
The Limits of “Rational Design”

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“The Rational Design of International Institutions” (special issue of *IO*, Autumn 2001) makes a significant contribution to the theoretical literature on international institutions. It addresses an important and interesting question—how to explain variation in institutional forms—and offers a promising analytical framework for doing so. Similar to regime theory in the 1980s, this framework potentially encompasses a wide range of empirical phenomena. But in contrast to initial formulations of regime theory, it systematically identifies multiple dimensions of institutional variation and offers potentially testable conjectures about the relationship between these dimensions and a variety of possible determinants.

At the same time, however, it is important to recognize the current limits of both the Rational Design project and the conclusions that can be drawn from the special issue about the project’s usefulness and validity as an explanation of institutional variation. As opposed to the critique offered by Alexander Wendt as part of that special issue, which presents what is primarily an “external” perspective, this article seeks to evaluate “The Rational Design of International Institutions” on its own terms, as a rationalist attempt to explain international institutions. The sections below identify three significant sets of limitations. One set concerns the scope of the project. Another set of limitations is found in the project’s analytical framework. A final set pertains to the efforts that are made to evaluate the framework through empirical analysis.

Although the first set of limitations is largely a matter of choice, the last two raise serious questions about the ability of the Rational Design project, in its current state of development, to offer a compelling and satisfactory explanation of institutional forms. Nevertheless, these shortcomings are not absolute—they can be remedied through further theoretical and empirical research. A concluding section offers suggestions for how this might be done.

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Limitations in Scope

The purposes of the Rational Design project are stated clearly in the first and last articles, both of which are co-authored by Barbara Koremenos, Charles Lipson, and Duncan Snidal. In the first article, they write that “Our main goal is to offer a systematic account of the wide range of design features that characterize international institutions.”¹ In the concluding article, the co-authors reiterate that “The main aim of the Rational Design project was to develop an explanatory framework and begin to test it against available empirical evidence.”²

Accordingly, the special issue consists of two principal parts. The first article lays out the basic analytical framework of the project. After offering a definition of international institutions, this article specifies the dependent and independent variables that will be the subject of inquiry and then derives a set of informal “conjectures” linking the two sets of variables. The framework article is followed by eight articles that focus on international institutions in a range of issue areas. Several of these articles seek to extend and elaborate on the framework, but most of them involve attempts to evaluate the framework and the conjectures derived from it against empirical material. In the final article, Koremenos, Lipson, and Snidal summarize the findings of the empirical articles, discuss what they view as some of the broader implications, and then address the gap Wendt identifies between the positivist aspirations of the project and the normative questions associated with the actual process of institutional design. They conclude that: “[i]n general, the results strongly support the conjectures”; that although the framework may have limitations, these do not diminish its value; and that some of the most obvious omissions can be readily incorporated.³

One question that should immediately be asked of any such theoretically oriented enterprise concerns the breadth of its applicability. Obviously, no single research project can accomplish everything, especially in the span of a single special issue. But it is nevertheless important to make clear what lies outside the scope of the project, as well as what it comprehends. Two particular limitations of scope are noted here: the empirical domain to which the project applies and the types of questions that are asked.

A Narrow Conception of Institutions

A first significant limitation of the Rational Design project concerns the range of international institutions to which it applies. Koremenos, Lipson, and Snidal are to be commended for offering a definition of international institutions at the very

1. Koremenos, Lipson, and Snidal 2001b, 762.
2. Koremenos, Lipson, and Snidal 2001a, 1052.
3. *Ibid.*, 1056.

outset: "explicit arrangements, negotiated among international actors, that prescribe, proscribe, and/or authorize behavior."⁴ One problem with this definition, which becomes clear in the following pages, is that it does not readily accommodate all of the types of international institutions that Koremenos, Lipson, and Snidal aspire to analyze. Although they state that the definition includes formal international organizations, subsequent references to international organizations as agents or actors that perform various functions do not fit easily with the conception of institutions as arrangements that simply "prescribe, proscribe, and/or authorize behavior."⁵

Nevertheless, this definitional flaw could be easily remedied. Of greater significance is the fact that the definition clearly excludes a wide range of other important international institutional forms. The organizers explicitly exclude "tacit bargains and implicit guidelines," describing them as general forms of cooperation. The problem here is that influential previous definitions of international institutions frequently included such forms. For example, the early "consensus" definition of international regimes refers to implicit as well as explicit principles, norms, rules, and decision-making procedures.⁶ Likewise, Robert Keohane's influential definition of international institutions embraces "implicit rules and understandings."⁷

Koremenos, Lipson, and Snidal seem less aware of the fact that their definition also excludes constitutive institutions. By now, most scholars of institutions would agree that institutions do more than just "prescribe, proscribe, and/or authorize behavior." In addition, institutions sometimes create actors, endow them with certain capabilities, and define categories of action. In other words, institutions may "create the very possibility of engaging in conduct of a certain kind."⁸ Moreover, such institutions often take the form of explicit, negotiated arrangements. Thus the United Nations (UN) charter creates the Security Council, as well as a number of other bodies, and defines their powers and the actions they may take.

Perhaps most fundamentally, the definition completely ignores those international institutions that are primarily intersubjective in nature. Kratochwil and Ruggie have pointed out that regimes and social institutions more generally have an inescapable intersubjective quality.⁹ As such, they are fundamentally ideational phenomena involving ideas that are shared by members of a collectivity.¹⁰

This truncated conception of international institutions is reinforced by the narrow focus on negotiated forms. The Rational Design project considers only those institutions that are "the fruits of agreement" and "the self-conscious creations of

4. Koremenos, Lipson, and Snidal 2001b, 762.

5. *Ibid.*, 763.

6. Krasner 1983, 2.

7. Keohane 1989, 4.

8. Schauer 1991, 6.

9. Kratochwil and Ruggie 1986, 754. See also Ruggie 1983, 196.

10. Wendt 1999, 94, 96.

states” and other international actors.¹¹ Scholars have long recognized, however, that international institutions may arise through other processes as well. For example, Oran Young has identified two additional developmental sequences, involving self-generating or spontaneous arrangements and imposed arrangements, respectively.¹² The Rational Design project nowhere recognizes the possibility of imposition, even though it can be an important source of “explicit arrangements . . . that prescribe, proscribe, and/or authorize behavior” and is no less likely to be guided by rational calculation. Additionally, although Koremenos, Lipson, and Snidal belatedly acknowledge and briefly discuss the possibility of spontaneous and evolutionary processes, they do not address their implications for the types of institutions that may result.¹³ In fact, these processes are likely to be the source of many constitutive and perhaps all primarily intersubjective institutions.

Of course, no research project on international institutions should be obliged to subsume the full range of manifestations of the subject. Indeed, it may not be possible to talk in a meaningful way about the “rational design” of many types of international institutions. At the same time, many international institutions do fit the definition of explicit, negotiated arrangements, ensuring that the Rational Design project will apply to a large number of cases. Nevertheless, when a project’s embrace of a phenomenon is less than universal, it is important to make clear in the definition what is excluded as well as what is included.

A Limited Set of Questions

A second limitation of the Rational Design project concerns the types of questions that it asks. Many of the early attempts to develop general theories of international institutions—primarily in the guise of international regimes—in the 1970s and 1980s focused on institutions as dependent variables. Whether or not international institutions actually mattered was largely assumed. Only in the 1990s did scholarly attention increasingly focus on the effects of institutions. As Martin and Simmons observed in their 1998 review of the institutional literature, “the strength of [the rationalist] approach has largely been its ability to explain the creation and maintenance of international institutions. It has been weaker at delineating their effects on state behavior and other significant outcomes. . . .”¹⁴ Consequently, Martin and Simmons argued that “research should increasingly turn to the question of how institutions matter in shaping the behavior of important actors in world politics.”¹⁵

The Rational Design project, however, moves in the opposite direction, revisiting international institutions as dependent variables. To be sure, much important

11. Koremenos, Lipson, and Snidal 2001b, 762.

12. Young 1989, 84–89.

13. Koremenos, Lipson, and Snidal 2001a, 1077–78.

14. Martin and Simmons 1998, 738.

15. *Ibid.*, 729, 730.

work remains to be done on the determinants of international institutions. But insofar as the theoretical literature is further developed in this area, this choice of focus requires a greater degree of justification, and any resulting claims must necessarily be subjected to a relatively higher level of scrutiny. In particular, the claims must, at a minimum, be explicitly evaluated against previous attempts to explain variations in institutional form in order to establish the value added.¹⁶

Limitations of the Framework

Having clarified the scope of the Rational Design project, the next step is to assess the adequacy of the analytical framework presented by Koremenos, Lipson, and Snidal as a basis for developing generalizations about institutional design. In fact, although the framework represents a reasonable first cut, it nevertheless contains significant shortcomings, which can be found in each of the three main components: the specification of dependent variables, the specification of independent variables, and the derivation of hypothesis-like conjectures linking the two.

Dependent Variables

Koremenos, Lipson, and Snidal highlight five dimensions of institutional variation, which become the dependent variables of the Rational Design project: membership rules (MEMBERSHIP), scope of issues covered (SCOPE), centralization of tasks (CENTRALIZATION), rules for controlling the institutions (CONTROL), and flexibility of arrangements (FLEXIBILITY). As a starting point, this is a useful conceptualization, one that seeks to strike a balance between the competing demands of distinguishing the most important institutional features and producing a framework that is both manageable in size and susceptible to empirical testing. Nevertheless, this conceptualization raises some questions.

One question is whether the framework includes all of the most important dependent variables. Other noteworthy studies of international institutions have emphasized different dimensions of variation. For example, Jeffrey Legro, in his study of international norms, identifies specificity as an important variable.¹⁷ The special issue of *International Organization* on “Legalization and World Politics” highlights three dimensions—obligation, precision, and delegation—that find no direct parallels in the Rational Design project.¹⁸ Although there is no canonical set of dependent variables that must be included in every study, at least some discussion of logical alternatives and the reasons for excluding them is warranted.

16. See, for example, Snidal 1985; Lipson 1991; and Martin 1992b.

17. Legro 1997.

18. Abbott et al. 2000.

That said, there may be more overlap with regard to dependent variables between the Rational Design project and previous studies than is readily apparent. For example, precision and specificity could be elements of flexibility. Likewise, delegation could in principle be closely related to centralization. Nevertheless, these possible links are obscured by an excessive degree of generality. The authors acknowledge that “[i]n some cases, our dimensions must be refined to clarify design issues in specific institutions.”¹⁹ Arguably, however, at least some further disaggregation should have been attempted at the outset to ensure adequate conceptualization of the variables and to facilitate the subsequent evaluation of the framework.

The problems that result from excessive aggregation are perhaps most apparent in the case of centralization, which refers to the performance of important institutional tasks by “a single focal entity.”²⁰ Koremenos, Lipson, and Snidal recognize that “[c]entralization, for instance, is a broad category—perhaps too broad for some cases,”²¹ and they conclude that “because our conception of centralization is very broad, an important avenue of inquiry will be to refine this concept into its different components.”²² In particular, they envision a finer differentiation of tasks.²³

In focusing on the question of which tasks are centralized, however, Koremenos, Lipson, and Snidal overlook the equally important question of how tasks are centralized. Most, if not all, formal international organizations involve some centralization of tasks. In some instances, however, these tasks are performed by intergovernmental bodies consisting of the entire membership; in other cases they are performed by bodies consisting of but a subset of the members (for example, the UN Security Council); and in yet others they are delegated to supranational bodies (for example, the European Commission).²⁴ The brief reference to “a single focal entity” obscures this important dimension of potential institutional variation. Likewise, the discussion of centralization does not address the related issues of authority and capabilities. A body may possess the authority to perform a particular task but not the capability to do so, and vice versa. More generally, this discussion underscores the need to pay attention to the critical constitutive choices involved in the design of many international institutions.

Independent Variables

Despite these problems with the handling of the dependent variables, even more problematic is the Rational Design project’s specification of independent vari-

19. Koremenos, Lipson, and Snidal 2001b, 769.

20. *Ibid.*, 771.

21. *Ibid.*, 769.

22. Koremenos, Lipson, and Snidal 2001a, 1060.

23. Subsequent discussions identify such distinct tasks as disseminating information, monitoring behavior and collecting information, reducing bargaining and transaction costs, facilitating communication, setting standards, adjudicating disputes, coordinating operational activities, and enforcing agreements.

24. See, for example, Tallberg 2002.

ables. Four sets of these variables are included in the framework: distribution problems (DISTRIBUTION); enforcement problems (ENFORCEMENT); number of actors and the asymmetries among them (NUMBER); and uncertainty about others' behavior, the state of the world, and others' preferences (UNCERTAINTY ABOUT BEHAVIOR, UNCERTAINTY ABOUT THE STATE OF THE WORLD, and UNCERTAINTY ABOUT PREFERENCES).²⁵ Once again, the project fails to even systematically discuss other obvious candidates, especially those that have figured prominently in previous rationalist analyses of institutions, and fails to explain why these variables are excluded. Certainly, a number of possibilities exist. As a result of this omission, one is justified in questioning from the outset how complete—and thus satisfactory—an explanation of institutional choice the project is likely to be able to provide.

First, the framework contains no explicit discussion of interests. In contrast, the starting point of most rationalist analyses of international institutions as dependent variables is the interests—or preferences over outcomes—of the actors. As Stephen Krasner noted two decades ago, "The prevailing explanation for the existence of international regimes is egoistic self-interest."²⁶ To be sure, rationalist analyses often move on to examine the cooperation problems that result from different constellations of actor interests.²⁷ But the fact that interests are among the ultimate determinants of institutional outcomes—or, in Krasner's terminology, the basic causal variables—and are therefore deserving of explicit mention is not in dispute.

Likewise, a number of rationalist—not to mention neorealist—analyses of institutions have also considered the power, or capabilities, of actors as an additional key determinant.²⁸ Yet Koremenos, Lipson, and Snidal devote only one paragraph (under number of actors) to a discussion of the implications of differences in the distribution of actors' capabilities. They seek to compensate somewhat for this neglect with a two-page discussion of the role of power in the final article, where they state that power considerations are highly compatible with the framework.²⁹ Nevertheless, they offer little or no discussion of the types of capabilities that may matter or the circumstances under which these capabilities may influence institutional choices.

This inattention to power is especially troubling in view of the frequency with which distribution problems appear in the case studies (six of the eight). Distribution problems are precisely the situations in which, according to previous analyses, capabilities are likely to play a central role in determining institutional outcomes.³⁰ Moreover, even if one accepts the project's exclusion of developmental sequences that might involve the use of coercion, the ability to make side payments may greatly influence negotiations over institutional forms. The implication

25. Koremenos, Lipson, and Snidal 2001a, 773.

26. Krasner 1983, 11.

27. See, for example, Stein 1983; Snidal 1985; and Martin 1992b.

28. See, for example, Krasner 1983 and 1991; Martin 1992b; Richards 1999; and Gruber 2000.

29. Koremenos, Lipson, and Snidal 2001a, 1067–69.

30. See, for example, Krasner 1991.

of this omission is that if the objective is to explain institutional choice, the framework may apply in only a very restrictive set of circumstances: those in which actors either lack, or are unwilling to exploit, capabilities to coerce or to offer inducements for the purpose of obtaining institutions that better serve their individual interests.

A third common rationalist variable that does not appear in the framework is the presence or absence of potentially useful institutions. Whether or not an institution involving more or less the same potential set of states and operating in a related issue area already exists would presumably have a major impact on institutional choice. In particular, given the various costs involved in creating institutions, actors seeking to pursue common interests in a new area may prefer, wherever possible, to make use of preexisting institutions rather than start from scratch, especially if we assume the actors to be risk-averse, as the project does. In such circumstances, the focus shifts from determining which new institutional design is most rational to asking when and to what degree the actors will avail themselves of preexisting institutional arrangements.

The issue of institutional path-dependence is briefly mentioned in the framework article³¹ (although not in the discussion of the independent variables), and then revisited in the conclusion under the heading of “Dynamics of Institutional Change.”³² But these brief mentions are insufficient to do justice to the subject. For example, there is no recognition of the concept of institutional assets, which may be essential in explaining the continued reliance on international organizations—such as the North Atlantic Treaty Organization (NATO) and the International Monetary Fund—that have outlived many, if not all, of their original purposes.³³ In fact, Koremenos, Lipson, and Snidal implicitly acknowledge the importance of institutional path-dependence when they note that the number of actors is “often determined by prior political and institutional arrangements.”³⁴ In addition, one of the case studies in the special issue is exclusively concerned with actors’ choices among preexisting institutional fora.³⁵ Consequently, it is all the more puzzling that this potential causal factor did not receive more explicit attention in the framework.

Also missing from the framework is any discussion of the role of ideas, which have appeared with increasing frequency in rationalist explanations of individual behavior and collective outcomes. Goldstein and Keohane have distinguished among three different types of ideas that may influence policy: world views, causal beliefs, and principled beliefs.³⁶ These distinctions are highly isomorphic to the categories of norms, principles, and knowledge included in Krasner’s typology of

31. Koremenos, Lipson, and Snidal 2001b, 767.

32. Koremenos, Lipson, and Snidal 2001a, 1075–76.

33. Wallander 2000.

34. Koremenos, Lipson, and Snidal 2001b, 777.

35. Mattli 2001.

36. Goldstein and Keohane 1993.

variables that explain regime development, although he treats the latter as an intervening rather than a basic causal variable.³⁷

Ideational factors such as worldviews and cause-effect beliefs—or knowledge—provide answers to a set of basic questions that rational actors must typically answer before they can determine which course of action is likely to maximize their utility. In particular, knowledge may play an important role in shaping institutional design by influencing, among other things, how issues are defined, what are regarded to be the relevant actors, which institutional options are seen to exist, and the expected consequences of different institutional choices. For their part, however, Koremenos, Lipson, and Snidal at most hint at the possibility that institutional scope is sometimes determined by cognitive factors, in a brief reference to how issues are framed.³⁸

Rationalist analyses sometimes also invoke principles to account for the interests or preferences of actors.³⁹ In contrast, behavioral norms would seem to be incompatible with the rationalist assumption of utility maximization. Nevertheless, norms, too, might merit at least some discussion insofar as they figure prominently in more general explanations of institutional choice.⁴⁰ Indeed, Koremenos, Lipson, and Snidal come close to acknowledging the potentially important role of norms when they note that institutions "may build on less formal arrangements that have evolved over time and are then codified and changed by negotiation."⁴¹ In addition, at least one of the case studies in the special issue focuses on a set of "normative values" and "informal understandings" that were formalized in treaty form.⁴²

Instead of interests, power, preexisting institutions, or ideas, the analytical framework places primary emphasis on distribution and enforcement problems as independent variables. As Koremenos, Lipson, and Snidal admit in the conclusion, "The Rational Design project has one overriding aim: to make explicit the connections between specific cooperation problems and their institutional solutions."⁴³ Certainly, these relationships are important and well worth exploring, as other seminal theoretical studies have done before.⁴⁴ But the characterization of cooperation problems as independent variables is problematic, especially in view of the alternatives that were not explicitly considered in the framework.

In fact, distribution and enforcement problems are themselves the result of more basic causal variables. Whether or not a particular type of cooperation problem exists, as well as how severe it is, depends critically on how a situation is perceived,

37. Krasner 1983.

38. Koremenos, Lipson, and Snidal 2001b, 771.

39. Goldstein and Keohane 1993.

40. Wendt 2001, 1024–27.

41. Koremenos, Lipson, and Snidal 2001b, 763.

42. Morrow 2001, 971.

43. Koremenos, Lipson, and Snidal 2001a, 1051.

44. See, for example, Stein 1993; Snidal 1985; and Martin 1992b.

which actors are potentially involved, and the interests, power, and beliefs of those actors.⁴⁵ A change in any of those factors may alter the nature of the problem.

It could perhaps be argued that different types of cooperation problems serve as a useful shorthand for particular combinations of such more fundamental variables. Koremenos, Lipson, and Snidal note in the conclusion that they asked the contributors “to specify preference configurations in terms of distribution and enforcement problems relevant to their cases.”⁴⁶ Nevertheless, insofar as it is impossible to characterize a cooperation problem without reference to underlying interests, power distributions, and beliefs, the latter deserve to be made explicit parts of the analytical framework.

Moreover, the failure to explicitly include interest, power, and ideas may undermine the validity of any causal inferences that are drawn. For example, Koremenos, Lipson, and Snidal claim in the conclusion that the omission of power from the analytical framework carries no risk of omitted variable bias, because “it is not at all clear that power should be correlated with our independent variables.”⁴⁷ In fact, however, power considerations can significantly determine the intensity of distribution and enforcement problems by influencing relative gains concerns and the cost of the “sucker’s payoff,” respectively.

Conjectures

The framework of Koremenos, Lipson, and Snidal culminates with a series of conjectures that link the dependent and independent variables. The authors are careful to implicitly differentiate these conjectures from hypotheses by noting that they represent generalizations but are not formally derived. Nevertheless, the conjectures play a vital role in the project by providing a bridge between the framework and the empirical articles.

Immediately apparent is the absence of a systematic linkage between the dependent and independent variables. Depending on how one counts the variables, the authors may offer conjectures for fewer than half (sixteen of thirty-five) of the possible causal relationships (see Table 1). Even the two types of cooperation problems are each linked by conjectures to only three of the five dependent variables. Although there is no logical reason why every independent variable should potentially influence every dependent variable in the framework, this lack of comprehensiveness, which goes unremarked, raises further questions about the criteria by which the variables were selected.

One must also ask how far the offered set of conjectures advances the existing scholarly literature. In addressing this question, it may be useful to focus on the

45. Zürn 1997, 296–98, for example, notes the need to identify the constellation of actor interests to know the type of game that is being played.

46. Koremenos, Lipson, and Snidal 2001a, 1072.

47. *Ibid.*, 1069.

TABLE 1. *Conjectures*

Dependent variables	Independent variables						
	Severity of distribution problem (9)	Severity of enforcement problem (8)	Actors		Uncertainty about		
			Number* (4)	Asymmetry (1)	Behavior (3)	State of world (10)	Preferences (2)
MEMBERSHIP	M3	M1	—	—	—	—	M2
RESTRICTIVENESS (8)	∇ (3)	Δ (3)					Δ (2)
SCOPE (3)	S2 Δ (2)	S3 Δ (1)	S1 Δ (0)	—	—	—	—
CENTRALIZATION (12)	—	C4 Δ (4)	C3 Δ (2)	—	C1 Δ (3)	C2 Δ (3)	—
CONTROL (4)	—	—	V1 ∇ (1)	V2 Δ (1)	—	V3 Δ (2)	—
FLEXIBILITY (10)	F2 Δ (4)	—	F3 ∇ (1)	—	—	F1 Δ (5)	—

Note: The first line in each cell refers to the designation used by Koremenos, Lipson, and Snidal for the conjecture. *NUMBER may also refer to the heterogeneity of the actors. Δ indicates a positive relationship. ∇ indicates a negative relationship. — indicates that no conjecture was offered. Numbers in parentheses indicate the number of appearances in case studies.

conjectures concerning centralization. These conjectures are not only the most numerous (four versus three for each of the other dependent variables), but they are also evaluated most frequently in the case studies and figure among the "three general observations [that] stand out among [the] empirical results."⁴⁸

Perhaps the most extensive previous theoretical discussion of centralization appears in Lisa Martin's "Interests, Power, and Multilateralism."⁴⁹ Although the avowed purpose of that article is described in different terms—"to explain variation in the organizing principles and strength of [formal multilateral] organizations on the basis of the strategic problems facing states"—it is directly relevant

48. Ibid., 1054.

49. Martin 1992b. But see also Snidal 1985, which focuses on "the fundamental question of what sorts of regimes are appropriate for resolving particular problems of collective action." Snidal 1985, 923.

to the question at hand.⁵⁰ Indeed, at one point Martin explicitly equates formal organizations with “centralization.”⁵¹

In fact, Martin largely anticipates the Rational Design project’s conjectures about centralization and goes beyond them in one important respect. Similar to Koremenos, Lipson, and Snidal, Martin argues that situations involving substantial incentives to defect from agreements (“collaboration problems” in Martin; “enforcement problems” in Koremenos, Lipson, and Snidal) should lead to relatively strong organizations.⁵² Martin further argues that games involving “major distributional implications” (“coordination problems,” in her terminology) do not require strong institutions, which is consistent with the fact that Koremenos, Lipson, and Snidal do not offer a conjecture linking centralization with distribution problems.⁵³ Unlike Koremenos, Lipson, and Snidal, Martin does not explicitly address the impact of number, although she does note that multilateral organizations do “typically have a large number of members,” as well as summarize the logical reasons why this might be the case.⁵⁴ Likewise, although Martin nowhere discusses behavioral uncertainty *per se*, she does mention that multilateral organizations could deal with difficulties such as “opportunities for undetected free riding.”⁵⁵ Finally, Martin devotes several pages, under the subject of “assurance problems,” to a discussion of how uncertainty over preferences may generate a demand for formal organizations for the purpose of centralized information exchange. Although she recognizes that the role of formal organizations in assurance games will be limited to this function, the lack of a corresponding conjecture linking uncertainty over preferences to centralization in the Rational Design framework is puzzling, especially given the prominence of informational considerations in all four of the existing centralization conjectures.⁵⁶

To the extent that one can raise questions about the originality of the individual conjectures, perhaps the greatest potential contribution of the framework lies in its ability to suggest when variation in a particular independent variable will be accompanied by variation in a particular dependent variable. As Koremenos, Lipson, and Snidal correctly recognize, institutional design may involve choices among multiple institutional equilibria. There may be no unique institutional arrangement that best addresses a particular combination of problems associated with distribution, enforcement, numbers, and uncertainty. Unfortunately, although Koremenos, Lipson, and Snidal identify the basic ways in which the dependent variables may

50. Martin 1992b, 767.

51. *Ibid.*, 770.

52. *Ibid.*, 770, 792.

53. *Ibid.*, 776.

54. *Ibid.*, 773.

55. *Ibid.*

56. It is not clear whether Koremenos, Lipson, and Snidal consulted this particular work by Martin. Although the text contains a citation to it, the accompanying discussion suggests that the reference should in fact be to Martin 1992a. Koremenos, Lipson, and Snidal 2001b, 790.

interact among themselves—as substitutes, complements, or conflicts⁵⁷—they “do not offer any arguments that explain when one approach would be used in place of another or when different design combinations might be chosen.”⁵⁸

Limitations of the Empirical Evaluation

The bulk of the Rational Design special issue consists of eight “empirical” articles. These articles serve several functions, including developing the conjectures further and extending the theoretical framework. Arguably, however, the most important purpose of the articles is to “[evaluate the] conjectures in the context of many different areas of international politics.”⁵⁹ As Koremenos, Lipson, and Snidal note, “The ultimate value of our framework depends on its ability to explain phenomena across a range of substantive issues.”⁶⁰

Obviously, the task of evaluating the many conjectures cannot be completed in a single volume. Nevertheless, one might reasonably expect that, in the course of eight carefully chosen and well-designed case studies spanning more than 200 pages, a good deal of progress could be made. In fact, however, because of problems with the choice and execution of the cases, the case studies are able to provide at best a very limited evaluation.

Case Selection

Although the empirical case studies cover a number of areas, they can hardly be considered representative of the full range of substantive issues. Five of the eight articles deal with economic issues, and of those, three are primarily concerned with trade arrangements. Two of the remaining articles address security issues, but one of those concerns institutional arrangements—prisoners of war (POW) treaties—that are relatively peripheral to the core security interests of states, while the other focuses narrowly on the criteria for admitting new members to NATO. Only one article covers environmental and natural resource issues, while none are devoted to such areas as broad political and diplomatic relations, human rights, science and technology, health, culture, and education, among others.

Nevertheless, even a substantively nonrepresentative set of cases could be used to conduct a qualified evaluation of the conjectures, if properly framed. Ideally, the cases would be as comparable as possible while exhibiting variation along one or more of the dimensions of interest. In fact, however, the cases fall well short of achieving this methodological desideratum.

57. Koremenos, Lipson, and Snidal 2001b, 795–96.

58. Koremenos, Lipson, and Snidal 2001a, 1062.

59. Koremenos, Lipson, and Snidal 2001b, 797.

60. *Ibid.*, 796.

Above all, few of the cases fit neatly with the project's stated focus on the rational design of explicit, negotiated arrangements. Three of the cases, arguably, are at best tangential. The subject of the article by Pahre is centralized bargaining, or "clustering," yet as Pahre himself admits, "clustering does not meet the Rational Design definition of an institution."⁶¹ Morrow's article on POW treaties deals with "normative values" and "informal understandings" that were codified and formalized in treaties, raising questions about how much discretion the designers of the formal arrangements actually had.⁶² Mattli's article focuses on the selection by private parties among alternative preexisting methods of international commercial dispute resolution, leaving unexamined the design of those institutions in the first place.⁶³

These three cases may be interesting and important in their own right, but given the abundance of situations that would clearly fit the project's stated focus, it is puzzling that more effort was not made to ensure that the cases were comparable in this respect. Of the remaining five case studies, two "are primarily formal exercises"⁶⁴ that contain little by way of empirical material and thus have little to contribute to the assessment of the conjectures, while a third is evenly divided between a formal extension of the framework and an examination of evidence. That leaves perhaps, at best, two or three articles that can offer systematic empirical evaluations of the analytical framework.

Operationalization of the Variables

Additional concerns about the comparability of the empirical cases arise from the way in which the variables are handled. For the cases to generate useful findings, the variables must be operationalized and measured in a consistent manner. It is not at all clear, however, whether this is in fact the case.

The problem begins with the analytical framework, which offers no guidance on this vital methodological issue to those who would attempt to evaluate the conjectures. This oversight would seem to be especially regrettable insofar as most of the independent variables are both relatively abstract and treated as potentially continuous in nature. For example, Koremenos, Lipson, and Snidal write that "*Uncertainty* refers to the *extent* (emphasis added) to which actors are not fully informed about others' behavior, the state of the world, and/or others' preferences."⁶⁵ Presumably, one can always find at least some evidence of uncertainty with regard to each of these factors, especially in international relations. It becomes vital, then, to be able to measure the extent of uncertainty, or at least to be able to dis-

61. Pahre 2001, 859–61. Defined as "a state's simultaneous negotiations with two or more countries on the same issue," clustering is more akin to behavior.

62. Morrow 2001.

63. Mattli 2001.

64. Koremenos, Lipson, and Snidal 2001a, 1066.

65. Koremenos, Lipson, and Snidal 2001b, 778.

tinguish with confidence between high and low levels of uncertainty; otherwise, it effectively becomes a constant. Similar sets of concerns attend the operationalization and measurement of enforcement problems, which "refers to the *strength* (emphasis added) of individual actors' incentives to cheat on a given agreement or set of rules,"⁶⁶ and of distribution problems, the "*magnitude*" (emphasis added) of which "depends on how each actor compares its preferred alternative to other actors' preferred alternatives."⁶⁷

The degree to which the variables are in fact measured in a consistent manner in the case studies is difficult to ascertain. Although some authors provide separate discussions of their characterizations of the variables, in other cases these operationalizations are not at all highlighted and the reader must hunt for them in the text. Nevertheless, some inconsistencies are readily apparent. For example, Kydd focuses on the restrictiveness of NATO membership criteria, while Pahre measures membership in terms of the number of states that actually join the trade regime.⁶⁸ For their part, Mitchell and Keilbach redefine scope in terms of the choice among three ideal-types of bargains, rather than the breadth of issues covered per se.⁶⁹ There is somewhat more consistency with regard to the handling of centralization—the degree to which important institutional tasks are performed by a single focal entity—but here, too, one finds discrepancies, such as Morrow's inclusion of treaty negotiation and ratification as centralized tasks, Mattli's treatment of centralization as the degree to which arbitration takes place within pre-existing centers (rather than on an ad hoc basis), and Pahre's equation of centralization with clustering.⁷⁰

Ironically, one important source of consistency in measurement is itself a cause of additional problems: a pronounced tendency to treat the independent variables not as potentially continuous but as dichotomous. Frequently, the authors of the empirical cases seem content to simply note that distribution or enforcement problems exist or that various types of uncertainty are present, rather than attempt to discern their extent, magnitude, or strength. This simplification, although not mandated by the framework, may be necessary in practice, but it greatly limits the ability of the project to explain variations in the wider range of values that can be assumed by the nondichotomous dependent variables.

A notable exception to this tendency is the article by Mitchell and Keilbach, which explicitly examines variation in the severity of enforcement and distribution problems.⁷¹ Rather than attempt to measure these directly, however, the authors focus on variation in the asymmetry of externalities, which represents an amalgamation of the two types of cooperation problems. As a result, it is not pos-

66. *Ibid.*, 776.

67. *Ibid.*, 774.

68. See Kydd 2001; Pahre 2001, 879, 888.

69. Mitchell and Keilbach 2001.

70. See Morrow 2001; Mattli 2001; and Pahre 2001.

71. Mitchell and Keilbach 2001.

sible to establish directly the relationship between enforcement and distribution problems, on the one hand, and the dependent variables of interest, on the other, and thus to determine which independent variable, if any, exerts the most influence.

Overall Lack of Empirical Support

As a result of such problems with case selection and execution, the special issue is able to offer at best a very limited evaluation of the conjectures, and thus of the framework. This conclusion follows in part from an examination of the frequency with which the conjectures appear in the empirical chapters (see Table 1). In fact, a majority (nine of sixteen) are addressed in two or fewer case studies. Of the remaining seven conjectures, four appear in three cases, two appear in four cases, and one appears in five, while just one of the seven is consistently supported by the evidence, according to the summary table of results.⁷²

Notwithstanding this fact, Koremenos, Lipson, and Snidal conclude that eleven of the conjectures received either strong, very strong, or extremely strong support. To be sure, no canonical methodological criteria exist for making such judgments. Nevertheless, one might expect a somewhat more qualified endorsement of the conjectures in view of the limited number of cases in which they are addressed—five of the eleven are considered in only one or two cases.

The need for caution is further suggested by a partial review of the results as presented in the case studies. For example, the second and third (of three) conjectures about the inclusiveness of membership (designated M2 and M3) are said to receive strong support based on the findings in two and three cases, respectively. Yet most, if not all, of these findings are problematic. Kydd's conclusion that restrictive NATO membership criteria are a response to uncertainty over preferences, supporting M2, follows from a formal model in which differing levels of uncertainty are assumed, rather than from a careful examination of empirical evidence.⁷³ Pahre, whose focus is on centralization, discusses conjecture M3 only tangentially, and explicitly acknowledges that he does not test it formally.⁷⁴ Morrow's finding that the system of POW treaties supports conjecture M2 ("restrictive membership increases with uncertainty about preferences") is undercut by his observation that the membership rules are not restrictive; the only states that are not members are those that choose not to ratify the treaties.⁷⁵ Richard's early observation that "intense distributional concerns in postwar aviation markets led to inclusive membership, confirming conjecture M3" is at odds with the fact that the

72. Koremenos, Lipson, and Snidal 2001a, 1055.

73. Kydd 2001, 803 and 821.

74. Pahre 2001, 879, 888. A further problem is that Pahre's reference to membership concerns the regimes within which centralization (clustering) of negotiations may or may not take place, rather than which states actually participate in the clustering.

75. Morrow 2001, 983, 985–86. Morrow also concludes that M3 is only weakly supported.

international markets were defined and largely regulated by exclusive bilateral interstate agreements.⁷⁶

Koremenos, Lipson, and Snidal also draw conclusions about the importance of the different independent variables as possible guidance for future research. In particular, they are struck by the relatively high frequency with which distributional concerns and uncertainty appear in tests of the conjectures in the various cases, and the frequency with which those tests yield confirmations.⁷⁷ The validity of such "findings" is highly dependent, however, on the representativeness and appropriateness of the cases as well as how well they are executed, all of which can be questioned.

Conclusion

The Rational Design project represents a valuable contribution to the theoretical literature on international institutions. In particular, it offers a useful foundation on which to build theories about the particular forms that institutions take. As presented in the special issue, however, the project contains a number of significant limitations. Some of these, such as the relatively limited range of institutions to which it applies and the types of questions that are asked about them, concern the scope of the project and are largely a matter of choice. All that may be required to address such limitations is a more thorough and explicit discussion of the boundaries of the enterprise.

Other existing weaknesses, however, especially those concerning the analytical framework and the attempts made thus far to evaluate it empirically, have directly impeded the achievement of the project's goal of offering a systematic account of institutional design features. Consequently, these weaknesses must be addressed if the project is to realize its full potential. Fortunately, this task should not represent an insuperable challenge. The above discussion has suggested that most, if not all, of these shortcomings are remediable.

Turning first to the framework, more thought needs to be given to both the dependent and independent variables of interest before further empirical evaluation is attempted. Alternative formulations of both sets of variables should be considered and discussed, with explicit reference being made to other possibilities that can be found in the institutional literature. An attempt should be made to relate such abstract phenomena as distribution and enforcement problems to more fundamental—if still somewhat intangible—factors, such as interests, power, and beliefs. In addition, at least some of the current variables—notably centralization—would seem to require further disaggregation before they can be applied fruitfully in empirical studies. As for the conjectures, greater effort must be made to exploit

76. Richards 2001, 995. It is perhaps noteworthy that Richards does not repeat this assertion in the body or conclusion of the article.

77. Koremenos, Lipson, and Snidal 2001a, 1063.

the most distinctive feature of the project, which is its attempt to bring together multiple dependent and independent variables within a single analytical framework. In particular, given the resulting potential for multiple institutional equilibria, significantly more attention needs to be given to possible interactions among the variables.

With regard to the empirical evaluation of the framework, cases must be selected in accordance with explicit, methodologically sound criteria. It will be useful, eventually, to explore how well the framework applies to norm-based institutional forms, case-by-case selection among preexisting institutional alternatives, and related phenomena such as Pahre's clustering. But given that the Rational Design project is still in its early stages, empirical testing should be tightly restricted to cases that are indisputably at the heart of the project's ambit, namely the design of explicit, negotiated, arrangements.

From a practical standpoint, it might also be advisable to focus initially on the evaluation of a more limited number of conjectures, as defined by subsets of the most important dependent and independent variables. In the eight empirical articles contained in the special issue, for example, some twenty-two of the thirty-seven "tests" concerned the six conjectures associated with combinations of three of the five dependent variables (MEMBERSHIP, CENTRALIZATION, FLEXIBILITY) and three of the six independent variables (DISTRIBUTION, ENFORCEMENT, UNCERTAINTY ABOUT THE STATE OF THE WORLD).⁷⁸ Arguably, more useful results might have been obtained if the authors had been encouraged to delve deeply into those questions rather than attempt to address all potentially relevant conjectures. Nevertheless, such a strategy makes sense only if significant design trade-offs are not expected to exist with other variables, or cases can be chosen in such a way that other variables are held constant.

Finally, it behooves the project organizers to develop and publicize explicit guidelines with regard to how the variables might be operationalized and measured. Moreover, insofar as the project remains under central direction, the organizers might usefully review the way in which the variables are handled in future case studies. Failing that, the development of a more standard format for presenting descriptions of the variables and evaluations of the conjectures would facilitate cross-case comparisons and external assessments.

References

Abbott, Kenneth W., Robert O. Keohane, Andrew Moravcsik, Anne-Marie Slaughter, and Duncan Snidal. 2000. The Concept of Legalization. *International Organization* 54 (3):401–19.

78. In contrast, only fifteen tests concerned the other ten conjectures associated with the remaining dependent variables (SCOPE and CONTROL) and independent variables (NUMBER OF ACTORS, ASYMMETRY OF ACTORS, UNCERTAINTY ABOUT BEHAVIOR, and UNCERTAINTY ABOUT PREFERENCES), making it more difficult to evaluate them.

- Goldstein, Judith, and Robert O. Keohane. 1993. Ideas and Foreign Policy: An Analytical Framework. In *Ideas and Foreign Policy: Beliefs, Institutions, and Political Change*, edited by Judith Goldstein and Robert O. Keohane, 3–30. Ithaca, N.Y.: Cornell University Press.
- Gruber, Lloyd Gerard. 2000. *Ruling the World: Power Politics and the Rise of Supranational Institutions*. Princeton, N.J.: Princeton University Press.
- Keohane, Robert O. 1989. *International Institutions and State Power: Essays in International Relations Theory*. Boulder, Colo.: Westview Press.
- Koremenos, Barbara, Charles Lipson, and Duncan Snidal. 2001a. Rational Design: Looking Back to Move Forward. *International Organization* 55 (4):1051–82.
- . 2001b. The Rational Design of International Institutions. *International Organization* 55 (4):761–99.
- Krasner, Stephen D. 1983. Structural Causes and Regime Consequences: Regimes as Intervening Variables. In *International Regimes*, edited by Stephen D. Krasner, 1–21. Ithaca, N.Y.: Cornell University Press.
- . 1991. Global Communications and National Power: Life on the Pareto Frontier. *World Politics* 43 (3):336–66.
- Kratochwil, Friedrich, and John Gerard Ruggie. 1986. International Organization: A State of the Art on the Art of the State. *International Organization* 40 (4):754–75.
- Kydd, Andrew. 2001. Trust Building, Trust Breaking: The Dilemma of NATO Enlargement. *International Organization* 55 (4):801–28.
- Legro, Jeffrey. 1997. Which Norms Matter? Revisiting the "Failure" of Internationalism. *International Organization* 51 (1):31–63.
- Lipson, Charles. 1991. Why Are Some International Agreements Informal? *International Organization* 45 (4):495–538.
- Martin, Lisa L. 1992a. *Coercive Cooperation: Explaining Multilateral Economic Sanctions*. Princeton, N.J.: Princeton University Press.
- . 1992b. Interests, Power, and Multilateralism. *International Organization* 46 (4):765–92.
- Martin, Lisa L., and Beth Simmons. 1998. Theories and Empirical Studies of International Institutions. *International Organization* 52 (4):729–57.
- Matthli, Walter. 2001. Private Justice in a Global Economy: From Litigation to Arbitration. *International Organization* 55 (4):919–47.
- Mitchell, Ronald B., and Patricia M. Keilbach. 2001. Situation Structure and Institutional Design: Reciprocity, Coercion, and Exchange. *International Organization* 55 (4):891–917.
- Morrow, James D. 2001. The Institutional Features of the Prisoners of War Treaties. *International Organization* 55 (4):971–91.
- Pahre, Robert. 2001. Most-Favored-Nation Clauses and Clustered Negotiations. *International Organization* 55 (4):859–90.
- Richards, John E. 1999. Toward a Positive Theory of International Institutions: Regulating International Aviation Markets. *International Organization* 53 (1):1–37.
- . 2001. Institutions for Flying: How States Built a Market in International Aviation Services. *International Organization* 55 (4):993–1017.
- Ruggie, John Gerard. 1983. International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order. In *International Regimes*, edited by Stephen D. Krasner, 195–231. Ithaca, N.Y.: Cornell University Press.
- Schauer, Frederick F. 1991. *Playing by the Rules: A Philosophical Examination of Rule-Based Decision Making in Law and in Life*. New York: Oxford University Press.
- Snidal, Duncan. 1985. Coordination Versus Prisoners Dilemma: Implications for International Cooperation and Regimes. *American Political Science Review* 79 (4):923–42.
- Stein, Arthur A. 1983. Coordination and Collaboration: Regimes in an Anarchic World. In *International Regimes*, edited by Stephen D. Krasner, 115–40. Ithaca, N.Y.: Cornell University Press.
- Tallberg, Jonas. 2002. Delegation to Supranational Institutions: Why, How, and with What Consequences? *West European Politics* 25 (1):23–46.

- Wallander, Celeste A. 2000. Institutional Assets and Adaptability: NATO After the Cold War. *International Organization* 54 (4):705–37.
- Wendt, Alexander E. 1999. *Social Theory of International Politics*. New York: Cambridge University Press.
- . 2001. Driving with the Rearview Mirror: On the Rational Science of Institutional Design. *International Organization* 55 (4):1019–49.
- Young, Oran R. 1989. *International Cooperation: Building Regimes for Natural Resources and the Environment*. Ithaca, N.Y.: Cornell University Press.
- Zürn, Michael. 1997. Assessing State Preferences and Explaining Institutional Choice: The Case of Intra-German Trade. *International Studies Quarterly* 41 (2):295–320.