governance in Transition*, *in* ENVIRONMENTAL GOVERNANCE IN CHINA (Neil T. Carter & Arthur P. J. Mol eds., 2007) (noting that China's environmental policy has led to "greater decentrali[z]ation and flexibility whilst moving away from a rigid, hierarchical, command-and-control system of environmental governance"); Joshua Su-Ya Wu, *The State of China's Environmental Governance After the 17th Party Congress*, 26 EAST ASIA 265–84 (2009) (discussing changes proposed at the 17th Party Congress and whether these changes actually address problems with Chinese environmental governance).

178. *See* ECONOMY, *supra* note 153, at 184–86 (marking 1972 as the year that China first entered the "arena of international environmental politics," suggesting that Chinese policy had been largely internalized before).

179. *See id.*, at 177–219 (discussing the extent to which China allows non-governmental influences on its environmental policy and practice).

180. *See id*. at 275–81 (establishing potential environmental benefits to the addition of, among other things, foreign trade and investment to China's economy).

cooperation/engagement has been pursued with reasonable determination and there has been a general willingness, where appropriate, to draw lessons from the experience of other countries.[181] This may not qualify as the defining characteristic of the governance regime, yet it is a notable one, an argument that may possibly be extended to all post-socialist (or better still, previously autarkic) societies.

The implication is that the descriptive propositions regarding the domestic institutional arrangements designed to promote environmental protection may be overly tight and not sufficiently comprehensive. China is witnessing structural change by embracing—selectively, in an incremental fashion, and not uniformly—ecological modernization, indirect regulatory instruments, flexible and transparent forms of policy implementation, and sophisticated and progressive regulatory styles. Nevertheless, these measures cannot be conceptualized in overly specific terms, must to be integrated, and need to be augmented by incorporating additional factors such as outward orientation. The notion of a domestic environmental governance regime is viable but should be handled carefully.

The development (formation and transformation) of the Chinese ecological management system may also provide a fertile ground for generating new ideas with respect to the evolution of domestic environmental governance regimes. This is the world's most populous country, economically resurgent yet ecologically distressed.[182] More importantly, it is an industrializing nation (rather than an industrialized one), it has not adopted democracy/ polyarchy, it has not moved decisively toward the rule of law (merely abandoning the rule of man in favor of a rule by law), it is a post-socialist society without qualifying as a capitalist one, and it has a unique institutional setup.[183] This is a fundamentally different configuration from those encountered in countries typically featured in socio-legal studies in that field of inquiry.[184]

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181. *See generally id.* at 195–213 (discussing the impact that other countries, multinational corporations, and international organizations have had on China's policy of international cooperation, and mentioning specifically the United States, the United Nations, the World Bank, General Motors, General Electric, and Dow Chemical Company, among others).

182. *See Country and Areas Ranked by Population: 2010*, U.S. CENSUS BUREAU, INTERNATIONAL DATA BASE (2010), *available at* http://sasweb.ssd.census.gov/idb/ranks.html (finding that China's population is 1.33 billion, over four times higher than the United States (third largest country in the world, by population) and over 100 million people more than the second largest country in the world, India)

183. *See* Miron Mushkat & Roda Mushkat, *Economic Growth, Democracy, the Rule of Law, and China's Future*, 29 FORDHAM INT'L L.J. 229, 245–51 (2005) (identifying the significant evolution that has occurred within China's economy).

184. *See, e.g.*, BÖRZEL, *supra* note 177, at 56–58 (comparing environmental policy in two largely socialist countries: Germany, considered an environmental leader in Europe, and Spain, considered an "environmental laggard"); SCHREURS, *supra* note 55, at 241–61

Perhaps the most telling observation is that the system appears to be predominantly exogenously driven, with endogenous factors playing a distinctly modest role. This diminishes the lure of institutionalist explanations that focus on the impact of regime-specific principles/norms/rules/procedures on policy outputs (on the other hand, institutional theories that highlight the influence of socio-organizational settings may be of even greater relevance than elsewhere). The underlying reason lies in the fact that the normative and structural underpinnings of the domestic environmental governance regime are exceptionally fragile. Laws tend to be abstract, ambiguous, impractical, incoherent, ineffective, and out of sync with rapidly evolving socio-economic realities.[185] The supporting organizational edifice (notably, the State Environmental Protection Administration/SEPA, the Environmental Protection Bureaus/EPBs, and the judicial system) is heavily fragmented and seriously deprived of strategic leverage.[186]

In a post-socialist milieu, force-of ideas explanations, anchored in cognitivist rather than institutionalist models, merit closer attention than in Western democracies.[187] Central planning, coupled with direct regulation and top-down implementation, was imported from the Soviet Union

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(comparing environmental policy in the U.S., Japan, and Germany); VOGEL, *supra* note 174, at 146–92 (comparing environmental policy in the U.S. with that of Great Britain); WURZEL, *supra* note 55, at 4–18 (comparing German and British environmental policy styles); Jeremy Richardson, Gunnel Gustafsson, & Grant Jordan, *The Concept of Policy Style*, *in* POLICY STYLES IN WESTERN EUROPE 1, 1–14 (Jeremy Richardson, ed., 1982) (discussing environmental policy in a number of European countries, including Germany, Norway, Great Britain, France, Sweden, and the Netherlands).

185. *See* Mushkat, *Contextualizing Environmental Human Rights*, *supra* note 158, at 162 (discussing the flaws in Chinese environmental law making, specifically calling it "is a laborious process and the end product leaves much to be desired in terms of coherence"); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 68 (characterizing Chinese laws as "overly ambiguous, non-transparent, provisional, and sermon-like").

186. *See* Mushkat, *Contextualizing Environmental Human Rights*, *supra* note 158, at 161–64 (analyzing the organizational structure of Chinese governmental elements that play an important role in environmental policy-making and enforcement); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 64–66 (outlining the general responsibilities of the individual governmental agencies and their impact on the greater organizational framework).

187. *See* JINGLIAN WU, *supra* note 161, at 57–89 (discussing the reforms that took place following the socialist regime, beginning with the incremental reforms from 1979 to 1993 through the "Overall Advance" strategy from 1994 to the present). For background information about the period prior to the change from socialism, see LIEBERTHAL, GOVERNING CHINA, *supra* note 167, at 84–122, which summarizes the "Maoist Era"—the era that led up to the change from Communism to socialism, and NAUGHTON, *supra* note 167, at 55–83, which discusses the Socialist era from 1949–1978, specifically the changes that led to the regime change and how they affected China's economy.

following the Communist Revolution.[188] Bottom-up mobilization of effort, via a one-off mixture of relentless moral suasion and intense psychological pressure, was a natural extension of revolutionary practices relied upon by a peasant movement in its struggle with Nationalist forces during the Civil War that erupted in 1927.[189] Administrative decentralization, featuring a transfer of power from the political center to the regional/ industrial periphery (provinces and State-owned enterprises/SOEs) was also influenced by foreign communist (Soviet and East European) experience/concepts.[190]

By the same token, exogenously-determined, economy-wide, and idea-inspired restructuring during the reform era, initially selective and slow-paced (1979–1993), and subsequently wide-ranging and fast-moving (1994–present), has been a key factor shaping ecological initiatives.[191] The

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188. *See* LIEBERTHAL, GOVERNING CHINA, *supra* note 167, at 53–56 (discussing the ways in which the Chinese Communist Party borrowed many of its policies and practices from the Soviet Union); NAUGHTON, *supra* note 167, at 59–62 (stating "China adopted the 'command economy' system from the Soviet Union," and setting out the system's fundamental characteristics).

189. *See* LIEBERTHAL, GOVERNING CHINA, *supra* note 167, at 43–47 (discussing the ways in which the Chinese lifestyle and economy was forced to adapt following the 1927 Civil War); NAUGHTON, *supra* note 167, at 43–47 (discussing the residual effects of the 1927 Civil War).

190. *See* NAUGHTON, *supra* note 167, at 55–62 (describing the functions and strategy of a command economy, which China adopted from the Soviet Union); JINGLIAN WU, *supra* note 161, at 43–57 (identifying 1958 to 1978 as the period in which administrative decentralization was integral in the transferring power from the central government to lower level governments).

191. *See* JINGLINAN WU, *supra* note 161, at 57–90 (discussing the reforms during the incremental period from 1979 to 1993 and the following period from 1994 to the present, where the emphasis was placed on overall reform with a focus on "urban areas and defin[ing] . . . a socialist commodity economy"). *See generally* ENVIRONMENTAL GOVERNANCE, *supra* note 157 (giving examples and history of recent Chinese environmental governance, the changes that have been made, and how these changes have affected the environment); LIEBERTHAL, GOVERNING CHINA, *supra* note 167, at 273–88 (discussing the problems existing with China's environment originating before 1978 and the reforms that have been put in place since then); MA & ORTOLANO, *supra* note 157 (evaluating the ways that China has dealt with its serious environmental problems: "a vast net-work of environmental protection agencies[,] . . . dozens of environmental laws and . . . eight major pollution control programs"); MURRAY & COOK, *supra* note 153 (discussing China's environmental problems with respect to industrialization, urbanization, and the change from centralized to a market-oriented economy); NAUGHTON, *supra* note 167, at 487–504 (identifying a variety of environmental problems, ranging from air and water pollution to the sustainability of forests and water supply); SUSTAINABLE DEVELOPMENT, *supra* note 157 (identifying China as a crucial player in the need to address outstanding environmental issues, specifically relating to regulation and governance); Lin Shuwen, *supra* note 157 (discussing the impact of market-based instruments since the 1972 Stockholm United Nations Conference on the Human Environment); Mushkat, *Contextualizing Environmental Human Rights*, *supra* note 158 (discussing global environmental governance, with specific examples from China's government and economy); Mushkat, *Implementing Environmental*

shift toward indirect regulation, market-based implementation, anticipatory and consensual regulatory style, and international cooperation/engagement is largely attributable to such macro-level, seismic changes reflecting the jettisoning (in a stepwise fashion) of one overarching idea (a blend of central planning and collective property rights) in favor of another (a combination of economic decentralization/marketization and private property rights).[192]

Not all development strategies are alike. Some industrializing nations have opted for balanced expansion. By contrast, China's reform drive has been loosely rooted in the idea of unbalanced growth, whereby resources are channeled more heavily toward certain segments of the economy than others.[193] The asymmetry has also manifested itself in the delicate relationship between the economy and the ecosystem, with the former consistently looming larger on the policy agenda than the latter. This has materially impeded the development of the domestic environmental governance regime during the revolutionary and reform eras, accounting for both its inadequate nature and constrained evolution.[194]

An industrializing nation is, by definition, one whose modernization is incomplete. In such a setting, traditional attitudes persist. Cognitivists may highlight the relevance for ecological progress of the importance accorded to social connections/*guanxi* (e.g., between regulator and regulatee), the pursuit of social harmony, the determination to avoid social conflict, the propensity toward compromise, and the preoccupation with saving face.[195]

Law, *supra* note 158 (discussing China's implementation of new environmental regulations in the post-Mao era).

192. *See generally* ECONOMY, *supra* note 153 (discussing the shift from a centralized to a market-based, decentralized economy, specifically relating to the environment and ways to improve on the new system and the environment as a whole); MA & ORTOLANO, *supra* note 157 (addressing the significant environmental destruction that resulted from China's market reforms and how the Chinese government is dealing with these problems through regulation); MURRAY & COOK, *supra* note 153 (analyzing specific environmental issues and how the regulatory environment surrounding them has changed and interacted with the introduction of market forces into the regime).

193. *See* Miron Mushkat & Roda Mushkat, *The Political Economy of Chinese "Federalism": New Analytical Directions*, 38 GLOBAL ECON. REV. 13, 14 (2009) (addressing the "delicate balancing act" between the needs of the country and the "high degree of concentrate[ed] resources" at the center of the government).

194. *See id.* at 17 (discussing the ways in which decentralization has affected the revolutionary era and the reform era that followed, specifically that regional development strategies have led to significant spatial disparities); *see also* ECONOMY, *supra* note 153, at 62–64 (discussing the competing interests of economic advancement and success and the subsequent environmental effects that such economic changes have had on China's environment); MURRAY & COOK, *supra* note 153, at 54–70 (discussing the effects that overproduction and production without any consideration for environmental impact can have on China's environment).

195. *See* MA & ORTOLANO, *supra* note 157, at 82–89 (discussing the relationship between social norms in China and the ecological process); BARBARA J. SINKULE &

They may also draw attention to the role played by cosmic resonance theory and neo-Confucianism.[196] The precise effect of these lingering cultural influences is not easy to pinpoint, but it is commonly believed that they hinder the process of institutionalization.[197]

Given the pervasive fragility and fragmentation of the Chinese organizational infrastructure, in the public sector in general[198] and in the

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LEONARD ORTOLANO, IMPLEMENTING ENVIRONMENTAL POLICY IN CHINA 12–20 (1995) (discussing the interaction between environmental policy implementation and social norms in place in China); Peter Hills & C.S. Man, *Environmental Regulation and the Industrial Sector in China: The Role of Informal Relationships in Policy Implementation*, 7 BUS. STRATEGY & THE ENV'T 60–61 (1998) (identifying Chinese social concepts that influence the environmental implementation process).

196. *See* Robert P. Weller & Peter K. Bol, *From Heaven-and-Earth to Nature: Chinese Concepts of the Environment and Their Influence on Policy Implementation*, *in* ENERGIZING CHINA: RECONCILING ENVIRONMENTAL PROTECTION AND ECONOMIC GROWTH 473, 473–83 (Michael B. McElroy et al. eds., 1998) (describing the concepts of cosmic resonance theory and neo-Confucianism).

197. *See id.* at 495–96 (offering two reasons why the two concepts are unsuccessful: first, these views "were developed to address the dominant concerns of political culture" and did not address environmental concerns; second, practices that emerged were used more for personal and political gain, rather than to positively impact environmental policy); *see also* MA & ORTOLANO, *supra* note 157, at 77–93, 161–69 (analyzing the ways that social behavior affects environmental regulatory acceptance, then comparing these social behavioral responses to similar situations in the United States); SINKULE & ORTOLANO, *supra* note 196, at 12–20, 46–50, 188–202 (discussing the social structure of Chinese organizations, how this social structure plays into policy implementation, and three programs that were locally designed to assist implementation); Hills & Man, *supra* note 196, at 59–61 (discussing the ways that environmental policy implementation interacts with four major Chinese social and industrial concepts: "units (*danwei*), systems (*xitong*), 'too many mothers in law' (*popo duo*), and independent kingdoms (*duli wangguo*)").

198. *See generally* BUREAUCRACY, POLITICS, AND DECISION MAKING IN POST-MAO CHINA (Kenneth G. Lieberthal & David M. Lampton eds., 1992) (outlining three major areas in the Chinese public regulatory environment: national issues, the center (referring to the governmental structure and bureacracy), and bureaucratic clusters (referring more to individual governmental agencies and their interaction with the larger central government); KENNETH G. LIEBERTHAL & MICHEL OKSENBERG, BUREAUCRATIC POLITICS AND CHINESE ENERGY DEVELOPMENT (1986) [hereinafter LIEBERTHAL & OKSENBERG, BUREAUCRATIC POLITICS] (outlining a study done in the early 1980s to determine the inner workings of the Chinese bureaucratic system); KENNETH LIEBERTHAL & MICHEL OKSENBERG, POLICYMAKING IN CHINA: LEADERS, STRUCTURES, AND PROCESSES (1988) [hereinafter LIEBERTHAL & OKSENBERG, POLICYMAKING IN CHINA] (expanding their earlier study, with the following purpose: "to illuminate how the bureaucratic structure of the state, policy processes, and outcomes are interrelated in contemporary China"); POLICY IMPLEMENTATION IN POST-MAO CHINA (David M. Lampton ed., 1987) (discussing and identifying the different policy types in China: planning and economic, resource, rural sector, and education and science); David M. Lampton, *Chinese Politics: The Bargaining Treadmill*, 23 ISSUES & STUD. 11 (1987) (concluding that the Chinese political system is one of bargaining, rather than a command system).

environmental domain in particular,[199] the models typically invoked by institutionalists to explain ecological agenda setting and transformation (and thus the development of governance regimes) may have gaps. Such models fall into three general categories: pluralist, elitist, and sub-governmental.[200] The first of these analytical constructs is based on theories of American democracy formulated approximately half a century ago.[201] In this somewhat romanticized view of a polyarchical form of political organization, power flows from the grassroots in a bottom-up fashion.[202]

By contrast, proponents of the elitist, or hierarchical, theory of agenda setting and transformation argue that power is concentrated in the hands of the few.[203] Political elites wield authority over a multitude lacking ready access to the corridors of power.[204] The authority structure resembles a

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199. *See generally* ECONOMY, *supra* note 153 (discussing the Chinese political landscape in more precise terms, dealing specifically with the environment and how it will be affected in the future); GØRILD HEGGELUND, ENVIRONMENT AND RESETTLEMENT POLITICS IN CHINA: THE THREE GORGES PROJECT (2004) (looking into one of the more significant events in Chinese ecological history: The Three Gorges Dam, a controversial dam constructed on the Yangtze River); MA & ORTOLANO, *supra* note 157 (discussing the state of Chinese environmental regulation); MURRAY & COOK, *supra* note 153 (giving a historical overview of China's environmental problems, then discussing how politics and market forces have shaped the state of environmental governance today); SINKULE & ORTOLANO, *supra* note 196 (discussing the methods available for environmental policy implementation in China); Kenneth Lieberthal, *China's Governing System and its Impact on Environmental Policy Implementation*, *in* CHINA ENVIRONMENT SERIES (1997) (discussing the challenges facing the Chinese government with relation to environmental awareness and its interactions with regulation and enforcement of environmental laws); Mushkat, *Contextualizing Environmental Human Rights*, *supra* note 158 (discussing the scale of global environmental governance, using China as its main example, and giving suggestions for how to effectively proceed into the future); Mushkat, *Implementing Environmental Law*, *supra* note 158 (outlining the history and current state of Chinese environmental law implementation).

200. *See infra* notes 202–08 and accompanying text (discussing these three categories).

201. *See generally* DOUGLASS CATER, POWER IN WASHINGTON: A CRITICAL LOOK AT TODAY'S STRUGGLE IN THE NATION'S CAPITAL (1964) (outlining the structure of the United States government as it appeared in the mid-1960s); ROBERT A. DAHL, WHO GOVERNS? DEMOCRACY AND POWER IN AN AMERICAN CITY (1961) (analyzing the United States governmental system using a case study done in New Haven, Connecticut for specific examples); DAVID B. TRUMAN, THE GOVERNMENTAL PROCESS: POLITICAL INTERESTS AND PUBLIC OPINION (1951) (giving an in-depth outline of the American governmental process, specifically how groups control the majority of aspects of this system).

202. *See generally* DAHL, *supra* note 202 (outlining city-level government by looking at a case study in New Haven, Connecticut); TRUMAN, *supra* note 202 (analyzing the role of group politics in the American governmental system).

203. *See* THOMAS R. DYE & L. HARMON ZIEGLER, THE IRONY OF DEMOCRACY: AN UNCOMMON INTRODUCTION TO AMERICAN POLITICS 1 (1981) ("Elites, not masses, govern America.").

204. *See generally id.* (discussing the elitist model and how the elite class controls the political system of the United States).

pyramid, with power flowing from the top to the bottom.[205] The sub-governmental model departs marginally from this pattern by converting the rigid pyramid into an iron triangle consisting of political elites, their bureaucratic counterparts, special interests, and professional advisors/experts.[206] The ruling coalition is normally stable and closed to outsiders, but more flexible formulations are available.[207]
Elements of those three paradigms pervade the literature on environmental agenda setting and transformation, although the pure elitist construct is currently seldom resorted to by researchers who explore democratic processes (the overwhelming majority in this field).[208]

However, in light of the institutional atrophy and disarray witnessed in China, it may be more appropriate to adopt the garbage can model put forth by some organizational theorists.[209] According to them, institutional choices are often made in a chaotic fashion in a milieu akin to organized anarchy.[210] This renders policy adaptation an uncomfortably unfocused and

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205. *See generally id.* (outlining, in detail, the American political system, with particular emphasis on control by a small group of elites, signaling a clear top-down structure).

206. *See generally* CATER, *supra* note 202 (analyzing who controls the U.S. government in light of the massive expansion of the government that occurred from the beginning of the 20th century through the years following World War II); J. LEIPER FREEMAN, THE POLITICAL PROCESS: EXECUTIVE BUREAU-LEGISLATIVE COMMITTEE RELATIONS (1965) (discussing the relationships within the U.S. government system, including between the three branches, the political parties, and individual agencies).

207. *See generally* POLICY CHANGE AND LEARNING: AN ADVOCACY COALITION APPROACH (Paul A. Sabatier & Hank C. Jenkins-Smith eds., 1993) (discussing "advocacy coalitions" in a variety of contexts, including an overall framework and a number of case studies in North America).

208. *See, e.g.*, FIORINO, *supra* note 55, at 22–59 (discussing the American model of ecological agenda setting, which involves mid-level sub-governmental agencies such as the Environmental Protection Agency that govern much of U.S. environmental policy); GOMAA, *supra* note 55, at 33–34 (concluding that Egypt's environmental agenda is dictated by a small number of interested donor agencies, who by showing interest in contributing funds to the government, convinced the Prime Minister to address these issues); SCHREURS, *supra* note 55, at 241 (comparing Germany, whose approach to environmental protection "could be called the green social welfare state's approach," with the U.S., where market-based mechanisms and cost-benefit analysis determine "when environmental protection should take precedence," and Japan, which falls somewhere in between the two); WEALE ET AL., *supra* note 55, at 115 (concluding that the European policy process is largely pluralist in nature, with a wide variety of sources lending input and support); WURZEL, *supra* note 55, at 17–18 (characterizing German and British policy styles as favoring consensus and consultation, with German policy being slightly more rigid because it gives a more important role to the state than Britain does).

209 . *See* JAMES G. MARCH & JOHAN P. OLSEN, AMBIGUITY AND CHOICE IN ORGANIZATIONS 24–37 (1976) (outlining the basics of the "garbage can" process of organizational theory, which exhibits persistent difficulties in resolving problems).

210. *Id*.

painfully slow affair.[211] There is reason to believe that Chinese decision making on the ecological front may display such characteristics.[212]

A strategically loose and poorly integrated structure offers ample scope for building autonomous power centers and, consequently, inter-party bargaining.[213] That is consistent with institutionalist propositions which accord to negotiations a prominent role in complex organizational processes.[214] Nevertheless, China may provide only partial reinforcement in this respect because evidence of cooperation/integrative bargaining is relatively modest, the implication being that institutionalist models of organizational negotiations may display an overly optimistic/positive orientation.[215] Chinese-style environmental bargaining (or regime development) involves widespread diversion of resources, deflection of policy goals, dilemmas of administration (stemming from resistance to explicit efforts to control behavior administratively), and dissipation of energies.[216]

Institutionalists duly acknowledge the importance of leadership in dynamic ecological management, but place strong emphasis on organized variants.[217] The evolution of China's amorphous and fractured environmental governance regime may be more influenced by individually-inspired initiatives.[218] For example, during the revolutionary era and early reform period a very small team of key players (the petroleum group) had virtually single-handedly shaped energy strategy in the country.[219] Perhaps

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211. *Id.* at 32–37; *see also* JOHN W. KINGDOM, AGENDAS, ALTERNATIVES, AND PUBLIC POLICIES 84–89 (1984) (noting that the fluid structure of the garbage can model is akin to organized anarchy).

212. *See* Mushkat, *Contextualizing Environmental Human Rights*, *supra* note 158, at 162–175 (analyzing the reasons for Chinese bureaucratic incoherence on environmental affairs); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 66–74 (highlighting poor observance of well-designed Chinese environmental laws).

213. *See* MARCH & OLSEN, *supra* note 210, at 82–133 (describing the function of bargaining in decision-making among several models of choice).

214. *See* YOUNG, INTERNATIONAL GOVERNANCE, supra note 21, at 81–116 (1994) (examining institutional bargaining in an international setting).

215. *See* SINKULE & ORTOLANO, *supra* note 196, at 27–35, 188–202 (stating that negotiations and bargaining, which form the core of implementing Chinese environmental policy, are not collaborative and are often affected by interagency "games").

216. *See id.* at 46–50, 188–202 (analyzing Chinese environmental and bureaucratic politics).

217. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note21, at 114–15, 152–60 (finding that leadership is necessary in international negotiations but finding that effectiveness is determined by certain variables).

218. *See* LIEBERTHAL & OKSENBERG, POLICYMAKING IN CHINA, *supra* note 199, at 169–268 (charting the elite hierarchy involved in decision-making).

219. *See* LIEBERTHAL & OKSENBERG, BUREAUCRATIC POLITICS, *supra* note 198199, at 151–248 (narrating China's initial involvement in petroleum production through the lens of the elites in the Chinese petroleum industry); LIEBERTHAL & OKSENBERG, POLICYMAKING IN

more tellingly, one irrepressible individual (a policy entrepreneur?), Qu Geping—the first chief administrator of the National Environmental Protection Bureau (NEPB) – had been at the forefront of systematic efforts to modernize the embryonic institutional machinery erected to arrest ecological degradation.[220]

Traditional-style utilitarianism is thought to be inapplicable by institutionalists in intricate and diffuse organizational settings.[221] This narrowly-focused form of analytical reasoning however should not be readily discarded. The Chinese environmental arena is crowded with players (determined utility-maximizers) who vigorously pursue their own interests to the detriment of the common good.[222] This manifests itself throughout the politico-bureaucratic pyramid, but particularly at the sub-national level, where the prevailing incentive structure encourages the formation of coalitions of local government officials and entrepreneurs capable of stymieing progress in the ecological domain.[223]

B. Looking Outward

China's participation in the development of international environmental governance regimes has been explored selectively rather than comprehensively. Moreover, Chinese involvement in some cases has been marginal, in the sense of being confined to joining an existing arrangement, as distinct from tangibly contributing to the design/redesign and attempts to forge a broad consensus. It is nevertheless possible to derive a number of useful insights on the basis of this limited and partly relevant information/experience because it is not insignificant and due to the fact that certain recurrent patterns may be observed.

One source of pertinent information is a series of events relating to the United Nations Framework Convention on Climate Change (FCCC

CHINA, *supra* note 199, at 169–268 (charting the rise in influence of Chinese petroleum policy makers from the 1950s to 1980s).

220. *See* ECONOMY, *supra* note 153, at 100–01 (recounting Qu Geping's efforts on the environmental protection front).

221. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 21, at 114–15 (pointing out the deficiencies of the utilitarian perspective).

222. *See* Mushkat, *Implementing Environmental Law*, *supra* note 158, at 87–91 (observing the competition between governmental players in Chinese environmental regulation).

223. *See* Kenneth G. Lieberthal, *China's Governing System and its Impact on the Environment* 1 CHINA ENVTL. SERIES 3, 3–6 (1997) (detailing the incentive structure that leads to collaboration between local government officials and entrepreneurs in suppressing observance of environmental regulations); Mushkat, *Contextualizing Environmental Human Rights*, *supra* note 158, at 161–65 (observing the deficiencies in administrative enforcement of Chinese environmental regulation due to the vast array of interested government parties); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 72–74, 81–85 (observing the disconnect between Chinese environmental policy and enforcement).

1992),[224] one of numerous international environmental accords to have been negotiated since the 1972 Conference on the Human Environment held in Stockholm.[225] The text of the Convention was the culmination of bargaining extending over a fifteen-month period and orchestrated by the Intergovernmental Negotiating Committee (INC), convened by the United Nations General Assembly and open to participation by all interested States.[226] The Convention was made available for signature at the UN Convention on Environment and Development (UNCED) in June 1992 at Rio de Janeiro, and adopted by over 150 States.[227]

It should be noted that, despite enjoying broad international support, the FCCC did not elicit a binding commitment on the part of the signatories, who merely signaled their intention to ratify the agreement in accordance with their internal constitutional processes.[228] Moreover, even then, the treaty would not come into force as law until ratified by the minimum number of States specified in the text (fifty).[229] The Rio Conference however took symbolic steps and established concrete institutional mechanisms to bring about a speedy conversion into an effective legal instrument.[230]

The term effective needs to be employed cautiously in this context. "Traditionally, a treaty in international law establishes rights and obligations among States and is designed to govern State behavior," while "most environmental agreements, although cast in the language of State obligation, are designed ultimately to change the behavior of private

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224. *See generally* United Nations Framework Convention on Climate Change, May 9th, 1992, 1771 U.N.T.S. 107 [hereinafter UNFCCC] (committing countries to negotiate reductions in emissions that cause climate change).

225. *See generally* U.N. Conference on the Human Environment, June 16, 1972, *Declaration of the United Nations Conference on the Human Environment*, U.N. Doc. A/Conf.48/14/Rev. 1 (1973) (setting out principles that must be considered in order to preserve the environment while promoting development).

226. *See* Chandrashekhar Dasgupta, *The Climate Change Negotiations*, *in* NEGOTIATING CLIMATE CHANGE: THE INSIDE STORY OF THE RIO CONVENTION, 129, 129–31 (Irving M. Mintzer & J.A. Leonard eds., 1994) (recounting briefly the negotiating history of the Rio Convention).

227. As of August 26, 2009, there are 193 parties to the Convention. *See* UNFCCC, *supra* note 225, *available at* http:unfccc.int/essential_background/convention/status_of_ratification/items/2631.php (listing the roster of nations that are parties to the convention); *see also* Dasgupta, *supra* note 226, at 131–46 (reviewing the negotiations process in an insightful manner).

228. See UNFCCC, *supra* note 225, at art. 22, *available at* http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php (binding the parties to the convention).

229. *See id.* art. 23 (stating that the FCCC came into force on March 21, 1994); *see also* UNFCCC, *supra* note 225, *available at* http://unfccc.int/ (providing background information).

230. *See* Dasgupta, *supra* note 227, at 129–46 (reviewing the specific obligations created by the Convention).

agents."[231] Therefore, "the State must enact domestic legislation and establish administrative machinery to ensure this outcome."[232] Still, even if the State proceeds to pursue that goal "in good faith, there is no assurance that the ultimate objective—the reduction of emissions by private individuals and firms will actually take place."[233]

International environmental treaties such as the FCCC also tend to be elastic and open-ended. To be more explicit, they typically assume the form of "a framework or umbrella convention, providing general cooperation in the area" where behavioral adjustment is deemed necessary.[234] Such umbrella conventions anticipate "subsequent, more specific supplementary accords (frequently called protocols) that will establish more concrete obligations."[235] Compliance may thus be a thorny issue when these kinds of institutional patterns prevail. Further, deciphering State movements may be a challenging undertaking.[236]

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231. *See* Abram Chayes & Charlotte Kim, *China and the United Nations Framework Convention on Climate Change*, *in* ENERGIZING CHINA: RECONCILING ENVIRONMENTAL PROTECTION AND ECONOMIC GROWTH 503, 506 (Michael B. McElroy et al. eds., 1998) (examining the general contours of treaty obligations); Abram Chayes, Antonia Handler Chayes, & Ronald B. Mitchell, *Managing Compliance: A Comparative Perspective*, *in* ENGAGING COUNTRIES: STRENGTHENING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL ACCORDS 39, 42–43 (Edith Brown Weiss & Harold K. Jacobson eds., 1998) (describing international norms as the foundation for compliance).

232. *See* Chayes & Kim, *supra* note 232, at 506 (describing the obligations placed on countries by international treaties). *See generally* David Vogel & Timothy Kessler, *How Compliance Happens and Doesn't Happen Domestically, in* ENGAGING COUNTRIES: STRENGTHENING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL ACCORDS 19, 20–23 (Edith Brown Weiss & Harold K. Jacobson eds., 1998) (noting how administrative capacity can limit effectiveness of international obligations).

233. *See* Chayes & Kim, *supra* note 232, at 506 (noting that compliance is not identical to any responsibilities assumed). *See generally* ENGAGING COUNTRIES: STRENGTHENING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL ACCORDS (Edith Brown Weiss & Harold K. Jacobson eds., 1998) (examining ways to make decision-making more effective in regulating the global environment); IMPROVING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL LAW (James Cameron, Jacob Werksman, & Peter Roderick eds., 1996) (examining possible solutions to increase compliance with international agreements without breaking fragile political consensus); Michael Faure & Jurgen Lefevere, *Compliance with International Environmental Agreements*, *in* THE GLOBAL ENVIRONMENT: INSTITUTIONS, LAW, AND POLICY 138, 138–56 (Norman J. Vig & Regina S. Axelrod eds., 1999) (discussing the theories of compliance and methods for improving compliance for international accords).

234. *See* Chayes & Kim, *supra* note 232, at 506 (outlining the nature of international environmental commitments).

235. *See id.* (discussing the nature of protocols made subsequent to international conventions); *see also* Dan Bodansky, *UN Convention on Climate Change*, 18 YALE J. INT'L L. 451, 493–96 (1993) (outlining the characteristics of framework conventions).

236. *See* Jana von Stein, *The International Law and Politics of Climate Change: Ratification of the UN Framework Convention and the Kyoto Protocol*, 52 J. CONFLICT RESOL. 243, 243–68 (2008) (arguing that while "soft" agreements like the FCCC achieve widespread participation fairly quickly, leaders who ratify do not appear to be particularly concerned about their ability subsequently to comply with such agreements). For a

China approached the FCCC challenge seriously, constructively, and actively.[237] It took a close interest and participated willingly in the elaborate scientific studies conducted from 1988 to late 1990 under the auspices of the Intergovernmental Panel on Climate Change (IPCC).[238] The IPCC is "a broadly-based body of scientific experts designated by governments" who will "study the science of climate change, the likely impacts, and potential response strategies."[239] In addition, Chinese representatives were deeply involved from late 1990 to the signing of the Convention in June 1992 in INC efforts to negotiate the FCCC.[240] For the most part, they exercised leadership and played a supportive role.[241]

It was not however an entirely positive experience from an international perspective. While apparently not engaged in deliberate foot-dragging, China was at times distinctly slow to engineer new protocols during the Intergovernmental Negotiating Committee (INC-XI) meeting leading up to the first Conference of Parties after the FCCC was negotiated (resorting to vivid expressions to justify its posture: 'the Convention is like a big pie, and if you try to swallow the whole pie in one gulp, you will choke', 'more haste, less speed', and 'first steps first').[242] It also strenuously objected, whether strategically or tactically, to some key elements of the FCCC blueprint (e.g., in-depths reviews, mechanics of the review process, country visits, joint implementation, targets, timetables, imposition of obligations on industrializing countries to reduce emissions, and differentiation among industrializing countries on the basis of their developmental status).[243]

Moreover, Chinese representatives consistently voiced skepticism regarding the validity of the IPCC's views on the subject of climate change ("[m]any scientists cast doubts on the causes of climate change. There are so many factors affecting climate change, including the activities of the sunspots, regulatory role of the oceans, the gigantic role of the Earth's

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discussion of the merits/demerits of the framework convention/protocol approach, see Bodansky, *supra* note 236, at 451, 493–95.

237. *See* Dasgupta, *supra* note 227, at 138–39 (recounting the China's involvement in the Rio Convention).

238. *See* Baozhong Wu et al., *The Status and Trend of China's Policies on Climate Change*, *in* ENERGIZING CHINA: RECONCILING ENVIRONMENTAL PROTECTION AND ECONOMIC GROWTH 541, 543 (Michael B. McElroy et al. eds., 1998) (recalling China's involvement in negotiating alongside the Group of 77).

239. *See* Chayes & Kim, *supra* note 232, at 507 (describing the workings of the IPCC).

240. *Id*. at 513–15.

241. *See id.* at 507 (recalling China's negotiating role in FCCC negotiations). *See also* Baozhong Wu, *supra* note 239, at 541–54 (examining China's role in representing developing nations alongside the Group of 77).

242. *See* Chayes & Kim, *supra* note 232, at 523 (recalling China's efforts to slow the pace of negotiations).

243. *Id.* at 515–23.

biosphere, water vapor and clouds, etc.").[244] The Chinese delegation also repeatedly emphasized that, given the residual gaps in technical knowledge, it would be inappropriate to proceed firmly and swiftly ("governments could not base policies decisions on such scientific uncertainties").[245]

The leadership exercised by China did not necessarily manifest itself in a comprehensive fashion. It often approached crucial issues in a manner that might be construed as partisan, in the sense of not reflecting worldwide considerations.[246] It is a moot point whether it was driven by its own parochial interests or the belief (legitimate or otherwise) that the international community is too heterogeneous and too unevenly structured to allow its members to adopt a uniform strategy with respect to environmental protection.[247] Chinese representatives underlined the persistence of substantial economic inequalities and vigorously championed the cause of industrializing nations, perhaps implicitly relegating ecological preservation to a position of secondary importance:

> The FCCC currently negotiated should clearly recognize that it is the developed countries which are mainly responsible for excessive emissions of greenhouse gases, historically and currently, and it is these developed countries which must take immediate action, with time-bound targets, to stabilize and reduce such emissions. Developing countries cannot be expected to accept any obligations in the near future . . . . [D]eveloping countries must be provided with the full scientific, technical, and financial cooperation necessary to cope with the adverse impacts of climate change.[248]

Neoliberal institutionalist insights may not fully account for this pattern. As noted earlier, the Chinese organizational façade is rather rudimentary and seriously fragmented.[249] This may explain the markedly slow policy adaptation and frequent shifts (again, whether strategic or tactical) in the stance regarding fundamental ecological questions.[250] To reiterate a point made previously, neoliberal institutionalists acknowledge the role played by

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244. *Id.* at 524.

245. *Id.*

246. *See id.* at 515–23 (recounting China's repeated demands to hold developing countries to a different standard from developed countries).

247. *See id.* at 515–27 (observing China's assertion that developing countries' economic situations entitle them to environmental regimes different from those in developed countries).

248. *See id.* at 515 (recounting China's efforts separate developing countries from developed countries in terms of duties under the FCCC).

249. *See* Mushkat, *Implementing Environmental Law*, *supra* note 158, at 87–91 (observing the discord in the Chinese environmental regime).

250. *See* Chayes & Kim, *supra* note 232, at 515–23 (examining China's reluctance to rapidly implement FCCC protocols).

domestic diversity in shaping behavior in the international (including environmental) arena, but they arguably overstate the intensity of forces inducing actors to cooperate/engage in integrative bargaining and understate the strength of divisive influences.[251]

Once more, the utilitarian perspective may be selectively invoked.[252] It has been claimed that China's complex maneuvers in such multilateral settings closely mirror self-interest, even when the tone is altruistic, and that they are grounded in a set of principles derived from robust cost-benefit logic ('[m]aximize material capabilities above all'; '[a]void high cost commitments'; '[i]f avoidance incurs image costs, then try to avoid high cost commitments but join low cost, high profile activities'; '[i]f the opportunities to pursue material gains unilaterally are closed off, and [the country] has little choice but to join multilateral negotiations, then it should try to build coalitions to weaken commitments'; '[i]f unilateral opportunities to maximize relative capabilities are closed off, and coalition building unsuccessful, then [it] should choose the least constraining options; try to prevent the toughening of any commitments that can be avoided').[253]

Chinese advocacy of industrializing nation causes may not be exclusively motivated by utilitarian concerns. China may genuinely see itself, or at least did in the past, as a leader of a counter-hegemonic coalition that is pursuing a redistributive agenda (the eradication of inequalities and global justice primarily, and ecosystem harmony and sustainability secondarily). To the extent that this assumption has any validity, it cannot be readily accommodated within the framework of mainstream (utilitarian, realist, cognitivist, and neoliberal institutionalist) international

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251. *See* O'NEILL, THE ENVIRONMENT AND INTERNATIONAL RELATIONS, *supra* note 60, at 32 (discussing the organizational necessity of institution-building in international regimes); YOUNG, INTERNATIONAL COOPERATION, *supra* note 12, at 11–30 (examining the theoretical workings of international regimes from an institutional perspective).

252. *See* YOUNG, INTERNATIONAL GOVERNANCE, *supra* note 21, at 91–95 (outlining the utilitarian perspective generally).

253. *See* Alastair I. Johnson, *China and International Environmental Institutions: A Decision Analysis Rule in* ENERGIZING CHINA: RECONCILING ENVIRONMENTAL PROTECTION AND ECONOMIC GROWTH 555, 565–82 (Michael B. McElroy et al. eds., 1998) (comparing China's arms control policy with its environmental policy); *see also* Roger Congleton, *Governing the Global Environmental Commons: The Political Economy of International Environmental Treaties and Institutions*, *in* INTERNATIONAL ENVIRONMENTAL ECONOMICS: A SURVEY OF THE ISSUES 241, 241–63 (Gunther G. Shulz & Heinrich W. Ursprung eds., 2001) (examining the externality problem in international environmental problems); Carsten Schmidt, *Incentives for International Environmental Cooperation: Theoretical Models and Economic Instruments*, *in* INTERNATIONAL ENVIRONMENTAL ECONOMICS: A SURVEY OF THE ISSUES 209, 209–40 (Gunther G. Shulz & Heinrich W. Ursprung eds., 2001) (examining theoretical frameworks for incentivizing compliance with international agreements and finding that underlying assumptions are not consonant with certain realities of international relations).

environmental theory. To dissect such behavioral patterns, the tools of political economy (the neo-Marxist, historical, materialist, and neo-Gramscian variants) may need to be employed.[254]

Another Chinese experience, which may be relied upon to generate insights regarding the development of environmental governance regimes, involves the Montreal Protocol on Substances that Deplete the Ozone Layer (hereafter referred to as the Montreal Protocol or simply the Protocol).[255] It is an instrument whose origins may be traced to the Vienna Convention for the Protection of the Ozone Layer, a framework convention ratified by twenty-one countries in 1985 (and ultimately, like the FCCC, to the 1972 United Nations Conference on the Human Environment in Stockholm, following which several multilateral environmental agreements/MEAs have been negotiated).[256]

The ozone layer, which consists of the reaches of earth's atmosphere between ten and fifty kilometers above the ground, furnishes protection to myriad organisms from the harmful effects of ultra-violet radiation from the sun.[257] Chlorofluorocarbons (CFCs), halons, and a wide range of industrial chemicals, commonly referred to as ozone-depleting substances (ODS), materially diminish its protective capacities.[258] In 1987, the Montreal Protocol, which provides specific requirements and deadlines for countries to reduce production and use of CFCs, was adopted.[259] A key provision of the Protocol requires signatory developing countries to phase out production and use of CFCs and halons by 2010.[260]

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254. *See* O'NEILL, *supra* note 60, at 7–20 (discussing the interplay of international environmental agreements and international environmental politics); Paterson, *supra* note 60, at 55–59 (outlining the various theories of international politics).

255. Montreal Protocol on Substances that Deplete the Ozone Layer, September 16, 1987, 1522 U.N.T.S. 3.

256. For a detailed account of the Montreal Protocol's negotiations, see RICHARD ELLIOT BENEDICK, OZONE DIPLOMACY: NEW DIRECTIONS IN SAFEGUARDING THE PLANET (2nd ed., 1998), which examines the Montreal Protocol negotiations from an insider's perspective. For an effective historical overview and update through 1992, see Ian H. Rowlands, *The Fourth Meeting of the Parties to the Montreal Protocol: Report and Reflection*, 35 ENV'T 25, 25–34 (1993), which reviews chronologically the important events in the negotiations of the Montreal Protocol.

257. *See* BENEDICK, *supra* note 257, at 9 (discussing the science of the ozone layer).

258. *Id.* at 10.

259. *Id.* at 1.

260. For a comprehensive account of the control measures and respective obligations under the Protocol, see Ozone Secretariat, *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer* 1, 15–18 (United Nations Environment Program, 8th ed. 2009) *available at* http://ozone.unep.org/Publications/MP_Handbook/ (reviewing the Montreal Protocol's history and purpose).

The Protocol was bolstered in 1990 when the London Amendments established an interim Multilateral Fund (MLF or the Fund).[261] The Fund, which acquired a permanent status (and London base) in 1992, was created to assist signatory developing countries with an annual consumption of ODS lower than 0.3 Kg per capita ('Article 5 countries') in meeting their obligations under the Protocol.[262] The London Amendments, which significantly expanded the scope of the 1987 Protocol, were signed by a majority of developing countries (subsequent revisions have had fewer implications for industrializing nations).[263]

China ratified the Montreal Protocol in 1991, after the establishment of the MLF.[264] This move coincided with calls on its part for financial support to facilitate the discharge of its obligations so that there evidently was a clear linkage between the willingness to commit and the availability of assistance.[265] Following ratification, the Chinese authorities promptly took the necessary steps to meet procedural requirements by setting up institutions to effect protocol implementation, devising a country program for the phase-out of ODS, and reporting ODS production and consumption data to the Ozone Secretariat.[266]

The actual performance has not consistently reflected the strength of the procedural commitment. China encountered considerable difficulties in complying with the substantive goals during the initial period after ratification and intensified its efforts since 1996.[267] Following this adjustment, results have improved relative to targets, but the overall picture has remained problematic.[268] Chinese share of the world's total production

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261. *See* BENEDICK, *supra* note 257, at 183–88 (recalling the benefits afforded by the fund).

262. *About the Multilateral Fund*, MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL (2003), *available at* http://www.multilateralfund.org/about_the_multilateral_fund.htm.

263. *Id.*

264. Jimin Zhao & Leonard Ortolano, *The Chinese Government's Role in Implementing Multilateral Agreements: The Case of the Montreal Protocol*, 175 CHINA Q. 708, 709–10 (2003).

265. *See id.* at 714–15 (recalling China's demands for instituting the fund to help developing countries enforce the protocol).

266. *See* Zhao & Ortolano, *supra* note 264, at 708–25 (2003) (narrating China's efforts to implement the protocol); Jimin Zhao, *Implementing International Environmental Treaties in Developing Countries: China's Compliance under the Montreal Protocol*, 5 GLOBAL ENV'L POL. 58, 58–81 (2005) [hereinafter Zhao, *Implementing International Environmental Treaties*] (measuring China's compliance with the Montreal protocol); Jimin Zhao, *The Multilateral Fund and China's Compliance with the Montreal Protocol*, 11 J. ENV. & DEV. 331, 331–53 (2002) [hereinafter Zhao, *The Multilateral Fund*] (narrating China's efforts to implement the protocol).

267. *See* Zhao, *Implementing International Environmental Treaties*, *supra* note 267, at 62 (recalling China's failure to meet its goal to reduce ozone-depleting emissions by 1996).

268. *See id.* at 64–66 (detailing China's success at reducing ozone-depleting emissions).

and consumption has climbed markedly because of a significant increase in domestic demand and a corresponding decline in production and consumption by industrialized nations, previously the principal source of ODS.[269] The ratification of the Montreal Protocol was not a straightforward proposition for a country in the early stages of modernization. The costs expected to be incurred by some economic sectors were not negligible, and powerful arguments against the move were advanced by representatives of those sectors and government officials overseeing them.[270] The debate raged over a long period and the decision could have gone either way.[271] China's scientific community (idea-driven and loosely integrated into an international network) played a pivotal role in tipping the balance in favor of ratification.[272] This is a cognitivist-style interpretation, albeit not without institutionalist underpinnings.

The utilitarian model however is probably the most appropriate analytical tool for dissecting China's response to the dilemma posed by the Montreal Protocol. While the burden to be borne by a number of key economic sectors could not be ignored, the costs for the country as a whole were deemed to be relatively modest.[273] There were gains to be realized, in the form of a better image abroad and concessions secured in other areas, by displaying a cooperative attitude.[274] Ultimately, the availability of financial support (a utilitarian-type side-payment?) proved to be the critical factor.[275]

Institutional influences were by no means absent. They manifested themselves visibly during the pre-negotiation, negotiation, and post-negotiation phases of the process. To illustrate, implementation was substantially impacted by a host of organizational constraints (e.g., limited administrative capacity, excessive centralization, ineffective regulatory strategies, and inadequate enforcement).[276] Be that as it may, institutional

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269. Zhao, *The Multilateral Fund*, *supra* note 267, at 710 (stating that China has become the largest producer and consumer of ozone-depleting substances).

270. *See* Zhao & Ortolano, *supra* note 265, at 711–12 (narrating the debate within the Chinese government).

271. *Id.*

272. *See* Zhao & Ortolano, *supra* note 264, at 708, 711 (stating that the scientific community played an outsized role in persuading the government to limit emissions); Zhao, *Implementing International Environmental Treaties*, *supra* note 266, at 58, 71 (noting the strength of the scientific evidence); Zhao, *The Multilateral Fund*, *supra* note 267, at 331–53 (detailing efforts by the scientific community to persuade the government).

273. *See* Zhao, *Implementing International Environmental Treaties*, *supra* note 267, at 73 (stating that low compliance costs were one of the reasons China accepted the protocol).

274. *See* Zhao & Ortolano, *supra* note 267, at 715–16 (observing that a cooperative image of China was a motivating factor in China's acceptance of the protocol).

275. *See id.* (focusing on the fund as a key reason for China's acceptance of the protocol).

276. *See* Elizabeth C. Economy, *The Impact of International Regimes on Chinese Foreign Policy-Making: Broadening Perspectives and Policies . . . But Only to a Point*, *in*

patterns alone cannot account fully for the outcomes witnessed. Other theoretical perspectives need to be systematically incorporated into the conceptual framework in order to enhance its explanatory power.

IV. Conclusion

Environmental governance regimes have featured prominently in domestic and international efforts to curtail ecological degradation. The academic literature on the subject is broad, deep, and insightful. As might be expected, given the socio-physical complexities confronted and the nature of the scholarly enterprise, it is characterized by a high degree of analytical diversity and intellectual tension. Attempts at genuine integration/ synthesis have been far and few between. Competing paradigms have largely drifted their own separate ways, experiencing little cross-fertilization.

In the Darwinian world of academic ideas, some perspectives fare better than others. Realism has been found to have merely marginal relevance as a theoretical tool for shedding light on the development of environmental governance regimes. Utilitarianism and cognitivism have exerted greater influence but have lost some of their original luster. Neoliberal institutionalism, on the other hand, has gained momentum and its proponents have been the dominant force shaping the understanding of the dynamics of ecological management system formation and transformation.

Neoliberal institutionalism is firmly rooted in Western democratic soil, although its claims of universal validity are not unjustified. It has not really been extensively and properly tested in inherently less hospitable territory. Many Chinese environmental experiences may be comfortably accommodated within a neoliberal institutional framework.[277] As

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THE MAKING OF CHINESE FOREIGN AND SECURITY POLICY IN AN ERA OF REFORM 230, 241–49 (David M. Lampton ed., 2001) (documenting the reticence within the Chinese government over adopting and adhering to the Montreal Protocol); Zhang Kunmin & Wang Can, *China's Sustainable Development Strategy and International Cooperation on the Environment*, *in* IMPLEMENTING INTERNATIONAL ENVIRONMENTAL LAW IN GERMANY AND CHINA 1, 1–19 (Zhenghua Tao and Rudiger Wolfrum eds., 2001) (detailing China's solutions to the environmental problems it faces); Mushkat, *Contextualizing Environmental Human Rights*, *supra* note 158, at 162–175 (discussing the factors that hinder Chinese ecological governance); Mushkat, *Implementing Environmental Law*, *supra* note 158, at 66–74 (detailing the factors weighing down Chinese environmental regulatory enforcement).

277. *See generally* GERALD CHAN, CHINA'S COMPLIANCE IN GLOBAL AFFAIRS: TRADE, ARMS CONTROL, ENVIRONMENTAL PROTECTION, HUMAN RIGHTS (2006) (measuring China's international involvement by its compliance with international accords); HEGGELUND, *supra* note 90 (examining Chinese efforts to build the Three Gorges Dam through an environmental lens); ANN KENT, BEYOND COMPLIANCE: CHINA, INTERNATIONAL ORGANIZATIONS, AND GLOBAL SECURITY 144–80 (2007); Gerald Chan, *China's Compliance*

demonstrated in this paper, there is however ample evidence to suggest that the challenges of explaining regime development is simply too overwhelming to be addressed from a single conceptual viewpoint. It may be desirable to go back to the drawing board and renew the search for multi-dimensional research strategies.[278]

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in Global Environmental Affairs, 45 ASIA PAC. VIEWPOINT 69, 69–86 (2004) (highlighting China's regulatory and policy reform on the environment); Gorild Heggelund & Ellen B. Backer, *China and the UN Environmental Policy: Institutional Growth, Learning, and Implementation*, 7 INT'L ENV'T. AGREEMENTS 415, 415–38 (2007) (examining the role of international institutions in prompting Chinese environmental reform); Gorild Heggelund, *China's Climate Change Policy: Domestic and International Developments*, 31 ASIAN PERSPECTIVES 155, 155–91 (2007) (examining China's reasons for not strengthening its environmental protections); Hongyuan Yu, *International Institutions and Transformation of China's Decision Making on Climate Change Policy*, 1 CHINESE J. INT'L POL. 497, 497–523 (2007) (measuring Chinese efforts to implement environmental reform through institutional change).

278. *See* Olav Schram Stokke, *Understanding the Formation of International Environmental Regimes*, *in* THE POLITICS OF INTERNATIONAL ENVIRONMENTAL MANAGEMENT 129, 129–48 (Aril Underdal ed., 1998) (theorizing that international solutions to thorny policy issues are discursive rather than monological); *see also* Miron Mushkat & Roda Mushkat, *The Political Economy of Hong Kong's "Open Skies" Legal Regime: An Empirical and Theoretical Exploration*, 10 SAN DIEGO INT'L L.J. 381–438 (2009) (highlighting the shifting nature of regulatory behavior in Hong Kong).