

# EXIT, NO EXIT

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## INTRODUCTION

Is international law rationally designed? That is, can we make sense of all the detailed provisions that make up the typical international agreement, features like duration provisions, escape clauses, the precision or vagueness of an agreement's main goals, or even withdrawal provisions? Do such provisions vary systematically in a way that makes sense given the problems states are trying to resolve by making international law?

Treaty design is a topic that has been the object of much research by legal scholars, but that has garnered relatively little attention from students of international relations ("IR").<sup>1</sup> Over the past decade, however, a resurgence of interest in international law has led many from the IR field to consider seriously the implications of the specific legal provisions that are inscribed in international agreements.<sup>2</sup> This Article contributes to the

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1. See, e.g., Francois S. Jones, *Treaties and Treaty-Making*, 12 POL. SCI. Q. 381, 420-49 (1897); Robert R. Wilson, *Revision Clauses in Treaties Since the World War*, 28 AM. POL. SCI. REV. 807, 901-09 (1934).

2. See Barbara Koremenos, *Contracting around International Uncertainty*, 99 AM. POL. SCI. REV. 473, 549-65 (2005) (arguing that finite duration provisions allow states to contract in the presence of uncertainty because they allow for adjustment or termination if the agreement does not work as anticipated); B. Peter V. Rosendorff & Helen V. Milner, *The Optimal Design of International Trade Institutions: Uncertainty and Escape*, 55 INT'L ORG. 761, 829-57 (2001) (arguing that international institutions are likely to be more durable and stable when they include an escape clause in the design). See generally BETH SIMMONS, *MOBILIZING FOR HUMAN RIGHTS: INTERNATIONAL LAW IN DOMESTIC POLITICS* (2009) (arguing that states observe better human rights practices after they ratify human rights treaties because ratification empowers domestic groups, and that this remains true across domains ranging from women's rights to civil rights to children's rights); Kal Raustiala, *The Architecture of International Cooperation: Transgovernmental Networks and the Future of International Law*, 43 VA. J. INT'L L. 1 (2002) (arguing that specialized domestic agencies, particularly those geared towards regulation, can enhance domestic compliance with international treaties).

ongoing discussion between the legal and the political science communities by offering a theoretical argument and large-n empirical analysis<sup>3</sup> of the factors that condition the design of an important feature of international agreements: withdrawal clauses.<sup>4</sup>

Building on earlier theoretical developments,<sup>5</sup> we explain how the inclusion of withdrawal clauses, and how their specific form, should be understood as a rational response to the strategic environment in which states hope to cooperate. We contend that under certain conditions, a “quick withdrawal” could offer a strategic advantage to the withdrawing state. In game theory, this is equivalent to the high payoff a state receives in a Prisoner’s Dilemma-type game when other states cooperate while it defects.<sup>6</sup> Even though withdrawing is lawful and not equivalent to defecting in that sense,<sup>7</sup> strategically, withdrawing has the same effect as defecting: The state that is no longer abiding by the terms of the agreement gains while the states left cooperating lose. We argue that states can solve this strategic problem with a withdrawal provision that includes a notice period and that this notice period is likely to be long. The longer notice

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3. A large-n analysis is a systematic statistical study of a population of cases, in this case, a large dataset of international agreements. *See generally* Lee Epstein & Gary King, *The Rules of Inference*, 69 U. CHI. L. REV. 1, 2 (2002) (arguing that large-n statistical analysis of a scientific random sample of international agreements allows inferences from this set of agreements to a much wider-range of cases). This method of large-n research is in contrast to the use of descriptive inference, as commonly used in legal scholarship, where scholars unscientifically generalize about the world from empirically examining small parts of it. *See id.* at 30 (arguing that inference from large-n work—as commonly applied in scientific studies in the natural and social sciences—adds accuracy and depth to legal scholarship).

4. In this paper, we follow Helfer in using the terms ‘exit,’ ‘denunciation,’ and ‘withdrawal’ interchangeably. *See generally* Laurence R. Helfer, *Exiting Treaties*, 91 VA. L. REV. 1579 (2005).

5. Rational Design theory is elaborated in detail below. *See infra* Part II; *see also* Barbara Koremenos, Charles Lipson & Duncan Snidal, *The Rational Design of International Institutions*, 55 INT’L ORG. 761 (2001).

6. Game theory allows us to analyze outcomes that result from strategic interactions between actors. For instance, the Prisoner’s Dilemma models a 2-by-2 game, that is, a two player, two option matrix, where two prisoners are taken to different rooms by cops who visit each prisoner separately. Either prisoner can give evidence to convict the other. If neither testifies against the other, they will both be convicted only of a very minor crime, say a one-year sentence. If Prisoner 1 testifies against Prisoner 2 but Prisoner 2 remains silent, Prisoner 2 gets a tough sentence, say ten years, and Prisoner 1 goes free and vice versa. If both testify against the other, both get a sentence of five years. Each prisoner makes a strategic decision, without knowing how the other prisoner will act, about whether or not to testify based on a “dominant” strategy. Regardless of whether or not the other prisoner testifies, it is in each prisoner’s interest to testify because he will receive a lower sentence in the event that the other prisoner testifies or in the event that the other prisoner stays quiet. But when both prisoners act rationally and testify against the other, they receive sentences of five years each; if they went against their self interest and remained quiet, they would receive only one year sentences, hence the dilemma. *See* ROBERT AXELROD, *EVOLUTION OF COOPERATION* 8 (2006).

7. *See generally* Helfer, *supra* note 4.

period levels the playing field for all states, reducing fear that the remaining states would be taken advantage of and eliminating one of the advantages to withdrawing. In this way, including a withdrawal provision with a notice period actually results in states being more willing to cooperate in the first place since their fear of opportunistic behavior on the part of their partners is reduced, and it makes cooperation more robust since withdrawing will occur less often once one of the advantages to withdrawing is reduced.

We also argue that when states face domestic commitment or time inconsistency problems, that is, when tying their hands is in their self interest in the long run but often politically difficult in the short run, they write agreements that include withdrawal provisions with wait periods (the amount of time that a state must wait before even giving notice of the intent to withdraw) and that this wait period is likely to be long. Such provisions help the state with the commitment problem solve its challenge and help assure its partner states that it is indeed a credible partner in cooperation.

The next section of this paper puts the functions of exit clauses in a broader theoretical perspective by focusing on Laurence Helfer's article about exit provisions. We proceed by introducing the "Rational Design" theoretical framework to the law community, highlighting how it can shed light on the topic at hand.<sup>8</sup> We then present our theoretical hypotheses, introduce the data from the Continent of International Law ("COIL"), a research project which aims to assemble detailed information on a large random sample of international agreements across the issue areas of economics, environment, human rights, and security,<sup>9</sup> and display the results of empirical testing. The results strongly support the hypotheses. We conclude that exit clauses are indeed rationally designed, thus corroborating their significance as well as the meaningfulness and rationality of international law more generally.

## I. EXIT CLAUSES IN THEORETICAL PERSPECTIVE

The process of negotiating treaty provisions is costly. If we assume that the signatory parties are rational actors, it follows that withdrawal clauses must be beneficial, or they would not appear in agreements. However, because states are sovereign actors, and given that there exists no centralized mechanism for the enforcement of international agreements,

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8. See Koremenos et al., *supra* note 5, at 761 and accompanying pieces in the 2001 *International Organization* special issue on Rational Design.

9. See generally Barbara Koremenos, *The Continent of International Law* (Mannheimer Zentrum für Europäische Sozialforschung [Mannheim Centre for European Social Research], Working Paper No. 128, 2009) (F.R.G.), available at <http://www.mzes.uni-mannheim.de/publications/wp/wp-128.pdf>.

states retain the ability to unilaterally (and illegally) defect from the agreements they conclude. This suggests two interesting puzzles: First, why would states codify practices that are already enabled by the anarchic nature of the international system?<sup>10</sup> Second, what can account for the wide variations in the design of exit clauses?

In his 2005 article *Exiting Treaties*,<sup>11</sup> Laurence Helfer answers the first question and makes an important contribution by highlighting the very different consequences that ensue from a unilateral and unlawful breach of treaty obligations, relative to a public and lawful exit of one of the parties.

First, noncompliance<sup>12</sup> does not “necessarily result in termination of the defaulting state’s membership.” In contrast, a state that exits a treaty is “foreclosed from the mechanisms of voice that the treaty establishes, mechanisms that can be used to influence both the parties’ current behavior as well as future rounds of international rulemaking.”<sup>13</sup> Not only do withdrawing states lose voice, but they can also be excluded from the benefits that accrue from membership.<sup>14</sup>

Second, a state which denounces a treaty in a lawful and public manner cannot be exposed to intra-treaty sanctions. Other signatories cannot use the treaty’s enforcement mechanism to punish or encourage certain types of behavior on the part of the withdrawing state. Lawful exit may also affect other states’ ability to legitimize the use of extra-treaty sanctions.<sup>15</sup>

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10. In Koremenos et al., the Rational Design framework is presented in explicit contrast to earlier work in the IR literature on cooperation under anarchy. The traditional view is that institutions generally play a modest role in international politics. From our perspective however, decentralized cooperation is difficult, but states can and do use institutions to eschew the strategic problems that are caused by the absence of centralized enforcement mechanisms. See Koremenos et al., *supra* note 5 (reviewing the literature and providing a thorough exposition of our views on the topic).

11. Helfer, *supra* note 4.

12. As Helfer points out, “breaches are highly varied. They may affect only a single treaty article, a handful of obligations, or the entire treaty.” The argument put forth above holds regardless of the extent of the breach. See *id.* at 1614.

13. *Id.* at 1613.

14. *Id.* at 1621. The ability to exclude a withdrawing partner from the benefits of a treaty depends on the type of goods that are generated by it. In the case of private or club goods, exclusion is possible; in the case of public goods, which are non-rival and non-excludable, it is impossible to prevent a state that exits from free-riding on the contributions of the members that remain. On the collective action problem that arises when actors attempt to coordinate for the production of public goods, see generally MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION* (1965) (arguing that when a public good is provided by a set of actors, others will “free ride” unless the good is provided to only those actors who are active participants in the provision of the good). On the related problem of managing shared resources, see generally ELINOR OSTROM, *GOVERNING THE COMMONS* (1990) (detailing how in the face of temptations to free-ride, designing durable institutions of cooperation can resolve a “tragedy of the commons”).

15. Helfer, *supra* note 5, at 1616-17.

Finally, Helfer argues that “[t]he choice to denounce, together with any explanation the state offers to justify its decision, may signal an intent to ‘play by the rules’ of future treaties as well. As a result, harm to the withdrawing state’s reputation as a law abiding nation may be minimal.”<sup>16</sup>

In sum, Helfer shows that the breach of treaty obligations and the complete withdrawal of a state yield different payoffs; the presence of an exit clause in a treaty alters the incentive structure that states face when they weigh the costs and benefits of cooperation versus defection. From this vantage point, Helfer criticizes the extant international relations literature by arguing that it has largely neglected the exit option by forcing the real world into 2-by-2 games like the Prisoner’s Dilemma. According to Helfer, future research should thus expand the range of available strategies for the players.<sup>17</sup> Analysts should also consider the interaction of problem structure, externalities, and exit clauses.<sup>18</sup>

We take seriously Helfer’s call for an examination of the interaction of problem structure and exit clauses. What is needed to move forward is an approach that is internally consistent and based on solid micro-foundations.<sup>19</sup> As we show below, the Rational Design project, which indeed moves away from 2-by-2 games, begins to respond to this need.

## II. THE RATIONAL DESIGN OF INSTITUTIONS<sup>20</sup>

The starting point for Rational Design is a very simple observation: institutionalized international cooperation is organized in radically different ways. Institutionalized international cooperation (what political scientists call “international institutions”) is defined as explicit arrangements—negotiated among international actors—that prescribe, proscribe, and/or authorize behavior. This includes the tens of thousands of international agreements that are registered with the United Nations (“UN”). But what is

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16. In his article, Helfer offers a more nuanced version of this general argument, by highlighting the importance of three variables on the reputational consequences of exit: “(1) the frequency of denunciation and withdrawal; (2) the relationship between entering and exiting treaties; (3) the risks of opportunism in light of the pervasive uncertainty of international affairs.” *See id.* at 1622.

17. Helfer considers the potential implications of extending the range of options to three in collaboration and coordination games, but does not offer a serious game-theoretic treatment of the question. *Id.* at 1629–36.

18. *Id.* at 1636–39.

19. By micro-foundations, we mean that the primary unit of analysis is the individual state and the preferences it holds as well as the constraints it faces. Collective outcomes of interest are derived from individual states interacting strategically. This is opposed to a sociological approach, for example, where the unit of analysis is the collective and what is studied is how the collective—for example, a set of norms—influences the individual states.

20. This section draws heavily on Koremenos et al., *supra* note 6, and Barbara Koremenos, *Loosening the Ties that Bind: A Learning Model of Agreement Flexibility*, 55 INT’L ORG. 289 (2001).

really important about the Rational Design agenda is the following theoretical premise: We cannot understand institutional design and compare across institutions/agreements without understanding the cooperation problem(s) the institutions are trying to solve.

Consider a comparison of the North American Free Trade Agreement (“NAFTA”) with the European Union (“EU”). Certain scholars and policymakers contemplated a NAFTA that more closely resembled the EU. Yet before we can compare the two to determine whether NAFTA somehow falls short, we have to consider the cooperation problems faced by the various actors when these institutions, including their predecessors, were concluded. The cooperation problems Europeans faced when the institutions of the EU began to form in post-World War II were far more dramatic than those ever facing North America. North America and Europe both wanted to cooperate over trade and hence faced the common Prisoner’s Dilemma-like incentives to defect. In addition, however, the Europeans faced a unique problem concerning Germany that could be characterized either as a significant *Uncertainty about Preferences*<sup>21</sup> (Could Germany be trusted? Was Germany indeed a peace-loving state or would it end up going down the same path that brought about two World Wars?), or as a commitment problem,<sup>22</sup> when an actor’s optimal plan today may not be optimal at a future point in time (Was it just a matter of time before some future German leader follows the destructive path of the past?). Given that the Europeans had to solve either *Uncertainty about Preferences* or a commitment problem, the institutional design of the EU would likely be more elaborate than that called for by the North American environment.

Because we cannot understand institutional design and compare and contrast international agreements without understanding the cooperation problem(s) the agreements are trying to solve, it can be implied that differences among international institutions or agreements are not random. Rather, states and other international actors shape institutions to solve the specific cooperation problems that they face. In other words, design variations are largely the result of rational, purposeful interactions. The goal of Rational Design is to offer a systematic account of these design features, relating them to recurrent problems faced by states.<sup>23</sup>

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21. This is one of the independent variables in the Rational Design framework, which is elaborated below. *See infra* Part IV.

22. This, too, is one of the independent variables in the Rational Design framework, which is elaborated below. *See infra* Part IV.

23. In game theory terms, effective international institutions are aspects of stable equilibria. Hence, they must be incentive-compatible and robust against small perturbations. Another way of thinking about this is to say that rational institutional design allows states to reach more efficient

Rational Design focuses on five key dimensions of international institutions—the *dependent variables*.<sup>24</sup> These are listed below.

Membership rules (MEMBERSHIP)  
Scope of issues covered (SCOPE)  
Centralization of tasks (CENTRALIZATION)  
Rules for controlling the institution (CONTROL)  
Flexibility of arrangements (FLEXIBILITY)

These are not the only dimensions of institutions, but these are among the most important. These different dependent variables capture important variations in the design of international agreements. The first dependent variable, MEMBERSHIP,<sup>25</sup> captures who is included in the agreement: is the membership designed to be restrictive or all-inclusive? These concepts are not to be confused with the actual number of actors involved in the institution. Whereas NAFTA has a small number of states, it is institutionally less restrictive than the EU. EU members must institute low budget deficits and criteria for human rights. The EU is thus a much more costly institution to join than NAFTA.

The second dependent variable, SCOPE,<sup>26</sup> details which issues will be addressed in the agreement. In some cases this refers to a single issue area, as in which kind of military arms are subject to the agreement, in other cases, this refers to whether trade issues will be linked to security issues.

The third dependent variable, CENTRALIZATION,<sup>27</sup> details which tasks will be required to achieve cooperation, and how they will be delegated. Whereas some tasks such as information collection, rule-making, reviews, monitoring and dispute settlement can be centralized, others cannot. This concept is among the more controversial design elements, as it touches directly on national sovereignty. States are reluctant to delegate authority since they thereby lose at least some control over the outcome. In other words, delegation introduces risk.

CONTROL<sup>28</sup> is the fourth dependent variable and it measures how collective decisions will be made within the institutional arrangement. For example, do the voting rules imply equal votes for each or a veto for a minority? This variable addresses how members will make decisions.

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cooperative equilibria and helps stabilize these equilibrium outcomes. Koremenos et al., *supra* note 5, at 761-63.

24. Dependent variables and their definitions were first introduced in *id.* at 768-69.

25. *Id.* at 770.

26. *Id.* at 770-71.

27. *Id.* at 771-72.

28. *Id.* at 772.

Because withdrawal clauses are a form of flexibility, further elaboration of this dependent variable is appropriate. FLEXIBILITY<sup>29</sup> speaks to how the institutional rules and procedures will accommodate new or changed circumstances. Included in this are not only things like duration and renegotiation provisions, escape and withdrawal clauses, and amendment provisions, but also the degree of precision as well as reservations.

As part of the Rational Design argument, Koremenos et al. further argue that variation in institutional design—that is, variation in the dependent variables—is explained by the underlying cooperation problems states are facing when designing their agreements: the independent variables.<sup>30</sup> Instead of using a typology of games, Rational Design calls for the disaggregation of cooperation problems. Fundamentally, states potentially face Distribution problems (which refer to the different preferences that actors have over alternative possible agreements) and enforcement problems (which refer to the incentives actors have to break an agreement). These are then shaped by various degrees of *Uncertainty about Preferences* (that is, uncertainty regarding what one's partners' preferences are), *Uncertainty about Behavior* (not being able to decipher easily whether partners are cooperating or defecting), and *Uncertainty about the State of the World* (that is, uncertainty regarding the consequences of cooperation).<sup>31</sup> Finally, the *Number of Actors* and asymmetries or heterogeneity among them affect the nature of the cooperation problem. Considering these factors independently allows for a treatment of their univariate effects on important features of potential institutions and hence gets around the problem of forcing real-life issues into 2-by-2 games.

Rational Design offers a set of conjectures linking one cooperation problem with one institutional design solution.<sup>32</sup> While we will not replicate the list of conjectures here, we will give a few examples from the Rational Design introduction. Of the sixteen univariate Rational Design conjectures relating one independent variable to one dependent variable, three conjectures involve the dependent variable, flexibility. Two of the three stipulate some aspect of the cooperation problem the states are facing

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29. *Id.* at 773.

30. The independent variables were first presented and elaborated in Koremenos et al., *supra* note 6, at 773–75.

31. These cooperation problems are elaborated in great detail in Barbara Koremenos, *International Institutions as Solutions to Underlying Games of Cooperation* (Institut Barcelona d'Estudis Internacionals, Working Paper 2009/27, 2009).

32. *See* Koremenos et al., *supra* note 5, at 780.

as the independent variable: “Flexibility increases with Uncertainty about the State of the World”<sup>33</sup> and “Flexibility increases with the Severity of the Distribution Problem.”<sup>34</sup> The third conjecture pertains to transaction costs—“Flexibility decreases with Number”<sup>35</sup>—where number can capture the literal number of states and/or their heterogeneity.<sup>36</sup>

To illustrate the intuition underlying the relevant Rational Design conjectures, consider the hypothesis that as a certain kind of uncertainty increases, states will design agreements to allow for more flexibility in the institutional rules: “Flexibility increases with Uncertainty about the State of the World.” International cooperation is plagued by uncertainty. While states negotiate the best agreements possible using available information, unpredictable things happen after agreements are signed that are beyond states’ control. States may not even commit themselves to an agreement if they anticipate circumstances will alter their expected benefits. Certain flexibility provisions, like duration clauses, can insure states in this context. Ex ante, all parties would agree to such a clause in the face of the uncertainty problem since each one is under the veil of ignorance about who might gain or lose more than anticipated.

What does a variable like uncertainty about the state of the world look like in real life? The best place to start the process of operationalizing and measuring a challenging variable is through some research, which allows one to understand the meaning of the variable in important, real-life cases. The Nuclear Non-Proliferation Treaty (“NPT”) is one such case.<sup>37</sup>

In *Loosening the Ties that Bind: A Learning Model of Agreement Flexibility*, Koremenos discusses the negotiating process of the NPT and the potential underlying reasoning for such debate.<sup>38</sup> It turns out that choosing the duration and renegotiation provisions of the NPT provoked an intense debate. The treaty negotiations lasted from 1962 to 1968. As late as 1967, the United States and the Soviet Union (the original drafters) were pressing for a treaty with an unlimited duration while the Germans and the Italians were emphasizing the impossibility of accepting such duration. As the Italian representative to the negotiating committee, Caracciolo, stated:

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33. *Id.* at 793-94.

34. *Id.* at 794.

35. *Id.* at 794-95.

36. Heterogeneity can mean different things in different contexts. For instance, in a security agreement, the meaningful heterogeneity might be between those possessing nuclear weapons or those not, or the dispersion of military power overall; in an economic agreement, the wealth or economic system of the set of states might be the relevant measure, while in human rights agreements, the wider the cultural divides, the greater the heterogeneity.

37. This example draws directly on ideas first discussed in Koremenos, *supra* note 20, at 304.

38. *Id.* at 305-08.

“... it is not the lot of man, to pledge eternity. Moreover, if we look back across our thousands of years of history, we see very few non-institutional treaties that have simply survived the vicissitudes of one generation, let alone achieved immortality. Therefore we fear that to affirm a principle so remote from reality may introduce into the treaty an element of weakness rather than of strength.”<sup>39</sup>

Hence the uncertainty about the state of the world was too high to make non-nuclear weapon states comfortable accepting an indefinitely long agreement. What did this uncertainty look like in real life? First, there were uncertainties surrounding the security consequences of the treaty. These included uncertainty about the effort that the nuclear weapon states would put into nuclear disarmament, uncertainties about extended deterrence, and uncertainties about which countries would end up participating in the regime.

Second, there were uncertainties surrounding the economic consequences of the treaty. These included whether the treaty might restrict non-nuclear weapon states' ability to make peaceful use of nuclear energy, how economically costly the International Atomic Energy Agency monitoring would turn out to be, and whether states that were not parties to the treaty might be able to obtain nuclear technology with fewer restrictions than signatory states.

Third, there were uncertainties surrounding the political consequences of the treaty. In particular, Italy worried that the distribution of gains from the NPT would skew the distribution of power in Europe in ways that would make European integration difficult if not impossible.

Essentially, this great uncertainty about the state of the world—that is, uncertainty about how the agreement would turn out in terms of its distribution of costs and benefits—forced the Soviet Union and the United States to compromise their desire for an indefinite agreement. What resulted from the negotiations was a twenty-five year duration agreement, with reviews every five years. The institutional design choice of flexibility helped states solve the cooperation problem.

Every Rational Design conjecture has game-theoretic underpinnings. As an example, it might be helpful to elaborate the theory informing this particular Rational Design conjecture of “Flexibility increases with Uncertainty about the State of the World.”

The conjecture has its origins in work in economics, especially, contract theory. Economists have long recognized the importance of

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39. U.S. Arms Control & Disarmament Agency, *Statement by the Italian Representative (Caracciolo) to the Eighteen Nation Disarmament Committee*, DOC. ON DISARMAMENT, 1967, at 528.

flexibility. Two particularly important papers that have theorized it are Gray<sup>40</sup> and Harris and Holmstrom.<sup>41</sup> The Gray paper grew out of attempts to model the role of incomplete contracts<sup>42</sup> at the microeconomic level in bringing about sticky wages at the macroeconomic level.<sup>43</sup> In the Harris and Holmstrom model, renegotiation is synonymous with paying a cost to learn the true value of the underlying state of the world variable. In both models of contract duration, the fundamental tradeoff is between the frequency with which the contracting costs are paid and the disutility of having a contract whose terms do not correspond well to the realized state of the world.

As Rational Design would predict, states do indeed routinely introduce flexibility mechanisms in their international agreements in order to cope with uncertainty. Koremenos and Helfer argue that such provisions act as an insurance policy, allowing states to conclude more agreements in the first place, negotiate more expansive or deeper substantive commitments, and keep their agreements longer without defecting.<sup>44</sup> Kucik and Reinhardt use an innovative research design to determine whether or not the ability to temporarily suspend trade concessions improves the likelihood that states will sign trade agreements.<sup>45</sup>

Connecting uncertainty and exit clauses, Helfer states: “Uncertainty is a pervasive feature of international affairs. Denunciation clauses reduce uncertainty by giving states a low cost exit option if an agreement turns out badly. All other things being equal, such clauses encourage the ratification

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40. See generally Jo Anna Gray, *On Indexation and Contract Length*, 86 J. POL. ECON. 1 (1978).

41. See generally Milton Harris & Bengt Holmstrom, *On the Duration of Agreements*, 26 INT’L ECON. REV. 389 (1987).

42. Incomplete contracts are drawn out because parties face uncertainty about the future when designing a contract and detailing each contingency for all possible outcomes is impossible. See generally Oliver Hart & Bengt Holmstrom, *The Theory of Contracts*, in *ADVANCES IN ECONOMIC THEORY* 71, 71–155 (Truman F. Bewley ed., 1987) (arguing that with transaction costs, incomplete contracts are necessary because the costs of making agreements completely contingent are too high for the parties to choose to do so).

43. Gray’s analysis illustrates the important general point that in the absence of some costs of contracting, contracts would always be written to end whenever new information arrives so that a new contract could be concluded that incorporates the new information. In contrast, in the presence of fixed costs to contracting (these costs may result from, for example, the costs of negotiation), there is a tradeoff between contracting costs and the divergence between the actual contract parameters and those that are optimal for the (evolving) state of the world. Gray’s model embodies this fundamental tradeoff. She examines the choice of the optimal duration (and level of indexing) for a single contract given this tradeoff. Gray, *supra* note 40, at 7.

44. See generally Koremenos, *supra* note 20; Helfer, *supra* note 4.

45. Jeffrey Kucik & Eric Reinhardt, *Does Flexibility Promote Cooperation? An Application to the Global Trade Regime*, 62 Int’l Org 477, 499-500 (2008) (arguing that states that incorporate flexibility through the use of antidumping mechanisms are more likely to commit to binding trade agreements).

of a treaty by a larger number of states than would be prepared to ratify in the absence of such a clause.”<sup>46</sup>

Koremenos refines this particular statement with an analysis that connects particular kinds of flexibility mechanisms with distinctive kinds of uncertainty. Koremenos provides a formal model of duration clauses and argues that that type of flexibility is the superior or optimal response to the kind of uncertainty the Helfer quote describes: the uncertainty surrounding how an agreement may turn out.

What is it that makes a finite duration with the possibility of renegotiation uniquely important in this context? This particular institutional design allows *adjustment* in the face of international uncertainty *without dismantling cooperation*.<sup>47</sup> Why should states contemplate complete withdrawal when they can instead renegotiate or amend an agreement so that the agreement can then accommodate the difficult-to-predict experience of the states? A systematic statistical study using a large dataset of international agreements—a large-*n* empirical analysis—allows us to understand whether or not Koremenos’ conjectures about these variables are correct. In using this kind of statistical analysis, she can confirm that duration provisions are indeed used for this purpose.<sup>48</sup> Koremenos analyzes both escape clauses (often called derogation clauses) and withdrawal clauses to see if they are substitutes for limited duration provisions as a response to this kind of uncertainty. They are not. Escape clauses do not permit adjustment; rather, they allow states to temporarily escape cooperation and return to an *unadjusted* agreement. Escape clauses are, however, appropriate responses to domestic uncertainty. States may agree to particular terms of cooperation but then suffer domestic shocks that make these terms politically difficult. What they require then is a temporary relief from their obligations. Even the typical wording of escape clauses suggests this purpose: “extraordinary circumstances that jeopardize extreme national interests.” Human rights agreements contain significantly more escape clauses than agreements in other issue areas, with the domestic shock usually being civil war. Article 4 of the International Covenant on Civil and Political Rights states “[i]n time of public emergency which threatens the life of the nation . . . [states] may take measures derogating from their obligations under the [agreement] to the extent strictly required by the exigencies of the situation.”<sup>49</sup> If a state takes

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46. Helfer, *supra* note 4, at 1599.

47. Koremenos, *supra* note 2, at 561.

48. *Id.* at 560.

49. International Covenant on Civil and Political Rights, art. 4, Dec. 16, 1966, 999 U.N.T.S. 171, 174.

such measures, it must inform other state parties through the Secretary-General of the UN regarding “the provisions from which it has derogated and of the reasons by which it was actuated.”<sup>50</sup>

Withdrawal clauses are also very different from duration provisions because cooperative institutions cease to exist in the bilateral cases (by far, the majority) or the membership changes in a multilateral setting. The latter can be quite consequential: when North Korea withdrew from the Nuclear Nonproliferation Treaty, the agreement remained intact, yet the implications of the membership change were serious. Koremenos argues that withdrawal clauses are responses to shocks that alter a state’s basic interest in cooperation. Although such shocks occur less frequently than unpredicted outcomes or domestic shocks, the risk they impose is great. Therefore, we might expect that states will more often than not include withdrawal provisions in their agreements. The relationship between “bedrock” preferences, which are fundamentally stable, and constraints, which arise from the fact that the state is a composite actor, also provides insight.<sup>51</sup> Withdrawal clauses are used in the event of “bedrock” changes while escape clauses are used in the event of unchanged bedrock preferences but different domestic constraints.<sup>52</sup>

Using a random sample of agreements, Koremenos finds that 62 percent of the agreements have withdrawal provisions and about 8 percent have escape clauses, but the correlation among these variables and duration provisions never exceeds 0.18.<sup>53</sup> Flexibility provisions are not simply chosen as a set; nor do particular pairs go together. The problems these provisions uniquely solve occur in different combinations depending on the cooperative endeavor. The conclusion to be drawn is that the landscape of international law is far from crude.<sup>54</sup>

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50. *Id.*

51. Barbara Koremenos, Charles Lipson & Duncon Snidal, *Rational Design: Looking Back to Move Forward*, 55 INT’L ORG. 1051, 1073 (2001).

52. Koremenos, *supra* note 2.

53. *Id.* at 561.

54. Although escape and withdrawal clauses seem to solve different problems than finite duration, there is another design tool that allows adjustment in the face of shocks: an agreement embodying a quasi-legislative institution with the power to modify the distribution of gains. The International Monetary Fund provides a good example of an indefinite duration agreement that establishes an institution that does many things including, importantly, adjusting the distribution of gains. Koremenos (2000) argues that such a design may be optimal when uncertainty regarding future gains is pervasive, but renegotiation costs are high because of the number of parties involved. In this context, an institution with an amendment provision characterized by majority rule cuts down on adjustment costs relative to a full renegotiation. See Barbara Koremenos, *Bending but Not Breaking: Flexibility in International Financial and Monetary Agreements*, Univ. of Cal., Berkeley: Ctr. for German and European Studies, Working Paper 1.73, 2000).

### III. A THEORY OF EXIT CLAUSE DESIGN

Focusing on exit clauses, we observe a high degree of variation in the substantive legal provisions that compose them. Helfer uses the handbook provided by the United Nations<sup>55</sup> that many international lawyers reference and finds that:

[W]ithdrawal clauses cluster around six ideal types: (1) treaties that may be denounced at any time; (2) treaties that preclude denunciation for a fixed number of years, calculated either from the date the agreement enters into force or from the date of ratification by the state; (3) treaties that permit denunciation only at fixed time intervals; (4) treaties that may be denounced only on a single occasion, identified either by time period or upon the occurrence of a particular event; (5) treaties whose denunciation occurs automatically upon the state's ratification of a subsequently-negotiated agreement; and (6) treaties that are silent as to denunciation or withdrawal.<sup>56</sup>

Data from COIL, elaborated below, also highlights the wide substantive differences in exit clauses. The majority of exit clauses take the form of categories 1, 2, and 6 above, but a few agreements from the random sample are characterized by categories 3, 4, and 5. The theoretical and empirical work presented below focuses on two dimensions of this variation: the length of the notice period, if any, that states are required to give before exiting a treaty (“notice period”), and the length of time that has to elapse between treaty ratification and a state being completely freed of its obligations (“wait period”). Each of these is discussed in detail below.

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55. UNITED NATIONS OFFICE OF LEGAL AFFAIRS, FINAL CLAUSES OF MULTILATERAL TREATIES HANDBOOK, UN Sales No E.04.V.3 (2003).

56. Helfer, *supra* note 4, at 1597. There subsists a doctrinal debate about whether or not “silent” treaties preclude exit altogether. On the one hand, the principle of state sovereignty may imply that states automatically reserve the right to withdraw from a treaty, even if the text does not include a denunciation clause. On the other, omitting to include such a clause might suggest that the signatory parties intend to make a treaty permanent (e.g. in high stakes issue areas such as peace agreements). A widely used approach to this question is set forth in Article 56 (1) of the *Vienna Convention on the Law of Treaties*: “A treaty which contains no provision regarding its termination and which does not provide for denunciation or withdrawal is not subject to denunciation or withdrawal unless: (a) [i]t is established that the parties intended to admit the possibility of denunciation or withdrawal; or (b) [a] right of denunciation or withdrawal may be implied by the nature of the treaty.” Vienna Convention on the Law of Treaties art. 56(1), May 23, 1969, 1155 U.N.T.S. 331. For brief overviews of this question, see John Quigley, *The United States’ Withdrawal from International Court of Justice Jurisdiction in Consular Cases: Reasons and Consequences*, 19 DUKE J. OF COMP. & INT’L L. 263, 291-92 (2008); Helfer, *supra* note 4, at 1593-94, 97.

### A. Notice Period

A notice period is the amount of time between the point at which a member gives notice of its withdrawal and the point at which its withdrawal becomes effective. There is tremendous variation in the length of the notice period states are required to give before exiting a treaty.

What explains the inclusion and length of the notice period? Following Rational Design, we can ask, what strategic underlying problems might cause states to want a longer notice period? If states were required to modify domestic policies as a treaty enters into force, they would likely have to change domestic policies again to accommodate for the change in circumstances caused by the withdrawal of another state from the treaty. Agreements based on reciprocal behavior would require a change in domestic policy for all parties if one state withdrew from the agreement.<sup>57</sup> A notice period would allow signatory states to adjust their own policies prior to the withdrawal of an individual state. This period of time to adjust policies is particularly important when states face an enforcement problem.

An enforcement problem is present when actors have incentives to defect from cooperation. Even if a cooperative arrangement makes everyone better off, some or all actors may prefer not to adhere to it because they can do better individually by cheating. Issues are characterized by enforcement problems when actors find current, unilateral noncooperation so enticing that they sacrifice long-term cooperation. This, of course, is the predicament of the repeated Prisoner's Dilemma and public goods problems.<sup>58</sup> At one extreme are cases with no enforcement problem: When states need to set technical standards, actors will have no incentive to defect once such an agreement has been reached. Within the context of repeated Prisoner's Dilemma games, the enforcement problem may be minimal if incentives to defect are small relative to the shadow of

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57. Arms control agreements between superpowers are examples of agreements designed on the principle of reciprocal behavior. For instance, in the Anti-Ballistic Missile Treaty, both the U.S. and the U.S.S.R. expected that the treaty's provisions would be upheld by each other. Treaty on the Limitation of Anti-Balistic Missile Systems, U.S.-U.S.S.R., 26 May, 1972, 23 U.S.T.S. 3435. Without reciprocity, the legitimacy of the treaty would have been undermined.

58. While defecting is the dominant strategy in a one-time play of the Prisoner's Dilemma, once the game is repeated, other equilibria emerge. In fact, repeated play often makes possible the Pareto-efficient equilibrium in which both parties cooperate. Usually, however, this equilibrium is supported by a threat, also known as the grim trigger strategy: if one party defects, the other party will start defecting and defect forever. Consequently, in this case, both parties lose when one party's defection is followed by another's, and this threat allows cooperation to continue despite the short-term gain from defection.

the future.<sup>59</sup> But as incentives to defect are greater, or interactions are less frequent, enforcement problems emerge.

The 1925 Convention Concerning Equality of Treatment for National and Foreign Workers as Regards Workmen's Compensation for Accidents<sup>60</sup> is an example of a human rights agreement<sup>61</sup> in which one of the underlying cooperation problems is an enforcement problem. The enforcement problem is created by the Prisoner's Dilemma structure of the game: A state wants its workers to be treated well in other states, but would prefer not to spend resources on foreigners within its borders.<sup>62</sup>

Agreements whose goal it is to solve underlying enforcement problems may include institutional design features like rewards and punishments or dispute resolution provisions to try to change the short-term incentives of states to defect. Still, there remains the possibility that a "quick withdrawal" could offer a strategic advantage to the withdrawing state, in the same way that a "sneak attack" offers an advantage to a state at war. It can be assumed that the withdrawing state knows that it wants to withdraw before it announces it. If it could withdraw immediately, it could have a strategic advantage by surprising other states with the announcement since other states would not have had time to accommodate. This is equivalent to the high payoff a defecting state receives in a Prisoner's Dilemma game when others cooperate while it defects. Even though withdrawing is lawful and not equivalent to defecting from a strict international law standpoint, strategically, withdrawing has the same effect as defecting: the state that is no longer abiding by the terms of the agreement gains while the states left cooperating lose. In a sense, including a notice period levels the playing field for all states, reducing fear that the remaining states would be taken advantage of and eliminating the advantage to withdrawing. Put differently, a notice period changes the

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59. The shadow of the future is the expectation of benefits from future interaction and their value. Thus, a long shadow implies both that actors have a sufficiently high density of interaction and that they assign a sufficiently high value to the future.

60. Convention Concerning Equality of Treatment for National and Foreign Workers as Regards Workmen's Compensation for Accidents, June 5, 1925, 38 U.N.T.S. 257.

61. In addition to the "core" multilateral human rights agreements that are very well known (e.g., the Convention on the Rights of the Child) the UNTS categorizes a number of bilateral agreements such as this one as being in the issue area of human rights, given that the rights of foreign citizens are addressed.

62. That is, State A would like its workers to be treated well but would prefer not to spend resources on State B's workers. State B feels the same way. However, both State A and State B would prefer to both spend resources on each other's workers than for neither to spend resources. In other words, cooperate-cooperate as a strategy pair is Pareto optimal to defect-defect, despite the desire of both parties to be the only defector while the other cooperates. This is the essence of a Prisoner's Dilemma game structure.

nature of the game by precluding the high payoff that comes from unilateral defection while another state cooperates. The inclusion of a notice period allows the other state the option of ceasing cooperation as well. Because what would likely result is the strategy pair defect-defect, which is Pareto suboptimal as well as individually inferior to cooperate-cooperate, all other things equal, states will cease cooperation less often.

For these reasons, we propose the following hypothesis:

(N-1)<sup>63</sup> Ceteris paribus, agreements that are characterized by an underlying enforcement problem are more likely to include notice periods than those not characterized by an underlying enforcement problem.

Should states choose to include a withdrawal notice period in their agreements, the same reasoning applies to the length of the notice period. When states fear a bad payoff from another state's withdrawal because of the underlying strategic structure of the situation in which they are cooperating, they will want greater warning time to be able to adjust their policies.

For these reasons, we propose the following hypothesis:

(N-2) Ceteris paribus, if the parties conclude an agreement with a notice period, those agreements that are characterized by an underlying enforcement problem are more likely to feature longer notice periods than those not characterized by an underlying enforcement problem.

Thus, an underlying enforcement problem leads states to include a notice period, but we do not claim that this is the only factor states consider. In other words, we are not offering a complete theory of notice periods. Once states decide to include a notice period, the same underlying enforcement problem leads them to make the notice period longer.

## B. Withdrawal Waiting Period

Another very important design element of some withdrawal provisions is what we label the *withdrawal waiting period*. A withdrawal waiting period is the designated period of time before a member that wants to withdraw from the agreement is fully freed from its commitments under the agreement. Some agreements specify a certain amount of time that member states must remain bound by the agreement before they are even allowed to give notice to withdraw. Additionally, while members are usually freed from their commitments on withdrawal, some agreements extend a state's

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63. N stands for notice period; below, W stands for waiting period.

commitments beyond the point of its withdrawal. Bilateral investment agreements, for example, usually extend protections for investments that were made before notice of termination an additional number of years. The withdrawal waiting period can thus include up to three distinct periods: first, any period that does not allow withdrawal; second, the withdrawal notice period; and third, the length of time that states are bound to an agreement's provisions beyond withdrawal. An agreement may include any or all of these periods. The total amount of time between the entry into force of the agreement and the full release of member obligation is the withdrawal waiting period.

Consider the 1982 Agreement on the Mutual Protection of Investments between Sweden and China.<sup>64</sup> Article 9 states:

- (1) This Agreement shall enter into force immediately upon signature.
- (2) This agreement shall remain in force for a period of fifteen years and shall continue in force thereafter unless, after the expiry of the initial period of fourteen years, either Contracting State notifies in writing the other Contracting State of its intention to terminate this Agreement. The notice of termination shall become effective one year after it has been received by the other Contracting State.
- (3) In respect of investments made prior to the date when the notice of termination of this Agreement becomes effective, the provisions of articles 1 to 8 shall remain in force for a further period of fifteen years from that date.<sup>65</sup>

The agreement, therefore, has a thirty-year withdrawal waiting period: a minimum of fourteen years initial duration plus a one-year withdrawal notice period plus a fifteen-year period of coverage of any investments made before notice of termination was given.

With respect to what kind of strategic problem might call for a withdrawal waiting period in the first place, or a longer withdrawal waiting period conditional on having one, consider commitment problems or time-inconsistency problems. Negotiating, ratifying, and complying with international agreements often pose heavy initial short-run costs before longer-term benefits can be enjoyed. Domestic political pressures may be such that certain leaders will want to withdraw because of these short-term costs before long-term benefits are realized.

The tradeoff between short-term costs and long-term gains is not only a problem for states vis-à-vis other states, but is also often an issue within a

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64. Agreement on the Mutual Protection of Investments, China-Swed. art. 9, Mar. 29, 1982, 1350 U.N.T.S. 255. This agreement is contained in the random sample used in this study.

65. *Id.*

signatory state. A forward-looking leader may want to sign an agreement that is unpopular with the domestic audience because of costly technological adjustment or some other kind of initial heavy investment, but that will reap substantial social welfare-enhancing benefits in the long run. Alternatively, a state with high levels of political leadership turnover may want to strengthen its credibility. The problem posed by short-term losses and long-term gains is very typical of a commitment problem.

The term commitment problem refers to a domestic commitment problem or a time-inconsistency problem. A time-inconsistency problem describes a situation in which an actor's best plan for some future period is inconsistent over time. Take the following agreement for which the cooperation problem is characterized by a commitment problem: the 1980 Agreement for the Promotion and Protection of Investments between the United Kingdom and Bangladesh.<sup>66</sup> Given its tumultuous political history, including military coups in the 1970s, Bangladesh has a credibility problem regarding the safety of outside investments.<sup>67</sup> Hence, it needs to tie its hands in the present so that it will not give into pressures to nationalize or expropriate outside investments. This is especially important given outsiders' perception of the likelihood of a regime change in Bangladesh; potential investors will likely not invest without some credible commitment on the part of Bangladesh to uphold its promise. If Bangladesh can withstand political pressures to not cooperate regarding protection of investments, its long-term credibility will be enhanced and it will attract even more investment, which will allow it to reap a steady flow of benefits.

In addition, because an early withdrawal by one state reduces the payoffs to the remaining states in the agreement, which then may have paid too high a price for the reduced expected payoffs, under certain conditions *ex ante* states would want to prevent themselves from withdrawing prematurely to avoid a net loss.

We therefore hypothesize that agreements for which one of the goals includes solving an underlying commitment problem are more likely to have wait periods than those without such a goal. All states will find it in their interest to write such a provision, whether they are tying their own hands or those of their partner(s) in cooperation who have the commitment problem.

For these reasons, we propose the following hypothesis:

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66. Agreement for the Promotion and Protection of Investments, Bangl.-U.K., June 19, 1980, 1212 U.N.T.S. 97.

67. *Background Note: Bangladesh*, U.S. DEP'T OF STATE (May 24 2010), <http://www.state.gov/r/pa/ei/bgn/3452.htm>.

(W-1) *Ceteris paribus*, agreements that are characterized by an underlying commitment problem are more likely to include withdrawal wait periods than those not characterized by an underlying commitment problem.

Should states choose to include a withdrawal wait period in their agreements, the same reasoning applies to the length of the wait period. When states fear their own or another state's premature withdrawal because of the underlying strategic structure that poses short-term incentives to stop cooperating, they will want to tie their hands for a longer period.

For these reasons, we propose the following hypothesis:

(W-2) *Ceteris paribus*, if the parties conclude an agreement with a wait period, those agreements that are characterized by an underlying commitment problem are more likely to feature longer wait periods than those not characterized by an underlying commitment problem.

Thus an underlying commitment problem leads states to include a wait period. We are not claiming that it is the only factor that states consider when deciding whether to include wait periods or not, but that it is an important single factor in their decision-making. Once states decide to include a wait period, the underlying commitment problem leads them to make the wait period longer.

#### IV. EMPIRICAL RESULTS<sup>68</sup>

##### A. Data: The Continent of International Law<sup>69</sup>

Testing these four hypotheses requires data. To that end, data were collected on the characteristics of a random sample of international agreements drawn from the United Nations Treaty Series ("UNTS").<sup>70</sup> The random sample is conditional on four issue areas: economics, environment, human rights, and security. The data collection was informed, both in terms of what variables were coded and how they were measured, by Rational

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68. Those wishing to replicate the results should access the "Exit, No Exit" data files available at my website. Barbara Koremenos, *Research*, U. MICH., <http://sitemaker.umich.edu/koremenos/research> (last visited Sept. 20, 2010).

69. The Continent of International Law (COIL) research project has been and is currently funded by the National Science Foundation (SES-0094376 and SES-0801581). Barbara Koremenos is the Principle Investigator. See Koremenos, *supra* note 9.

70. The internet collection at the time the sample was drawn contained over 34,000 international agreements, "which have been published in hard copy in over 1,450 volumes, which corresponds to all treaties and subsequent actions registered up to December 1986." See *United Nations Treaty Series Online Collection*, UNITED NATIONS TREATY COLLECTION, <http://treaties.un.org/Pages/UNTSONline.aspx?id=1>.

Design theories and by other theoretical approaches in international relations.<sup>71</sup>

Defining the population of interest represents a crucial first step in any sampling exercise, and in this context it meant answering the question of exactly what counted as an international agreement. Inclusion criteria were developed through an iterative process that included consultation with experts in the field, including senior scholars in international relations and international law as well as policymakers at the U.S. State Department's Office of Treaty Affairs.

Essentially, every agreement found in the UNTS was considered an international agreement for the purposes of this study unless it was excluded by one of the following five rules:<sup>72</sup> First, agreements whose primary ambition was to either establish the procedures and/or arrangements for the goals of negotiations of other agreements, or designate the host state of an international conference were excluded. Second, agreements not between at least two states were excluded. Thus, agreements between one state and an international organization were excluded; agreements that are negotiated within an international organization but that involve two or more states were included. Third, agreements that do not prescribe, proscribe, or authorize behavior that is observable in principle were excluded. That is, agreements that are not specific enough to include (at least potentially) objective criteria for determining performance were excluded from the sample. Fourth, the study excluded agreements whose sole ambition is to implement the provisions of other international agreements.<sup>73</sup> That is, agreements whose terms are

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71. The coding of the dataset COIL incorporated some of the key variables from other core theories in International Relations. These include Realism, which theorizes that international institutions reflect power relationships between states, *see generally*, JOHN MEARSHEIMER, TRAGEDY OF GREAT POWER POLITICS (2001), and Constructivism, which focuses on how norms can triumph over power relations in international institutions and ultimately affect international policy outcomes, *see generally*, M. KECK & K. SIKKINK, ACTIVISTS BEYOND BORDERS: ADVOCACY NETWORKS IN INTERNATIONAL POLITICS (1998). Thus, the COIL data collection featured a question about how symmetric the international agreement in question is, with three possible answers: symmetric, mildly asymmetric, and profoundly asymmetric. The NPT is an example of a profoundly asymmetric agreement in that its main substantive provisions favor powerful actors whereas the International Monetary Fund is an example of a mildly asymmetric agreement in that the more wealthy states have greater voting power. To measure a variable central to the Constructivist framework, the role of norms, the COIL coding instrument asked the coder to identify the balance of prescriptions, proscriptions and authorizations (hard law) and recommendations and suggestions (soft law).

72. These rules first appear in Koremenos, *supra* note 9, at 8.

73. Rules 3 and 4 derive from Coordination, Reporting and Publication of International Agreements, 22 C.F.R. § 181.2(a)(3), (c) (2006). The purpose of that document is to implement the provisions of the Case-Zablocki Act. The Case-Zablocki Act calls for the full and timely disclosure to the U.S. Congress of all concluded international agreements to which the U.S. is a party. The document

closely anticipated and identified in the underlying agreement were excluded from the sample. Examples of implementing agreements that were included in the sample are those that both implement and extend the underlying agreement, those that specify and/or interpret the provisions of a vague underlying agreement that would be excluded, and those that implement a law of a particular state.<sup>74</sup> Fifth, agreements that were extended through time, whether by default after the passage of a specified duration or by means other than default, were counted only once, not as separate international agreements. Renegotiated agreements, on the other hand, constituted separate international agreements.<sup>75</sup>

The current sample of agreements can be found in the Appendix. It is important to note that, by far, the great majority of excluded agreements were between one state and an Intergovernmental Organization (“IGO”), requiring no judgment calls to be made. Only a couple of agreements were excluded under the fourth rule. The Protocol on the construction and maintenance of reindeer fences<sup>76</sup> between Sweden and Norway was excluded because it implements the Agreement between Sweden and Norway on the grazing of reindeer;<sup>77</sup> the latter agreement calls for the construction of fences, but leaves the details concerning placement and design for a special agreement. There were no agreements excluded under the fifth rule given that extensions and renegotiations of agreements counted in the same way the UNTS does.

A coding instrument was used to record the characteristics of the agreements.<sup>78</sup> Among the provisions coded were flexibility provisions (e.g., Can a subset of states amend the agreement? If so, is it binding on all members? Are there certain provisions that states can opt out of but still retain membership in the agreement?); membership provisions (e.g., Are

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identifies criteria for determining whether any undertaking between the U.S. government or an agency of the U.S. government) and another state constitutes an international agreement within the meaning of the Act.

74. In the 1950s, the United States signed a series of bilateral agreements with its allies, including a number of European countries, to implement the Economic Cooperation Act of 1948. These bilateral agreements are examples of implementing agreements that implement a domestic law of one of the parties. *See, e.g.*, Exchange of Notes Constituting an Agreement Relating to Mutual Security, U.S.-Greece, Dec. 21, 1951 180 U.N.T.S. 2382.

75. Agreements that are extended are not considered original agreements in the UNTS. Those that are renegotiated, that is, those for which the renegotiated agreement supplants the original agreement, are considered original agreements in the UNTS.

76. Protocol on the Construction and Maintenance of Reindeer Fences, Nor.-Swed., May 1, 1972, 968 U.N.T.S. 344.

77. Agreement on the Grazing of Reindeer, Nor.-Swed., Feb. 9, 1972, 969 U.N.T.S. 44.

78. For a more detailed discussion of the coding instrument, see Koremenos, *supra* note 9, at 9–11.

there particular member states that must ratify the agreement before it enters into force? Are non-state actors given any rights or responsibilities?); provisions related to monitoring and compliance (e.g., Do states exchange information? Is the information self-reported or gathered by an independent agency? Are there penalties for failure to comply with agreement provisions?); and references to other international agreements. These are just a sprinkling of the characteristics coded. While almost 70 percent of the coding instrument was devoted to design issues, the remaining questions addressed more substantive issues. For example, coders listed the most important prescriptions/proscriptions versus recommendations/suggestions. These particular questions will inform a study of how international law evolves, including the role of norms, which is a hotly debated topic.<sup>79</sup>

The coders for this project were extensively trained to ensure that they obtained high levels of competency and consistency.<sup>80</sup> Two coders independently coded each agreement using an online survey instrument. After they completed their surveys, an intercoder reliability report was generated for the 375 questions for which there are “quantitative” answers, like yes/no, multiple choice, or a number.<sup>81</sup> (There were an additional 160 fill-in questions.) The average coded agreement was characterized by disagreement on approximately 15 questions, or four percent of the quantitative questions; the range was between two and 11 percent. Hence, from an intercoder reliability standpoint, these statistics are excellent. The inconsistencies were resolved through a close rereading of the agreement and supervised discussion involving the original coders, a trained graduate student, and Koremenos.<sup>82</sup>

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79. See Steven R. Ratner, *The Trials of Global Norms*, 110 FOREIGN POL’Y 65, 65–80 (1998) (arguing that international lawyers must begin to acknowledge that in addition to treaties and customary law, norms are arising as another important category of law); Martha Finnemore, *Are Legal Norms Distinctive?*, 32 N.Y.U. J. INT’L L. & POL. 669, 701–05 (2000) (arguing for the need for the detailing of distinctive features of legal norms so as to understand their effects on international politics).

80. The majority of coders went through 9-12 months of course-based training, which included both theoretical training and practice coding runs. For further details, see Koremenos, *supra* note 9, at 9–11.

81. Because building this dataset involved translating qualitative work in the form of international agreements into quantitative data, we had to establish that this kind of non-numeric information would be quantified the same way regardless of who is quantifying it. An intercoder reliability reports details when two people have quantified non-numeric information differently, so that those researchers can revisit that information and establish correct quantifications according to definitions set forth in a codebook.

82. COIL data are featured in several of Koremenos’ articles. See, e.g., Koremenos, *supra* note 2, at 554; Barbara Koremenos, *If Only Half of International Agreements Have Dispute Resolution Provisions, Which Half Needs Explaining?*, 36 JOURNAL LEGAL STUD. 189, 194–98 (2007); Barbara

## B. Dependent Variables

We operationalize the dependent variables as follows. As defined above, a *withdrawal notice provision* stipulates that a state must give notice before it can withdraw from an international agreement; a *withdrawal notice period* is specified as the length of time in months that must pass after a state has announced its intention to withdraw before that withdrawal can go into effect. A *withdrawal wait provision* stipulates that a state is bound for a certain period of time before it can be free of its international obligations; a *wait period* is the specified length of time in fractional years that must pass before a state is completely free of its obligations under the agreement—typically, after giving notice and withdrawing. Importantly, although the Vienna Convention on the Law of Treaties articulates some rules regarding exit, the dependent variables used in this analysis are measured according to the agreement text.<sup>83</sup>

## C. Independent Variables

Given Rational Design's focus on the underlying cooperation problems that states face as one of the main determinants of institutional design, the two independent variables used in the analyses below are an underlying enforcement problem and an underlying commitment problem. Examples of these variables are given above, but it is important to ask how such variables are operationalized for a large-n sample.

As noted above, two trained coders carefully read the international agreement and coded hundreds of institutional design variables. Independently, a graduate student with training in rationalist approaches to international cooperation and Koremenos also looked at the agreement and answered, among others, the following substantive question: How can the cooperation problem be characterized? In addition to the independent variables elaborated in Rational Design, Koremenos added the following possible answers: commitment problem, positive externalities, negative externalities, deadlock, and other. ("other" captures areas of cooperation such as foreign aid for which there are no or little strategic considerations, pure coordination games, and the exportation or codification of norms as in the human rights as well as environmental issue area.)<sup>84</sup> More than one

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Koremenos, *When, What, and Why do States Choose to Delegate?*, 71 LAW & CONTEMP. PROBS. 151, 155–92 (2008).

83. See discussion *supra* note 53.

84. Full definitions of these cooperation problems are given in the glossary online. See *supra* note 64.

answer could be chosen for each agreement since real-life issues are characterized by multiple cooperation problems.

Obviously, these questions are not nearly as straightforward as those pertaining to agreement design. Indeed, there is an inference that had to be made from the agreement to the cooperation problem. There is no way around this in such a study using a random sample of agreements given the observations are the agreements themselves and they cut across diverse issue and sub-issue areas. Nonetheless, there are some factors that should alleviate concerns.<sup>85</sup> First, the inference came by looking at relevant background information. Sometimes, negotiators reveal the problems they were attempting to solve, which is documented. Unfortunately, this was not always the case for an agreement from the random sample; rather, research needed to be done more broadly on the relationship among the relevant states and the general problems of the sub-issue at the time. For example, in a bilateral agreement, the relationship of the dyad in the decade or two before the agreement is signed was examined. Also, only the substantive goals of the agreement were looked at when trying to infer the underlying cooperation problem(s). Given that the theoretical work focuses on explaining the procedural or design aspects of the agreements, the separation of coders for, what are in these analyses, the independent and dependent variables was critical to the integrity of the project. This approach was extremely labor intensive, but by employing different and multiple sets of trained coders, political science and law scholars can have confidence in the resulting data.

In addition to the examples given in the theoretical section above, consider the following examples of the two independent variables.<sup>86</sup> The Agreement Concerning the Protection of the Sound Oresund from Pollution<sup>87</sup> between Denmark and Sweden in 1974 is coded as having an underlying enforcement problem. The assigned coder wrote: “Even though there was a significant shadow of the future<sup>88</sup> between Denmark and Sweden, there were strong economic incentives to defect from the agreement: less regulation or wastewater treatment would mean more economic freedom for municipalities and more profits for industries. The situation was further complicated by the existence of a two-level game between the government and industry.”<sup>89</sup>

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85. This idea draws from Koremenos, *supra* note 9, at 11.

86. These examples first appeared in *id.* at 11–12.

87. Agreement Concerning the Protection of the Sound Oresund from Pollution, Den.-Swed., Apr. 5, 1974, 962 U.N.T.S. 205.

88. *See supra* note 56.

89. Koremenos, *supra* note 9, at 12.

The Convention on the Protection of Investments signed in 1973 between France and Mauritius<sup>90</sup> was coded as having an underlying commitment problem. Drawing on research conducted by a law scholar, the coder wrote: “Given its tumultuous history, Mauritius wants to tie its hands in case of future regime change so that foreigners will invest.”<sup>91</sup>

Thus, each agreement in the sample was coded for every cooperation problem as either high—meaning that the underlying problem existed to a great degree—or low—meaning the underlying problem existed to a low degree. Agreements for which the enforcement problem was coded as high received ones while those which were characterized by low enforcement problems received zeros; the same coding applied to commitment problem.

#### D. Descriptive Statistics

Tables 1-3 present a first glance at the incidence of the variables of interest. With a random sample of 142 agreements, some interesting findings emerge. Table 1 demonstrates that the incidence of a withdrawal clause varies by issue area, with human rights agreement almost always incorporating them but more than half of the security agreements in the sample failing to do so. Overall, 60% of the agreements contain an exit clause.

Table 1: Withdrawal Clauses: Number of Agreements		
Issue Area	Have withdrawal clause	Do not have withdrawal clause
Economic	39	30
Environmental	16	9
Human Rights	20	3
Security	11	14
<b>Total</b>	86	56

Table 2 illustrates the variation in the length of notice periods of the 86 agreements in the random sample that have withdrawal clauses. Notice periods range from less than one month to twenty-four months, with a twelve-month period being the most popular. Other popular notice period lengths include 3 months and 6 months.

90. Convention Concerning the Protection of Investments, Fr.-Mauritius Mar. 22, 1973, 940 U.N.T.S 309.

91. Koremenos, *supra* note 9, at 12. See generally Tom Ginsburg, *International Substitutes for Domestic Institutions: Bilateral Investment Treaties and Governance*, 25 INT’L REV. L. & ECON. 107 (2005) (exploring the relationships and consequences that result from Bilateral Investment Treaties as countries pursue treaties as a potential international alternative to domestic institutional protection).

<b>Table 2: Length of Notice Periods</b>	
<b>Length of time specified, in months</b>	<b>Number of treaties</b>
0	1
1	8
2	1
3	12
4	2
6	19
9	1
12	41
24	1
<b>Total</b>	<b>85</b>

Finally, Table 3 illustrates the substantial variation in the withdrawal wait periods, for those agreements that include them. While the most common wait period is one year or less, the majority of agreements that include wait periods specify a period of time greater than one year, with a nontrivial number of agreements specifying ten to twenty years.

<b>Table 3: Length of Wait Period</b>	
<b>Length of Wait Period in fractional years</b>	<b>Number of Treaties</b>
1 year or less	27
1 to 5 years	17
5 to 10 years	12
10 to 20 years	13
20 to 31 years	14
<b>Total</b>	<b>83</b>
<b>Mean</b>	<b>6.88</b>
<b>Standard Deviation</b>	<b>8.45</b>

### E. Statistical Results

To test hypotheses N-1 and N-2 as well as W-1 and W-2, we use both probit and Ordinary Least Squares (“OLS”) regressions. Probit enables us to examine whether the particular cooperation problems of enforcement and commitment make it more likely that states will include notice periods and wait periods, respectively. OLS regression enables us to determine the effect that these particular strategic problems have on the length of the notice and wait periods for those agreements that incorporate them.<sup>92</sup>

We also include dummy variables<sup>93</sup> for the human rights, economic, and environmental issue areas (security is the excluded category) because the random sample is conditional on issue area. This is the first theory of withdrawal provision variation; no other independent variables are included in the model because currently there is no theoretical justification for adding them.

Hypothesis N-1 and N-2 predict that the greater the strategic advantage to be gained by a sudden withdrawal (i.e., the presence of an underlying enforcement problem), the more likely there is to be a notice period as well as a longer notice period. Table 4 shows the results of the probit analysis, the marginal effects of the probit analysis, and results from the OLS regression.<sup>94</sup>

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92. Ordinary Least Squares regression is the most popular estimator amongst researchers: it estimates a parameter from data and applies it to data so as to minimize the sum of squared residuals. See PETER KENNEDY, *A GUIDE TO ECONOMETRICS* 12–14 (5th ed. 2003). If the outcome of interest (the dependent variable) is binomial, a probit model is used to estimate parameters. In this case, the outcome of interest – whether or not states include a notice period or a wait period—takes on the value of one when the states include such provisions and zero when it does not. For further discussion beginning with a review of the mathematical structures of these models, see M. FINKELSTEIN & B. LEVIN, *STATISTICS FOR SOCIAL SCIENCE AND PUBLIC POLICY: STATISTICS FOR LAWYERS* 350–58, 458–72 (2d ed. 2001) for discussions of Ordinary Least Squares and probit models, respectively.

93. A dummy variable is a dichotomous variable that takes on a value of 1 when something is true or is present and 0 when it is not. This variable can provide a useful way to understand how categories affect an outcome (for instance, how gender affects a specific outcome or whether the post-Cold War world affects an outcome). See FINKLESTEN & LEVIN, *supra* note 88, at 380, for a further discussion of the use of dummy variables in legal studies.

94. In Tables 4 and 5, the N values indicate the number of observations used in the analyses. The goodness of fit of the models is measured in the R-squared values, which can range from zero to one. A zero indicates that the model does not improve prediction over the mean model and a one indicates a perfect prediction.

<b>Table 4: Explaining Notice Periods – Probit and OLS results</b>			
	<b>Probit</b>	<b>Probit Analysis</b>	<b>OLS Regression</b>
	<b>Analysis</b>	<b>Marginal Effects</b>	
<b>Enforcement problem</b>	1.57*** .34	.45*** .06	2.82*** (.99)
<b>Human Rights Issue</b>	1.41*** (.45)	.38*** .08	.89 (1.67)
<b>Environment Issue</b>	.67* (.39)	.22* .11	.70 (1.74)
<b>Economics Issue</b>	.26 (.32)	.10 .12	-1.25 (1.52)
<b>Constant</b>	-.50 * (.28)		7.17 *** (1.41)
<b>N</b>	142	142	85
<b>R-squared</b>			0.12
Standard errors are indicated in parentheses			
* significant at 10% level			
** significant at 5% level			
*** significant at 1% level			

These statistical analyses provide strong support for hypothesis N-1 and N-2. Having an underlying enforcement problem is significant for explaining the notice periods of withdrawal clauses. As the second column of Table 4 illustrates, having an underlying enforcement problem increases the probability of having a notice period by 45 percent. In the regression results, having an underlying enforcement problem increases the length of the notice period by 2.82 months, which, given the range of withdrawal notice periods described above, is quite large. Moreover, all of these results are highly statistically significant.

Turning to withdrawal wait periods, hypothesis W-1 and W-2 predict that agreements with underlying commitment problems are more likely to include a wait period than agreements that do not have any potential short-term losses. Similarly, the short-term losses and long-term gains dynamic should increase the length of wait periods for those agreements that incorporate them. Table 5 illustrates the results of the probit and OLS regressions.

<b>Table 5: Explaining Wait Periods – Probit and OLS results</b>			
	<b>Probit Analysis</b>	<b>Probit Analysis Marginal Effects</b>	<b>OLS Regression</b>
<b>Commitment problem</b>	.75**	.26**	13.56***
	(.32)	(.10)	(1.65)
<b>Human Rights Issue</b>	1.03***	.33***	2.77
	(.40)	(.10)	(2.22)
<b>Environment Issue</b>	.49	.18	3.27
	(.36)	(.12)	(2.29)
<b>Economics Issue</b>	.05	.02	3.49*
	(.31)	(.12)	(2.12)
<b>Constant</b>	-.15		.80
	(.25)		(1.76)
<b>N</b>	142	142	83
<b>R-squared</b>			0.55
Standard errors are indicated in parentheses * significant at 10% level ** significant at 5% level *** significant at 1% level			

These statistical analyses provide strong support for hypothesis W-1 and W-2. As the first column in Table 5 illustrates, agreements that are characterized by an underlying commitment problem are more likely to include a wait period. In fact, the marginal effects column indicates that an underlying commitment problem increases the probability of having a wait period by 26 percent.<sup>95</sup> Finally, when looking at the length of wait periods, having a commitment problem plays a very large substantive role in determining the length of the period. Having a commitment problem increases the length of the wait period by 13.56 years, all else held constant. All the effects are highly statistically significant as well.

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95. The marginal effect measures the change in the predicted probability of an event (in this case, the inclusion of a wait period) given the values of the explanatory variable (in this case, the presence of an underlying commitment problem). See WILLIAM GREENE, *ECONOMETRIC ANALYSIS* 667 (6th ed. 2008).

## CONCLUSION

One of the goals of this Article is to make connections with law scholars. Much can be gained from interdisciplinary work which is especially important for international relations scholars who, because of the subfield's focus on anarchy, have been somewhat skeptical of international law.<sup>96</sup> There is no doubt anarchy is important, but if we trumpet it to such a large degree, we ignore an entire continent of institutions. Moreover, the institutional variation on the international continent is tremendous, with differences ranging across multiple dimensions including the rules governing membership, voting, monitoring, punishments, disputes, delegation, and as this Article shows, even withdrawal.

When we examine the continent of international law through the game-theoretic lens of the underlying cooperation problems states are trying to resolve, we expect differences across international agreements and institutions. States shape agreements to solve the specific problems they face; design variations are largely the result of rational, purposeful interactions. The data strongly suggest that the details of withdrawal provisions, including the inclusion and length of notice periods and wait periods, are rationally designed. Enforcement problems lead to a greater incidence of notice periods and longer ones when they are included while commitment problems lead to a greater incidence of wait periods and longer ones when they are included. The findings of this paper contribute to the growing literature on the rational design of international law and provide a foundation for further research explaining exit provisions, and many other provisions of international agreements.

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96. *See generally* John Mearsheimer, *The False Promise of International Institutions*, 19 INT'L SEC. 5 (1994-95) (arguing that international institutions reflect power relationships and do not contribute directly to changes in state behavior or stability of relations between states). There are international law scholars who draw similar conclusions. *See generally* JACK GOLDSMITH & ERIC POSNER, *THE LIMITS OF INTERNATIONAL LAW* (2005) (arguing that international law's roles are limited since states simply pursue their own interests on the international stage in these venues and law does not change the behavior of these states).

## Appendix: Agreements in Random Sample

TABLE 1			
FINANCE AGREEMENTS INCLUDED IN THE SAMPLE			
Agreement Name	Signatories	Signature Date	UNTS #
Agreement concerning financial co-operation on the Lake Volta Transport System.	(Federal Rep. Germany – Ghana)	1980	21671
Convention for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income.	(Japan – United Arab Rep.)	1968	10576
Convention for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income.	(Belgium – U.K.)	1953	2526
Agreement concerning financial co-operation.	(Federal Rep. Germany – Congo)	1983	22976
Reciprocal Trade Agreement.	(U.S. – Mexico)	1942	81
Agreement concerning financial co-operation.	(Fed. Rep. Germany – Bangladesh)	1986	25472
Agreement for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income and capital gains.	(U.K. – Barbados)	1970	10955
Agreement relating to the purchase by Poland of surplus property prior to January 1, 1948.	(U.S. – Poland)	1946	5851
Convention for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income.	(Australia – Italy)	1982	25393
Agreement concerning the disposition of certain accounts in Thailand under Article 16 of the Treaty of Peace with Japan of 8 September 1951.	(Multilateral)	1953	2913
Exchange of notes constituting an agreement concerning the delivery of a linear accelerator to the Cancer Institute.	(Denmark – India)	1975	14491
Agreement concerning financial co-operation.	(Fed. Rep. Germany – Cent. Afr. Rep.)	1984	24332
Agreement concerning financial co-operation.	(Fed. Rep. Germany – Indonesia)	1982	22444
Agreement concerning financial co-operation.	(Fed. Rep. Germany – Niger)	1978	20214
Agreement for financing certain educational exchange programs.	(U.S. – Ecuador)	1956	4114
Agreement Concerning Financial co-operation.	(Fed. Rep. Germany – Thailand)	1981	21732
Agreement concerning the collection of bills, drafts, etc.	(Multilateral)	1964	8851
Agreement concerning the compensation of Netherlands interests.	(Netherlands – Egypt)	1971	11868
Convention for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income and on capital (with protocol).	(Czechoslovakia – Norway)	1979	18930

TABLE 2			
INVESTMENT AGREEMENTS INCLUDED IN THE SAMPLE			
Agreement Name	Signatories	Signature Date	UNTS #
Agreement for the promotion and protection of investments.	(U.K. – Yemen)	1982	22810
Agreement concerning financial assistance	(Federal Rep. Germany – Tanzania)	1974	14366
Foreign Investment Insurance Agreement.	(Canada – Senegal)	1979	24875
Agreement for the promotion and protection of investments	(U.K. – Panama)	1983	24700
Convention concerning the mutual promotion and protection of investments.	(France – Syrian Arab Rep.)	1978	19570
Treaty on the encouragement and reciprocal protection of investments of capital	(Federal Rep. Germany – Benin)	1978	24681
Exchange of notes constituting an agreement relating to the guaranty of private investments.	(U.S. – Nicaragua)	1959	4922
Exchange of letters constituting an agreement relating to investment guaranties.	(U.S. – Colombia)		6621
The Second ACP-EEC Convention (with protocols, final act and minutes of the Convention).	(Multilateral)	1979	21071
Exchange of notes constituting an agreement relating to Canadian investments in Western Samoa insured by the Government of Canada through its agent, the Export Development Corporation.	(Canada – Western Samoa)	1978	17730
Agreement for the promotion and protection of investments.	(U.K. – Bangladesh)	1980	19536
Agreement on the mutual protection of investments (with exchange of notes).	(Sweden – China)	1982	22733
Convention on the protection of investments	(France – Mauritius)	1973	13396
Exchange of notes constituting an agreement relating to the guaranty of private investments.	(U.S. – Liberia)	1960	5596
Agreement for the promotion and protection of investments.	(U.K. – Egypt)	1975	15181
Exchange of letters constituting an agreement concerning the guarantees of investment securities.	(New Zealand – Western Samoa)	1970	11642
Agreement on reciprocal promotion and protection of investments.	(France – Equatorial Guinea)	1982	24657
Exchange of notes constituting an agreement relating to guarantees authorized by Section 111 (b) (3) of the Economic Cooperation Act of 1948, as amended.	(China – U.S.)	1952	1837
Exchange of notes constituting an agreement relating to investment guaranties.	(U.S. – Zambia)	1966	8901
Exchange of notes constituting an agreement relating to investment guaranties.	(U.S. – Cameroon)	1967	9855
Agreement on the mutual promotion and guarantee of investments.	(Denmark – Romania)	1980	20625
Agreement on the mutual promotion and protection of investments (with exchange of letters)	(France – Haiti)	1984	24323

Convention concerning the encouragement of capital investment and the protection of property	(Netherlands – Tunisia)	1963	7558
Agreement on processing and protection of investments (with exchanges of letters)	(France – Panama)	1982	24235
Exchange of notes constituting an agreement relating to Canadian investments in the Kingdom of Thailand (with related letters).	(Canada – Thailand)	1983	24956
Agreement concerning the encouragement and reciprocal protection of investments.	(Denmark – Sri Lanka)	1985	23607

TABLE 3			
MONETARY AGREEMENTS INCLUDED IN THE SAMPLE			
Agreement Name	Signatories	Signature Date	UNTS #
Exchange of notes constituting an agreement concerning the Guarantee by the Government of the United Kingdom and the maintenance of the Minimum Sterling Proportion by the Government of Iceland.	(Iceland – U.K.)	1961	9800
Agreement concerning settlement of the "Special Yen Problem."	(Japan – Thailand)	1955	3172
Exchange of letters constituting an agreement concerning the Guarantee by the Government of the United Kingdom and the maintenance of the Minimum of Sterling Proportion by the Government of Sierra Leone.	(Sierra Leone – U.K.)	1968	9806
Exchange of notes constituting an agreement concerning the Guarantee by the Government of the United Kingdom and the maintenance of the Minimum Sterling Proportion by the Government of Libya.	(Libya – U.K.)	1968	9815
Agreement concerning financial co-operation.	(Fed. Rep. of Germany – Somalia)	1983	22962
Agreement concerning financial co-operation.	(Fed. Rep. of Germany – Nepal)	1980	21731
Exchange of notes constituting an agreement regarding the guarantee by the Government of the United Kingdom and the maintenance of the minimum sterling proportion by Ireland.	(Belgium - U.K.)	1947	9374
Exchange of Notes and Monetary Agreement.	(Netherlands - U.K.)	1945	24
Monetary Agreement.	(Belgium - U.K.)	1947	367

TABLE 4			
TRADE AGREEMENTS INCLUDED IN THE SAMPLE			
Agreement Name	Signatories	Signature Date	UNTS #
Exchange of notes constituting an agreement concerning grain to be supplied by the Government of the United Kingdom of Great Britain to the Government of Mali within the framework of the Cereals Food Aid Programme of the European Economic Community.	(Mali – U.K.)	1975	14430
Agreement for sales of agricultural commodities.	(Dominican Republic – U.S.)	1968	10249
Agreement for sales of agricultural commodities.	(Bangladesh – U.S.)	1973	13092
Agreement for sales of agricultural commodities.	(Republic of Vietnam – U.S.)	1972	12254
Supplementary Agreement for sales of agricultural commodities.	(Republic of Vietnam – U.S.)	1968	10135
Agreement for sales of agricultural commodities.	(Paraguay – U.S.)	1970	11046
Agreement for sales of agricultural commodities.	(Egypt – U.S.)	1974	13629
Agricultural Commodities Agreement under Title I of the Agricultural Trade Development and Assistance Act, as amended (with exchange of notes).	(Republic of China – U.S.)	1960	5579
International Sugar Agreement, 1973 (with annexes).	(Multilateral)	1973	12951
Agreement relating to the transfer of agricultural commodities.	(Mozambique – U.S.)	1977	17753
Agricultural Commodities Agreement under Title I of the Agricultural Trade Development and Assistance Act (with agreed minute and memorandum of Understanding).	(Israel – U.S.)	1957	4365
Agreement for sales of agricultural commodities	(India – U.S.)	1976	15915
Agreement for the sale of agricultural commodities (with minutes of negotiations of 20 March 1978).	(Lebanon – U.S.)	1978	18143
Exchange of notes constituting an agreement concerning trade in cotton textiles (with annex).	(Mexico – U.S.)	1967	9770
Agreement concerning economic, scientific and technical co-operation in the field of sugar production and sugar by-products (with additional note).	(Cuba – Mexico)	1979	20684
Exchange of notes constituting an interim agreement relating to the purchase of surplus agricultural commodities.	(Japan – U.S.)	1954	3239
Agreement with respect to quality wheat.	(Multilateral)	1962	6389
Exchange of notes (with annex) constituting an agreement regarding the changes which the Government of the United Kingdom propose to introduce in their production and trade policies relating to cereals.	(Argentina – U.K.)	1964	7450

TABLE 5			
ENVIRONMENTAL AGREEMENTS INCLUDED IN THE SAMPLE			
Agreement Name	Signatories	Signature Date	UNTS #
Agreement concerning financial co-operation—Refuse Disposal in the Freetown Metropolitan Area.	(Federal Republic of Germany – Sierra Leone)	1980	21678
Exchange of notes constituting an agreement on the project Soil management and conservation in East Amazonia.	(Brazil – Federal Republic of Germany)	1984	23031
Agreement on co-operation in the field of environmental protection.	(German Democratic Republic – Sweden)	1976	20644
Agreement on co-operation in the field of environmental protection (with agreed minutes).	(Japan – U.S.)	1975	15109
Agreement concerning the protection of frontier forests against fire.	(Argentina – Chile)	1961	9075
Community-Cost Concentration Agreement on a concerted action project in the field of analysis of organic micro-pollutants in water.	(Multilateral)	1980	20754
Exchange of letters constituting an agreement concerning the free passage of salmon in Vanern Lake.	(Norway – Sweden)	1969	14017
Agreement for the protection of migratory birds and birds in danger of extinction and their environment.	(Australia – Japan)	1974	20181
International Convention (with annexes) for the Prevention of Pollution of the Sea by Oil.	(Multilateral)	1954	4714
Memorandum of understanding on cooperation in earth sciences and environmental studies.	(U.K. – U.S.)	1979	19699
Agreement for plant protection— Sudan quelea bird research project.	(Sudan – U.S.)	1977	17308
European Agreement on the restriction of the use of certain detergents in washing and cleaning products.	(Multilateral)	1968	11210
Convention on Fishing and Conservation of the Living Resources of the High Seas.	(Multilateral)	1958	8164
Agreement concerning co-operation in the matter of plant protection.	(Austria – Hungary)	1963	6989
Agreement for cooperation relating to the marine environment.	(Canada – Denmark)	1983	22693
Agreement on co-operation in the field of environmental protection.	(U.K. – USSR)	1974	13920
Exchange of notes constituting an agreement concerning land use and soil conservation in the eastern Amazon region.	(Brazil - Federal Republic of Germany)	1979	17973
Agreement on plant protection and phytosanitary quarantine.	(Bulgaria – United Arab Republic)	1966	9963
Agreement concerning the protection of the Sound Oresund from pollution.	(Denmark – Sweden)	1974	13823
African Migratory Locust Convention.	(Multilateral)	1952	10476
Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere.	(Multilateral)	1940	485
International Convention on Civil Liability for Oil Pollution Damage.	(Multilateral)	1969	14097

International Convention for the Conservation of Atlantic Tunas (with Final Act and Resolution adopted by the Conference of Plenipotentiaries).	(Multilateral)	1966	9587
Convention on fishing and conservation of the living resources in the Baltic Sea and the Belts.	(Multilateral)	1973	16710
Convention on long-range transboundary air pollution.	(Multilateral)	1979	21623

TABLE 6			
HUMAN RIGHTS AGREEMENTS INCLUDED IN THE SAMPLE			
Agreement Name	Signatories	Signature Date	UNTS #
Convention (No. 155) concerning occupational safety and health and the working environment.	(Multilateral)	1981	22345
Protocol (with annex) amending the Slavery Convention signed at Geneva on 25 September 1926.	(Multilateral)	1926	2422
Convention on the prevention and punishment of the crime of genocide.	(Multilateral)	1948	1021
Convention on the non-applicability of statutory limitations to war crimes and crimes against humanity.	(Multilateral)	1968	10823
OAU Convention governing the specific aspects of refugee problems in Africa.	(Multilateral)	1969	14691
Convention for the Protection of Human Rights and Fundamental Freedoms.	(Multilateral)	1950	2889
International Covenant on Civil and Political Rights.	(Multilateral)	1966	14668
Convention on human rights and biomedicine.	(Multilateral)	1997	N/A
Convention on the prevention and punishment of crimes against internationally protected persons, including diplomatic agents.	(Multilateral)	1973	15410
Convention on the Elimination of All Forms of Discrimination against Women.	(Multilateral)	1979	20378
Fran-Belgian Agreement on passenger traffic.	(Belgium – France)	1945	132
Convention (No. 105) concerning the abolition of forced labor.	(Multilateral)	1957	4648
Agreement on the fundamental rights of nationals.	(Congo – France)	1974	21833
Protocol relating to refugee seamen.	(Multilateral)	1973	13928
Geneva Convention relative to the treatment of prisoners of war	(Multilateral)	1949	972
Convention (No. 111) concerning discrimination in respect of employment and occupation.	(Multilateral)	1958	5181
International Convention on the Suppression and Punishment of the Crime of Apartheid.	(Multilateral)	1973	14861
Convention (No. 118) concerning equality of treatment of nationals and non-nationals in social security	(Multilateral)	1962	7238
Convention (with Final Protocol) concerning the reciprocal grant of assistance to distressed persons.	(Multilateral)	1951	2647
Convention (No. 19) concerning equality of treatment for national and foreign workers as regards workmen's compensation for accidents.)	(Multilateral)	1925	602

Convention (No. 98) concerning the application of the principles of the right to organize and to bargain collectively.	(Multilateral)	1949	1341
Constitution of the International Refugee Organization and Agreement on interim measures to be taken in respect of refugees and displaced persons.	(Multilateral)	1946	283
American Convention on Human Rights Pact of San Jos, Costa Rica.	(Multilateral)	1969	17955
Convention (No. 143) concerning migrations in abusive conditions and the promotion of equality of opportunity and treatment of migrant workers.	(Multilateral)	1975	17426
Convention of establishment.	(France – Mali)	1977	20762

TABLE 7			
SECURITY AGREEMENTS INCLUDED IN THE SAMPLE			
Agreement Name	Signatories	Signature Date	UNTS #
Convention on the prohibition of the development, production and stockpiling of bacteriological (biological) and toxin weapons and on their destruction.	(Multilateral)	1972	14860
Convention on prohibitions or restrictions on the use of certain conventional weapons which may be deemed to be excessively injurious or to have indiscriminate effects.	(Multilateral)	1980	22495
Treaty on the prohibition of the emplacement of nuclear weapons and other weapons of mass destruction on the sea-bed and the ocean floor and in the subsoil thereof.	(Multilateral)	1971	13678
Interim Agreement on certain measures with respect to the limitation of strategic offensive arms.	(USSR – U.S.)	1972	13445
Convention on the prohibition of military or any other hostile use of environmental modification techniques.	(Multilateral)	1976	17119
Agreement governing the activities of states on the moon and other celestial bodies.	(Multilateral)	1979	23002
Treaty for the Prohibition of Nuclear Weapons in Latin America (with annexed Additional Protocols I and II).	(Multilateral)	1967	9068
Agreement on the prevention of accidental nuclear war.	(U.K. – USSR)	1977	17086
Exchange of notes constituting an agreement relating to military assistance: Eligibility requirements pursuant to the Foreign Assistance Act of 1973 and the International Security Assistance and Arms Export Control Act of 1976.	(Greece – U.S.)	1976	16035
Exchange of notes constituting an agreement relating to assurances under the Mutual Security Act of 1951.	(Portugal – U.S.)	1952	2799
Exchange of notes constituting an agreement relating to mutual security.	(Korea – U.S.)	1952	2359
Exchange of notes constituting an agreement relating to military assistance: eligibility requirements pursuant to the International Security Assistance and Arms Export Control Act of 1976.	(Malaysia – U.S.)	1977	17310
Exchange of notes constituting an agreement relating to mutual security.	(Belgium – U.S.)	1952	2356
Co-operation Agreement on civil defense and security.	(France – Morocco)	1981	20783
Exchange of notes constituting an agreement relating to mutual security.	(Luxembourg – U.S.)	1952	2384

Security Treaty.	(Japan – U.S.)	1951	1835
Exchange of notes constituting an agreement relating to military assistance: Eligibility requirements pursuant to the International Security Assistance and Arms Export Control Act of 1976.	(Indonesia – U.S.)	1976	16034
The Security Treaty.	(Multilateral)	1951	1736
Exchange of notes constituting an agreement relating to mutual security.	(Italy – U.S.)	1952	2365
Exchange of notes constituting an agreement relating to mutual security.	(Greece – U.S.)	1951	2382
Exchange of letters constituting an agreement on a defense security arrangement.	(Australia – Netherlands)	1977	21950
Exchange of notes constituting an agreement relating to mutual security.	(Turkey – U.S.)	1952	2361
Technical Security Arrangement concerning special security measures for safeguarding of certain United States classified military articles, services and information.	(Kuwait – U.S.)	1976	16314
Inter-American Treaty of Reciprocal Assistance and Final Act of the Inter-American Conference for the Maintenance of Continental Peace and Security.	(Multilateral)	1947	324
Security Agreement concerning certain exchanges of secret information.	(France – Sweden)	1973	14951