Hauser Globalization Colloquium Fall 2010

Professors Ryan Goodman & Robert Keohane

Furman Hall 900, Pollack Colloquium Room
Wednesdays 2:00 pm-3:50pm
(unless otherwise noted)

Schedule of Sessions (subject to modification)

September 15	**Professor Eric Posner** *Human Rights, the Laws of War, and Reciprocity*
September 22	**Professor Michael Doyle** *A Global Constitution? The Struggle over the UN Charter*
October 6	**Professor Mary Dudziak** *Law, War, and the History of Time*
October 13	**Professor Tim Buthe** *Standards for global markets: domestic and international institutions for setting international product standards*
October 20	**Professor Kal Raustiala** *Information and International Agreements* **Background Readings:** *Police Patrols and Fire Alarms in the NAAEC* *The Rational Design of International Institutions*
October 22 (Friday)	**Professor Peter Katzenstein** *The Transnational Spread of American Law: Legalization as Soft Power*
November 10	**Professors Oona Hathaway & Scott Shapiro** *Outcasting: Enforcement in Domestic and International Law*
November 17	**Professors Ann Marie Clark & Kathryn Sikkink** "Information Effects and Human Rights Data: Is the Good News about Increased Human Rights Information Bad News for Human Rights Measures?" **Background Reading:** Emilie M. Hafner-Burton, & James Ron, Seeing Double: Human Rights Impact Through Qualitative and Quantitative Eyes, World Politics, 2009.
December 1	**Professor Benedict Kingsbury** *Obligations Overload for Fragile States*
December 3 (Friday)	**Professor Beth Simmons** *Subjective Frames and Rational Choice: Transnational Crime and the Case of Human Trafficking*

Information & International Agreements

Draft, October 2010

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I Introduction

Information is at the heart of rationalist theories of international institutions. Robert Keohane famously argued that international institutions provide three primary benefits to the states that create them: lower transactions costs, higher information flows, and reduced uncertainty.[1] In *After Hegemony*, his influential work on the subject, Keohane "treats information as a variable and institutions as a means to manipulate it, thereby facilitating cooperation."[2] "By reducing asymmetries of information," he argued, international institutions reduce uncertainty, thereby reducing the risks of cooperation.[3]

This view has become orthodox within the now-rich literature on international institutions. For example, Goldstein and Martin argue that a primary function of international institutions is "to provide politically relevant information and so allow states to escape from the prisoners' dilemma trap."[4] Barnett and Finnemore likewise claim that the huge literature on international institutions has largely been devoted to exploring how, "through their control over information, in particular," international regimes mediate between state interest and political outcomes. From a different disciplinary vantage point, Alvarez concurs that international institutions facilitate transparency and "provide access to stabilizing or reassuring information about others' level of compliance."[5] In short, it is widely believed that information provision is a central—if not *the* central—function of international institutions.

Despite the key role of information in theories of international institutions, the precise mechanisms by which "politically relevant information" is produced and disseminated have not

[1] Keohane, 1984, etc.
[2] Moravcsik, Robert Keohane: Political Theorist, in Milner 2009.
[3] Keohane 1984 at 94
[4] Goldstein and Martin, 2000 at 236
[5] Jose Alvarez, INTERNATIONAL ORGANIZATIONS AS LAW-MAKERS (2005) at 339.

received commensurate attention.[6] A cursory look at international cooperation shows that there is substantial variation in how international institutions acquire information, in what kinds of information is acquired, and in how that information is transmitted to other states and interested actors. Some institutions,[7] for example, create extensive and intrusive monitoring systems; others do not or simply employ (often unreliable) self-reporting. Some permit private actors to make claims about state performance; others limit that power to state parties or to centralized actors.

In this paper we focus on one very important type of information: information about state performance in a given regime, such as whether a state violates or complies with its obligations, or whether it is taking steps to implement those obligations. Using a randomly-selected set of international agreements drawn from the United Nations Treaty Series, we explore and seek to explain the variation in how different international agreements structure the collection and dissemination of information. Understanding this variation not only is an interesting and important addition to theories of international institutions; it has policy relevance, since information about performance—or the lack of that information—is often a major barrier to cooperation.

This paper proceeds in six additional parts. Part II describes the problem of information and previous approaches to it. Part III details our general approach, and offers several conjectures about the organization of information in international agreements. Part IV describes our dataset, which is an original creation of coded agreements that comprises nearly 200 treaties. Part V presents basic descriptive statistics on treaty design and information provision. Part VI tests our conjectures against the data and offers some preliminary results. Part VII concludes.

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[6] Exceptions include Xinyuan Dai, INTERNATIONAL INSTITUTIONS AND NATIONAL POLICIES (Cambridge 2007); Dai, Information Systems in International Regimes, *World Politics* (2002); Kal Raustiala, Citizen Submissions and Treaty Review in the NAAEC, in THE NORTH AMERICAN COMMISSION ON ENVIRONMENTAL COOPERATION: AN EVALUATION (John Knox and David Markell, eds, 2003); Kal Raustiala, REPORTING AND REVIEW INSTITUTIONS IN 10 MULTILATERAL ENVIRONMENTAL AGREEMENTS (UN Environment Programme, 2001); Ronald Mitchell, Sources of Transparency: Information Systems in International Regimes, *International Studies Quarterly*, 42, 1998. THE IMPLEMENTATION AND EFFECTIVENESS OF INTERNATIONAL ENVIRONMENTAL AGREEMENTS (David G. Victor, Kal Raustiala, and Eugene Skolnikoff, eds., 1998); ABRAM AND ANTONIA HANDLER CHAYES, THE NEW SOVEREIGNTY: COMPLIANCE WITH INTERNATIONAL REGULATORY AGREEMENTS (1995).

[7] There are important differences between the concepts of "international institution," "international organization," and "international agreement." However, international agreements typically form the core of institutions, which may or may not have an organization attached (for example, the World Intellectual Property Organization). In this paper we focus on international agreements, and we analyze these agreements whether or not they are associated with a formal organization. We use the term "institution" to generically refer to these agreements and the larger regimes sometimes encompassing them.

II The Provision of Information

International cooperation often creates dilemmas for states. Collective action problems by definition feature incentives to violate commitments ex post. Compounding this incentive is frequent uncertainty about the costs of implementing commitments. States consequently enter agreements cautiously, often negotiating treaties that essentially enshrine the status quo. The negotiation of such "shallow" international agreements is one way to ensure that violations of international commitments are rare; when states commit to act in ways they would anyway, compliance is relatively easy.[8]

When states seek deeper cooperation, however, they usually fear violations by others. As a result they must solve or attenuate the problem of enforcement—and they generally need to gather accurate information to do so. An obvious way forward is to create some system to monitor the performance of other states, so violations are deterred or at least detected and, perhaps most importantly, so that commitments appear credible ex ante. All of this depends on information.

The importance of information to institutionalized cooperation has long been noted by theorists of international regimes. Keohane's seminal treatment of regimes put information front and center. Analogizing to Akerlof's famous "market for lemons" argument about market failure and information asymmetries, Keohane reasoned that similar dynamics could cause political market failure, in which states fail to jointly realize gains because they fear the adverse consequences of information asymmetries.[9] Keohane repeatedly noted the importance of information to stable regimes. Indeed, information and its provision were central to the core claim of *After Hegemony*:

> Appreciating the significance of these information-producing patterns of action that become embedded in international regimes helps us to understand further why the erosion of American hegemony during the 1970s was not accompanied by an immediate collapse of cooperation, as the crude theory of hegemonic stability theory would have predicted.[10]

In the remarkable outpouring of work on international regimes that began in the 1980s, this view became widely held. Consider a few prominent examples. Goldstein, Kahler, Keohane, and

[8] See Downs, Rocke, and Barsoom, supra; Kal Raustiala, Form and Substance in International Agreements, AJIL, 2005
[9] Akerlof CITE
[10] Keohane at 101.

Slaughter contend that "virtually all international organizations gather and disseminate information relevant to implementation; many also generate new information…many also monitor state behavior and disseminate information on rule observance, creating implicit sanctions for states that wish to be seen as trustworthy members of an international community."[11] Mitchell argues that to "effectively alter the behavior of states and substate actors, regimes (or the states that compose them) must either have-or create-information about the activities they seek to regulate and the impact of those activities on the ultimate goals of the regime."[12] Mansfield and Reinhardt likewise claim that institutions "serve as information clearinghouses….Such information helps focus reputational or retaliation costs on members that abrogate their treaty commitments."[13] Many similar arguments about the centrality of information can be found in the pages of leading journals such as *International Organization*, the *American Political Science Review*, and *World Politics*. In short, for many scholars the collection and distribution of information is essential to successful international cooperation.

To be sure, some strands of research on cooperation have focused on the role of information in a slightly different way, such as the use of information possessed by non-state actors such as NGOs (e.g. Sikkink, 1986) or scientists and other experts, as in the burst of work on "epistemic communities" that occurred in the 1990s.[14] More recent work has focused on strategic uses of information provision, often employing a signaling dynamic.[15] The main stream of research on international institutions, however, has adopted the approach pioneered by Keohane. Cooperation is sustained when politically relevant information can be gathered and disseminated to agreement partners. When information about behavior is spotty or absent, by contrast, the cooperative equilibrium sustained by institutions tends to break down[16]. Thus "fostering the acquisition, analysis, and dissemination of regular, prompt, and accurate regime-relevant information [ ] is often one of the most important functions regimes perform."[17]

Yet how exactly regimes perform this function has not received extensive attention. International lawyers have closely and helpfully examined several treaty monitoring systems, but

[11] Goldstein et al, The Concept of Legalization (Legalization book, 2000) at 33-4.
[12] Mitchell at 111
[13] Mansfield and Reinhardt, International Institutions and the Volatility of International Trade, IO, Fall 2008 at 626.
[14] Eg, Special issue of IO
[15] Thompson, Coercion Trhough IOs: The Security Council and the Logic of Information Transmission, IO, 2006; Johns, Servant of Two Masters. OTHERS?
[16] Eg Dai, 2005.
[17] Ronald Mitchell, Sources of Transparency: Information Systems in International Regimes, International Studies Quarterly, 42, 1998.

much of this work is unconnected to larger theories and only rarely comparative.[18] International relations scholars, as we have just suggested, frequently acknowledge the importance of information to the dominant theory of international institutions, but have rarely hypothesized about how this is done or engaged in comparative analyses of different approaches.

In one of the few focused treatments of information provision, Mitchell (1998) looked at what he terms "information systems."[19] Mitchell focused broadly on the issue of transparency in international regimes, distinguishing between self-reporting, "other reporting," and "problem reporting," which relates to information on the effects of behaviors, such as how the underlying problem is changing or reacting to new behavior. Regime transparency depends, he argued, upon both the demand for information and the supply of information, and he looked broadly at a wide range of factors that may explain this supply and demand: the capabilities and incentives of relevant actors, the structure of the underlying problem, the nature of the rules in question (e.g., is the rule a ban, which is easy to monitor, or a more complex regulatory scheme?), and the nature of the regulated behavior (ocean dumping that is easily concealed, or obvious ballistic missile tests?).

In a similar vein, a large multi-year study by Victor, Raustiala, and Skolnikoff (1998) comprising a wide range of case studies of environmental agreements analyzed "systems of implementation review," or SIRs. SIRs were defined as sub-institutions through which the parties share information, compare activities, review performance, handle noncompliance, and adjust commitments.[20] These studies illustrated that there was substantial variation in how SIRs were structured formally, and that in some areas, such as flora and fauna agreements, SIRs had grown in complexity and effectiveness over time. Indeed, as of 1998 "4 of the 19 wildlife agreements concluded since 1970 even have provisions for on-site inspection."[21] This study also underscored that much of the relevant review activities occurred outside formal legal structures, and could only be understood through close examination of the empirical practice of review. For example, in the regime governing Baltic Sea pollution, the relevant international organization (the Helsinki Commission) even reviewed the implementation of commitments promulgated by another international organization (the International Maritime Organization) via a different legal instrument. The designation of "systems" reflected this understanding that there were, in practice, a multiplicity of modes within a given regime by which treaty-relevant information was gathered,

[18] Exceptions include THE FUTURE OF UN HUMAN RIGHTS TREATY MONITORING (Philip Alston and James Crawford, eds, 2000); ADMINISTRATIVE AND EXPERT MONITORING OF INTERNATIONAL TREATIES, (Paul C. Szasz, ed, 1999), AND Ken Abbott, Trust But Verify (CITE 1993)
[19] Mitchell, supra
[20] Victor, Raustiala, and Skolnikoff, supra at 3.
[21] Raustiala and Victor, conclusions at 679.

distributed, and assessed.

Dai (2002) focused on the issue of how specific international institutions structure the provision of information. She stressed two explanatory factors. The first is the convergence between the interests of the victims of noncompliance and of states, and the second the presence of victims as low cost monitors. When states are good agents of victims, interests are aligned and states create effective information systems. Victims are low cost monitors when noncompliance with an agreement is apparent (rather than latent) and the source of noncompliance easily identified. The presence of low cost monitors, Dai argues, "results in less centralized information systems."[22] Dai selects several prominent institutions in varied areas—trade, human rights, money, etc—to explore this approach. She finds, consistent with her framework, that the International Monetary Fund has a strong, centralized information system. Creditor states have a strong incentive to create monitoring arrangements because they are the victims of noncompliance. Yet they are not themselves well-placed to detect violations. "Centralized monitoring thus emerges," Dai argues, "as an efficient and feasible solution."[23] By contrast, the WTO relies on both a centralized information-gathering arrangement—the Trade Policy Review Mechanism—and decentralized action through the judicial process known as the Dispute Settlement Understanding. This arrangement "is consistent with a strategic environment that is characterized by the ability of private producers to detect noncompliance."[24]

III *Theory: The Design of Information Provisions*

In this paper, we analyze how international agreements structure and organize the provision of information about state performance. By looking at multiple agreements, drawn randomly from the UN Treaty Series and representing a wide array of issue areas, we hope to shed new light on how states have addressed this basic issue of regime design.[25] Information provisions are defined here in terms of monitoring: they are provisions that demand that information related to state performance be gathered and reported. Some agreements contain no monitoring provisions, some have very basic provisions, and a few employ elaborate systems to acquire and distribute information about state performance. That variation in formal structure is our main

[22] Dai at 416
[23] Id 422.
[24] Dai, 424.
[25] We discuss the dataset and its composition further in Part III, below.

focus.[26]

The need to gather and disseminate information about state performance is not unique to international cooperation; indeed, it is endemic to governance of all kinds. In the study of American politics, scholars of the congressional oversight of administrative bureaucracies have argued that two basic models of review exist: police patrols and fire alarms.[27] Police patrols are efforts by centralized authorities (in the congressional context, committees) to actively and systematically search for problems or violations through hearings, audits, inspections, and the like. Fire alarms are procedures that private actors trigger to signal that a violation or problem has occurred. Like real fire alarms, these procedures are reactive, decentralized, and rely on individual stakeholders who have economic or political incentives to pursue such claims.

The core distinction between police patrols and fire alarms is in how information is supplied and whether it is supplied on a regular basis or not. Does the agreement contemplate central authorities that search for and reveal information about performance, or does it delegate that role to other actors? An agreement that empowers private actors to bring forward claims about state performance at their discretion is akin to a fire alarm. One that permits a central authority to inspect and review state performance regularly is akin to a police patrol.

For example, under the Treaty on the Non-Proliferation of Nuclear Weapons, or NPT, the International Atomic Energy Agency (IAEA) is explicitly tasked with verifying implementation and compliance, often by inspecting nuclear power facilities within states. These inspections occur on a regular basis, and hence this system of monitoring closely resembles the police patrol monitoring written about in the study of American politics By contrast, the Bilateral Investment Treaty, or BIT, between the US and El Salvador empowers private actors, in this case firms from one state investing in the territory of the other, to bring disputes about compliance with the agreement to an arbitral panel or a national court.[28] This feature is typical of BITs, which generally rely on private actors to uncover noncompliance and judicial processes to address it, and is also found in investment provisions in some multilateral arrangements, such as NAFTA.[29] Certain human rights treaties are structured similarly, typically through optional protocols that permit individuals to bring forward claims of violations. These forms of monitoring very closely resemble the fire alarm monitoring written about in American politics.

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[26] We discuss the categories used to capture variation in information provision below in the description of the variables used in the analysis.
[27] E.g McCubbins and Schwartz, supra.
[28] http://www.ustr.gov/pdf/bit-info.pdf
[29] Andrew Guzman, Explaining the Popularity of Bilateral Investment Treaties: Why LDCs Sign Agreements That Hurt Them, VA. J. INT'L L (1998).

These two models of information gathering—police patrols and fire alarms--represent distinct, but not mutually exclusive, institutional strategies. In police patrols, central authorities (Congressional committees; an international organization) have the authority and bear the costs of searching for non-compliance. Fire alarms, by contrast, shift authority and search costs away from governments and international organizations such as the IAEA to individuals and other private actors. As discussed further below, international agreements can and frequently do blend elements of both. Some agreements—such as BITs—rely almost exclusively on fire alarms. But in other cases fire alarms work in conjunction with police patrols.

In the international context, a third important mode of information provision is self-help. States often engage in their own information-gathering efforts, such as monitoring seismic changes for underground nuclear tests or using satellites to track whaling boats on the high seas, when this is technically possible and not legally prohibited. In the arms control context this is often referred to as "national technical means."[30] International agreements may expressly permit the use of certain national technical means (such as aerial reconnaissance over national territory) which would normally violate international law. But in most cases, national technical means do not require explicit permission and are not mentioned at all in the treaty text.[31]

Relatedly, an accord may rely only on self-reporting about implementation and compliance by the parties: what Abbott calls "assurance provisions."[32] Assurance provisions help states to manifest their intent to comply--thereby assuring their cooperative partners that they are not being cheated--but their utility is limited by fears that states will not report accurately on their own behavior. As a result, as Abbott acknowledges, states may rely on some form of external information-gathering even when assurance provisions are incorporated.[33]

It is important to underscore that the police patrol-fire alarm-self help trichotomy refers to the *manner* in which treaty relevant information is gathered and signaled, not the *response* to information about non-compliance. That response can vary independently of the mode of the review. In the context of international agreements, responses to non-compliance typically range from doing mild shaming strategies, such as placing a state on an authoritative, public blacklist, to authorized trade sanctions.[34] While this is an interesting and important topic in its own right, we

[30] See e.g. the Antiballistic Missile Treaty (now defunct), Article XII.
[31] Eg. Biological Weapons Convention; others.
[32] Ken Abbott, Trust but Verify
[33] Abbott, supra at 26-7.
[34] Raustiala and Slaughter, 2002.

leave this for future research.[35]

A second distinction is that in domestic settings legislators make law that applies primarily to other actors. In the international system, by contrast, states typically create legal obligations by negotiating treaties which apply to their own behavior. As a result, states often face incentives both to review the performance of other states and to behave opportunistically. These sometimes conflicting incentives may help explain why, in the aggregate, scholars expect monitoring provisions at the international level to appear relatively weak when compared to domestic level oversight procedures.

In this paper we draw on two frameworks, each employed by one of the two authors in previous works: Koremenos in the introduction to the *International Organization* special issue, *The Rational Design of International Institutions* (Koremenos, Lipson, and Snidal 2001), heretofore referred to as "Rational Design," and Raustiala in an analysis of the North American Agreement on Environmental Cooperation, one of the so-called "side agreements" to NAFTA (Raustiala 2003). The two frameworks rely on the same basic assumptions about state actors: States create international institutions in order to solve collective problems. States also design these institutions efficiently. In other words, states incorporate particular provisions only when they are necessary to the problems at hand, and, furthermore, they design these provisions to solve these problems at the lowest possible cost. We briefly elaborate the two frameworks below.

The starting point for Rational Design is a very simple observation: Institutionalized international cooperation is organized in radically different ways.[36] The theoretical premise is the following: We cannot understand institutional design and compare across institutions without understanding the cooperation problem the institutions are trying to solve. What this implies is that differences among international institutions are not random. Rather, states and other international actors shape institutions to solve the specific problems they face. In other words, design variations are largely the result of rational, purposive interactions.

The goal of the Rational Design volume is to offer a systematic account of five design features (membership, scope, centralization, control, and flexibility), relating them to recurrent cooperation problems faced by states, the independent variables. One possible way to conceptualize an abstract idea like "cooperation problem" is to break it into two sets of elements: interests and constraints. This has the advantage of being able to draw on a powerful and well-

[35] Future research will also look at the relationship between monitoring provisions and enforcement and dispute resolution provisions.

[36] Institutionalized international cooperation is defined as any explicit arrangement, negotiated among international actors, prescribing, proscribing, and/or authorizing behavior.

developed set of theory on these topics. Interests are captured in two of the independent variables, with *Enforcement* referring "to the strength of individual actors' incentives to cheat …" and *Distribution* to "how each actor compares its preferred alternative to other actors' preferred alternatives."[37] Constraints are captured with variables that address both information and beliefs: *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* (uncertainty regarding the consequences of cooperation).

Rational Design offers a set of conjectures linking one cooperation problem with one institutional design solution.[38] While we will not replicate the list of conjectures here, we will give a few examples. Of the sixteen univariate Rational Design conjectures relating one independent variable to one dependent variable, four involve the dependent variable, centralization. Three of the four stipulate some aspect of the cooperation problem the states are facing as the independent variable: Centralization increases with the Enforcement Problem; Centralization increases with Uncertainty about Behavior; and Centralization increases with Uncertainty about the State of the World.[39] The fourth conjecture pertains to transactions costs, "Centralization increases with Number,"[40] where number can capture the literal number of states and/or their heterogeneity.[41]

With respect to the design of monitoring provisions, two variables are particularly pertinent: the independent variable, *Uncertainty about Behavior*, which Raustiala also highlights in his framework, and the dependent variable, *centralization* (defined as whether institutional tasks are performed by a single focal entity or not). The Rational Design variables and conjectures are framed rather generally. Among the dependent variables, this is particularly the case with the centralization variable.[42] For the purposes of this article, we narrow the definition of centralization to refer to *delegated monitoring provisions*.

Thus, according to Rational Design, we might expect monitoring to occur in the presence of Uncertainty about Behavior. Now, Rational Design only offers univariate conjectures, that is, it links one underlying cooperation problem to one institutional design solution. Koremenos' Continent of

[37] Koremenos, Lipson, and Snidal, 776 and 775, respectively,
[38] Koremenos et al.
[39] Koremenos et al.
[40] Koremenos et al
[41] 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.
[42] Koremenos et al note this and encourage refinement of this and other variables in future work.

International Law (COIL), a research project which assembles detailed information on a large random sample of international agreements, and which we draw upon in this paper, extends Rational Design by considering the interactions of independent variables or cooperation problems. Specifically, while uncertainty about behavior might lead to monitoring, it seems reasonable to assume that states might only worry about not being to see if their partner(s) in cooperation are cooperating or defecting if there are actual incentives to defect given the underlying strategic structure of the issue over which they are cooperating. Put more simply, I won't worry about whether you are cheating if I know your preferences and we are playing a simple coordination game. However, if we are playing a game with Prisoner's Dilemma-like payoffs, i.e., with an underlying enforcement problem, not being able to tell whether you are defecting is troublesome indeed.

The Rational Design/Coil cooperation problems that are characterized by incentives to defect, at least in certain circumstances, are as follows: Enforcement Problem, Uncertainty about Preferences, and Uncertainty about the State of the World. In each of these instances, states could find it either in their own interest to defect or worry that their partner(s) will. Another *International Organization* special issue, *Legalization and World Politics* (Goldstein et al 2000), offers an additional cooperation problem that is important in this context: A time-inconsistency or domestic commitment problem. "Governments and domestic groups may also deliberately employ international legalization as a means to bind themselves or their successors in the future. In other words, international legalization may have the aim of imposing constraints on domestic political behavior."[43]

Drawing on all these approaches, we offer the following conjectures:

- **States facing *high uncertainty about behavior* are more likely to include some form of monitoring provisions in agreements.**
- **States facing *high uncertainty about behavior* combined with an underlying Enforcement problem, Uncertainty about Preferences, Uncertainty about the State of the World, or Commitment Problem are more likely to include strong, delegated monitoring in agreements.**

[43] Goldstein et al, supra, 393

In addition, building on Oye 1986, we argue that as the number of participating states increases, states are more likely to incorporate monitoring provisions to help them keep track of cooperators and defectors.

- **As their *number* increases, states are more likely to incorporate monitoring provisions in their international agreements.**

Thus Rational Design gives us some insight as to when we might expect monitoring provisions in general and strong, delegated monitoring provisions in particular. But it does not address the issue of fire alarm versus police patrol systems. Here we draw on Rautiala's analysis of the North American Agreement on Environmental Cooperation, one of the so-called "side agreements" to NAFTA. Using the police patrol-fire alarm distinction, Raustiala argued that the advantages of police patrol or fire alarms varied "given the structure of relevant information."[44] Where compliance-relevant information is well hidden or confidential, police patrols should be more effective than fire alarms. Conversely, fire alarms are favored when information is widely dispersed, so that private actors can observe violations and, in essence, pull the fire alarm to alert other parties to the agreement. And when information is easily observed by all actors, we ought to expect no formal monitoring system; states can simply rely on self-help.

In the NAFTA context, a fire alarm system was created in the environmental side agreement that took advantage of the dispersed nature of information about environmental damage. Individuals and NGOs were empowered to bring forward claims about violations to a multilateral investigatory body, which in turn could issue authoritative public reports on the allegations. This structure mirrored the frequent use of citizen suit provisions in domestic American environmental law, which similarly relies on the informational resources of private actors to enforce public norms. Fire alarms are attractive to governments because they tap into information already possessed by private actors and therefore entail no or low additional search costs. In other words, "fire alarms transfer search costs off-budget," because the direct costs of discovering enforcement failures are borne by private actors.[45]

For these reasons, Raustiala suggested that fire alarms are often more efficient than police patrols, though police patrols may have greater deterrent value:

[44] Raustiala, 2003 at 259.
[45] At 265

One plausible hypothesis is that the deterrent value of a police patrol is likely highest where noncompliant actors can escape attention and/or readily hide evidence of their malfeasance ex post. This is the consistent with the fact that real police officers patrol for crime rather than merely responding to calls. Fire departments do not generally patrol, precisely because fires do not run away or burn out without a trace.[46]

The structure of relevant information can thus be thought of along a *continuum of observability*. At one end are events obvious to all actors, such as an above ground nuclear test. In the middle is information that is less readily observed but known to affected actors, such as non-tariff barriers. Importing firms will readily discern, without any special efforts, if they are being subject to undue regulatory hurdles, and will be incentivized to report or act on that information. But many other actors may not readily uncover that fact. Finally, at the opposite end are secret forms of information, such as a chemical weapons plant. Few actors are likely to uncover such a plant in their ordinary affairs; a specialized inspection regime—i.e., a police patrol of some kind—is probably necessary. Figure 1 illustrates this continuum:

Figure 1: *Continuum of Observability*

INFORMATION

<--Widely Observable----------Known to Victims----------Private/Secret-->

We draw out the following conjectures about this continuum:

- **When information is *widely observable*, we expect to observe self-help provisions**
- **When information is *known to victims*, we expect fire alarms provisions**
- **When information is *held privately*, we expect police patrol provisions[47]**

In sum, our basic assumption is that states seek to create international institutions in order to solve collective dilemmas or cooperation problems. To do so effectively, they must under some

[46] 266

[47] With respect to the *observability continuum*, Koremenos et al would argue that under conditions where behavior is widely observable, there is low uncertainty about behavior; where information is either secret or only available to a few actors, there is high uncertainty about behavior.

conditions gather information about state performance. When that is necessary, they will seek to do so in ways that reflect the nature of the particular problem they are addressing, and that provide the maximum information at the lowest cost. While earlier studies show that monitoring and review may occur in ways that go beyond the treaty text, or even without any formal basis in the underlying agreement, states nonetheless negotiate specific information provisions into their agreements.[48] We focus here on these formal, negotiated elements, rather than on extra-regime processes that may exist or have developed through practice ex post. We seek to understand, in short, what explains the variation in institutional design we observe.

In the sections that follow, we outline the data used to test our theoretical conjectures, present descriptive statistics on monitoring provision in the random sample of agreements, and present the preliminary results of our testing.

IV Data

To test these theoretical conjectures, we employ data from COIL. The sample, which is conditional on the issue areas of economics, environment, human rights, and security, is drawn from the United Nations Treaty Series.[49] A coding instrument was used to record the characteristics of 235 randomly-selected international agreements.[50] Below we describe in detail the variables used in this analysis.

Dependent Variables

One of the goals of COIL was to develop and collect data on more precisely defined conceptualizations of variables used frequently in research on international cooperation. Of course, the motivation for this is a belief that such refinements are theoretically meaningful. Below we describe in detail the institutional design variables used in this analysis. The coding instrument has a section on compliance monitoring systems.

[48] Raustiala and Victor in Victor, Raustiala, and Skolnikoff, supra.
[49] The sample features agreements up through the year 2006.
[50] Importantly, the coders for this project were extensively trained in order to give them high levels of both competency and consistency, with the majority going through 9-12 months of course-based training that included both theoretical training and practice coding runs. At least two coders independently coded each agreement using an online survey instrument. Upon completion, an intercoder reliability report was generated for the 375 questions for which there are "quantitative" answers, e.g., yes/no, multiple choice, a specific number, etc. The average coded agreement was characterized by disagreement on approximately 15 questions, or 4% of the quantitative questions; the range so far overall was between 2% and 15%. The inconsistencies were then resolved through a close re-reading of the agreement and supervised discussion involving the original coders, a trained graduate student, and Koremenos. See Appendix A for a list of the agreements used in this analysis.

If a monitoring system does exist, coders are asked to distinguish between the two main types of systems discussed above: fire alarm and police patrol; i.e., the extent to which monitoring is regularly conducted (police patrol) or based on information that a particular actor has at its disposal (fire alarm).

> ***Fire Alarm*** is defined as a compliance monitoring system in which the monitoring body relies on other member-states or third parties to bring the non-compliance of a member to its attention. The aggrieved member or third party can complain and seek redress, most often by submitting a complaint to some body that will take action with regard to the non-complying member. It is less centralized and less direct than a police patrol because it relies on the action from a pool of actors to report non-compliance of members rather than on a single entity that regularly patrols member states and determines whether they are in compliance or not. As an example, the CTBT provides that "[e]ach State Party has the right to request an on-site inspection in accordance with the provisions of this Article and Part II of the Protocol in the territory or in any other place under the jurisdiction or control of any State Party, or in any area beyond the jurisdiction or control of any State."
>
> ***Police Patrol*** is defined as a compliance monitoring system in which the member states, a body created by the agreement, or a third party, examine instances of member-state actions on a regular basis and determine whether they are in compliance with the agreement. Often but not always a centralized monitor routinely observes the behavior of the members to ensure they are fulfilling their duties and obligations set forth in the agreement. An example is the International Coffee Agreement. The importing states police the agreement by requiring that coffee coming into their states be accompanied by a certificate of origin. This information is then forwarded to the International Coffee Organization. Another example is the WTO's Trade Policy Review Mechanism, which regularly reviews the trade policy of WTO members.

A second set of questions ascertains who does the monitoring: member states in a self-reporting fashion, other member states (who act as monitors of each other), an internal body that is created by the agreement,[51] a pre-existing intergovernmental organization (IGO), a

[51] Following those in American politics who study Congress, we consider monitoring conducted by internal bodies as a form of delegation/centralization. For more on this assumption, see Koremenos, Barbara, "If Only Half of

nongovernmental organization (NGO), or some other entity. This "other" entity is usually individuals or firms acting independently of their home states, as in BITs, or third state outside the agreement, as in the Geneva Conventions.

Independent Variables

Given the driving force of the cooperation problem in any institutional analysis, we discuss the coding of the independent variables in some detail. The Rational Design volume, while theoretically rich, does not provide much advice with respect to operationalizing these variables given the level of abstraction. In his critique of the special issue Duffield (2003:424) states: "For the cases to generate useful findings, the variables must be operationalized and measured in a consistent manner….The problem begins with the analytic framework, which offers no guidance on this vital methodological issue…"[52] Duffield concludes his critique by calling on the project organizers to develop and publicize explicit guidelines for variable measurement (2003: 428). Obviously, this is not an easy task. Still, this article utilizes a dataset that features a consistent coding of the independent variables.

The coders answered the following substantive question, among others: 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. (The "other" category includes areas of cooperation such as foreign aid, for which there are no or few strategic considerations, and pure coordination games without uncertainty.) Of course, more than one answer can be chosen for each agreement.[53]

Consider the following examples, which come directly from the COIL dataset: An agreement for which the cooperation problem is characterized by a commitment problem, an enforcement problem, and an uncertainty about the state of the world problem is the "Agreement for the Promotion and Protection of Investments" (UNTS 19536) between the United Kingdom and Bangladesh. Given its tumultuous political history, including military coups in the 1970s, Bangladesh wanted to tie its hands in case of a future regime change so that outsiders will invest.[54]

International Agreements Have Dispute Resolution Provisions, Which Half Needs Explaining?" *Journal of Legal Studies*, 36: 189, January 2007.

[52] In their response, Koremenos and Snidal (2003) argue that careful conceptualization is the first step and necessary condition before operationalization.

[53] For a detailed explanation of each of these cooperation problems, see Appendix B. (MUST BE ADDED)

[54] This hands-tying is also important given the tenets of the New International Economic Order, which allow for national expropriation. (We thank John Crook for his comments on this point.)

This is also a classic Prisoner's Dilemma, where the best outcome for me is if you protect my investments but I can nationalize yours; hence the enforcement problem.[55] And finally the uncertainty about the state of the world comes about because future political shocks change the benefits accrued under such agreements in unstable states, which Bangladesh certainly was. Put differently, what the future distribution of benefits will look like under such cooperation depends on whether certain political developments change the desirability of the cooperative terms. These developments cannot be predicted and hence are best modeled as shocks. States like Bangladesh are vulnerable to such shocks.

An example of an agreement for which the cooperation problem is quite simple is the African Migratory Locust Convention (UNTS 10476) in which the main goal is scientific cooperation. This agreement is also coded for "negative externalities," because an outbreak of migratory locust in any one state could spread into Africa more generally. As another example, consider the "Agreement between the U.S. and Ecuador for Financing Certain Educational Exchange Programs" (UNTS 4114), which is characterized only by "other." The agreement creates a bilateral commission to administer a joint educational exchange program between the U.S. and Ecuador, funded by Ecuadorian payments for surplus U.S. agricultural commodities.

The Convention Concerning Equality of Treatment for National and Foreign Workers as Regards Workmen's Compensation for Accidents (UNTS 602) is an example of a human rights agreement for which the underlying cooperation problem is characterized by uncertainty about behavior as well as an enforcement problem. States can easily discern if other member states have appropriately incorporated equal treatment into their domestic law, but it is quite difficult to tell if the laws are being enforced. This kind of uncertainty about behavior underlies many human rights agreements. The enforcement problem is created by the Prisoner's Dilemma structure of the payoffs: A state wants its workers to be treated well in other states, but would prefer not to spend resources on foreigners working within its borders.

A second agreement for which the underlying cooperation problem is characterized by uncertainty about behavior is the International Covenant on Civil and Political Rights (UNTS 14668). The treaty prescribes a number of civil and political rights that states are obligated to respect. But it is extremely difficult to determine to what extent states are faithfully complying with these prescriptions. In addition to the uncertainty about behavior, the cooperation problem is

[55] We remind readers that the term "enforcement problem" as used in the Rational Design framework does not refer to the likelihood that states will actually comply with an agreement; rather, it refers to the pre-agreement incentives in the particular substantive area covered by the agreement. Put differently, in this case, the enforcement problem characterizes the situation in the *absence* of any institutional solutions provided by an agreement.

characterized as "other," given its goal of norm-setting. Unlike the human rights agreement described above, the payoff structure among the states does not resemble a Prisoner's Dilemma – for example, while I may have an interest in your cooperation, your defection does not make me wish I had defected as well; hence the cooperation problem is not characterized by an enforcement problem.

The separation of coders for the independent and dependent variables is necessary for the integrity of any analysis using the data. While quite labor-intensive and time-consuming, scholars can have confidence in the resulting dataset.

V Descriptive Statistics

In this section we present a first look at the variables of interest. With a random sample of 235 agreements, there are quite a few interesting patterns.

Table 1: Does the agreement create a system of compliance monitoring?

	No	Yes	N
Economics	43	60	103
Environment	22	21	43
Human Rights	18	24	42
Security	18	29	47
N	101	134	235

Table 2: Does the agreement create a system of compliance monitoring?

	No	Yes
Agricultural commodities	5	20
Disarmament	1	8
Environment	21	20
Finance	15	11
Human rights	18	25
Investment	13	29
Monetary matters	11	0
Security	17	21
N	101	134

Tables 1 and 2 report the number of agreements that create a system of compliance monitoring, breaking the numbers down according to the four broad issue areas coded in the dataset and the eight sub-issue areas, respectively. Roughly ½ of the agreements contain monitoring provisions. Yet in some issue areas the vast majority of agreements are systematically monitored – agricultural

commodities and disarmament agreements in particular. Substantial variation arises even across closely related sub-issue areas: About 2/3s of investment agreements are monitored, but none of the agreements on monetary matters are.

Which actors monitor is shown in Table 3 (from 3 onwards, only *percentages* are displayed). Whenever monitoring tasks are specified, member states assume the prime role regardless of the issue area. Still, the involvement of various entities in monitoring differs widely. Member states are involved in the monitoring most heavily in security, where they monitor more than half of the agreements; by contrast, only 29% of agreements related to economics are monitored by member states, while 27% of these agreements delegate the role of monitoring to 'other actors'. These other actors are usually individuals and firms acting in an independent capacity, as in bilateral investment treaties. NGOs are given little role in monitoring agreements across all issue areas.

Table 3: Who monitors behavior?

	Member-states (%)	**Internal body (%)**	**IGO (%)**	**NGO (%)**	**Other (%)**
Economics	29	4	6	0	27
Environment	42	23	19	0	2
Human Rights	50	31	36	10	0
Security	55	9	21	0	2

"Chi^2 = 147.63 ; P value < 0.001 ; N = 235"

Table 4: Who monitors behavior?

	Member-states (%)	**Internal body (%)**	**IGO (%)**	**NGO (%)**	**Other (%)**
Agricultural commodities	76	8	12	0	0
Disarmament	67	33	56	0	0
Environment	42	23	19	0	2
Finance	31	4	8	0	0
Human rights	50	31	36	10	0
Investment	7	2	2	0	67
Monetary matters	0	0	0	0	0
Security	53	3	13	0	3

"Chi^2 = 986.35 ; P value < 0.001 ; N = 235"

An interesting finding in Table 3 is the dense monitoring of human rights agreements (and to a lesser extent, environmental agreements). (Note that the N of 235 implies that these percentages refer to the entire sample of agreements.) Recall from Table 1 that almost 60% of agreements in the human rights issue area call for some type of compliance monitoring. Table 3 illustrates that, among those human rights agreements that are monitored, five out of six assign this role at least partially to member states. In addition, internal bodies and IGOs each monitor about half of those human rights agreements that have any monitoring provisions. And human rights agreements are also the only ones which expressly involve NGOs in monitoring.

Notice that the data imply that each monitored human rights agreement involves more than two monitoring entities on average, which may point to the severe difficulties in monitoring these agreements. About 40% of human rights agreements have no formal monitoring provisions at all, but our sample of human rights agreements contains some reciprocal voting right agreements that allow individuals with permanent residency status in either country to vote in local elections.

Table 4 looks at sub-issues. The data reflect the tremendous variation within economics and security, in particular. Disarmament agreements are monitored in 89% of the cases, with 67% of the agreements involving member states and 56% involving IGOs. This contrasts markedly with other security agreements, where about 50% of agreements are monitored, and a mere 13% rely on IGOs. Similarly, while 76% of the agreements on agricultural commodities are monitored by member states, agreements on monetary matters are not monitored at all, and 67% of the agreements on investment rely on 'other' entities for monitoring. Moreover, a look at the ultimate column of Table 2 reveals how much collapsing agreements to four broad issue areas obfuscates additional variation across sub-issues. The strikingly high share of 'other' monitoring agents of investment agreements is primarily due to the involvement of individual persons in these cases – of the 28 investment agreements that are monitored by non-state actors, only one is not monitored by an individual. This stands in stark contrast to all other sub-issues, where individuals are rarely drawn in.

Tables 5 and 6 report, for those agreements with monitoring provisions, whether monitoring occurs on a regular basis, only in cases of allegations of non-compliance, or whether both mechanisms are invoked.[56] The observed pattern again seems to reflect substantial differences in the

[56]Agreements on monetary matters are not included in Table 6 because none of these, as discussed earlier, calls for a monitoring mechanism.

severity of cooperation problems: about 1/2 of environmental agreements and security agreements are monitored on a regular basis, and another 1/3 of these agreements rely on both monitoring mechanisms. By contrast, in economic agreements states appear much more inclined to wait for allegations of non-compliance to occur before starting to monitor.

Table 5: Does monitoring occur on a regular basis (police patrol or self reporting), only when there are allegations of non-compliance ("fire alarm"), or both?

	Not specified (%)	**Only when there are allegations of non-compliance (%)**	**Regular basis (%)**	**Both (%)**
Economics	3	63	23	10
Environment	10	5	57	29
Human Rights	21	12	12	54
Security	10	14	48	28

"Chi^2 = 175.63 ; P value < 0.001 ; N = 134"

Table 6: Does monitoring occur on a regular basis (police patrol or self reporting), only when there are allegations of non-compliance ("fire alarm), or both?

	Not specified (%)	**Only when there are allegations of non-compliance (%)**	**Regular basis (%)**	**Both (%)**
Agricultural commodities	10	15	50	25
Disarmament	12	25	25	38
Environment	10	5	60	25
Finance	0	73	18	9
Human rights	20	12	12	56
Investment	0	93	7	0
Security	10	10	57	24

"Chi^2 = 426.16 ; P value < 0.001 ; N = 134"

In issue areas where there is relatively little to lose (for the state as a whole) in the case of non-compliance, member states appear most willing to monitor only in response to specific allegations – this pertains to investment and finance agreements in particular. In matters of 'life and death', on the other hand, continuous monitoring or even the inclusion of both mechanisms is much more common, as the high share of this institutional feature among security, disarmament and human rights agreements suggests. Environment is an interesting exception here: Being a rather 'soft' issue, it appears that the underlying cooperation problems are so severe that, once addressed in a formal agreement, states are willing to monitor compliance relatively thoroughly – in other words, states seem to care not only about concluding agreements per se, but also exert the necessary effort to make them effective. In this regard, it is a striking feature that, across all sub-issue areas, states are very careful to specify the institutional details of their agreements: In most sub-issue areas, 90% of agreements mention how monitoring takes place (with human rights being the notable exception at 80%).

An interesting aside is that the dense monitoring of human rights agreements reported in Table 3 above is also reflected in deciding how to design the monitoring process: In more than 1/2 of human rights agreements, monitoring occurs both on a regular basis and in response to allegations of non-compliance, which is by far the highest share among the four issue areas – the distant second are environmental agreements, less than 1/3 of which feature this design choice.

Table 7: Does the agreement explicitly state that compliance data will be collected?

	No (%)	**Yes (%)**
Economics	63	37
Environment	19	81
Human Rights	21	79
Security	31	69

"Chi^2 = 56.75 ; P value < 0.001 ; N = 134"

Table 8: Does the agreement explicitly state that compliance data will be collected?

	No (%)	**Yes (%)**
Agricultural commodities	10	90
Disarmament	50	50
Environment	20	80
Finance	91	9
Human rights	20	80
Investment	90	10
Security	24	76

"Chi^2 = 286.25 ; P value < 0.001 ; N = 134"

Table 7 reports the share of agreements that explicitly state the collection of compliance data. In economics, only 37% of agreements specify that data will be collected, while the share is as high as 81% for environmental agreements. Table 8 reports the same variable, only now broken down into sub-issue areas. Within economics, compliance data is collected in 90% of the agreements relating to agricultural commodities, but only on one out of ten agreements on investment and finance issues. Similarly, while compliance data is collected for 3/4 of security agreements, this is true only for 1/2 of the disarmament agreements in the sample. It is not only statistically highly unlikely (as evidenced by the reported Chi-Square), but also implausible that such variation occurs by chance – instead, it appears that states tackle the different underlying cooperation problems characterizing different subissue areas through intentional institutional design features.

States rely primarily on self-reporting in order to obtain data on compliance, as Table 9 shows – with the notable exception of human rights agreements, 37% of which exploit pre-existing IGOs, with an additional 16% drawing on internal bodies. By contrast, only 6% of environmental and none of the security-related agreements rely on pre-existing IGOs. The variation is consistent with the claim that states purposefully choose provisions on data collection in response to the underlying cooperation problems prevailing in different issue areas.

Interestingly, while security-related agreement do not rely on IGOs to *collect* data on compliance, 17% of these agreements use IGOs in order to *verify* the data gathered by single member states (while there is no data available on how the remaining agreements proceed; see Table 10). This

is a more elaborate design of the monitoring process, increasing the reliability of the data while maintaining the efficiency of self-reporting.

Table 9: Who gathers and reports the data from which compliance/non-compliance is determined?

	A pre-existing IGO (%)	**Internal body (%)**	**Other (%)**	**Self-reporting by members (%)**
Economics	5	5	0	91
Environment	6	18	0	76
Human Rights	37	16	5	42
Security	0	11	22	67

"Chi^2 = 147.33 ; P value < 0.001 ; N = 76"

Table 10: If the member is responsible for self-reporting of compliance, who verifies the data?

	A pre-existing IGO (%)	**Internal body (%)**	**Not specified (%)**	**Other (%)**
Economics	5	5	75	15
Environment	15	15	46	23
Human Rights	0	12	75	12
Security	17	0	33	50

"Chi^2 = 97.43 ; P value < 0.001 ; N = 53"

Finally, Table 11 reports the share of agreements for which information is gathered via on-site inspections. These shares vary starkly. Agreements on security employ on-site inspections most often, followed by environmental agreements. None of the economic agreements uses this measure. At least the latter should not be too surprising, as data in the issue area of economics is in general much easier collected and disseminated than in any other issue area. The picture is less clear for environmental and human rights agreements. In the case of the former, this possibly reflects the high economic cost of on-site inspections, while for human rights, the omission of on-site inspections might in part reflect the high sovereignty costs associated with this issue area.

Table 11: Is information gathered by on-site inspections?		
	No (%)	**Yes (%)**
Economics	100	0
Environment	59	41
Human Rights	84	16
Security	17	83
"Chi^2 = 174.26 ; P value < 0.001 ; N = 76"		

VI Empirical Tests and Results

[THIS SECTION IS VERY PRELIMINARY; MORE MATERIAL WILL BE ADDED LATER]

Table 1 shows the results from a probit analysis, with the dependent variable coded one when the agreement calls for a system of compliance monitoring.[57] The independent variables of interest are the presence or absence of uncertainty about behavior, the presence of other cooperation problems that are characterized by incentives to defect from an agreement,[58] and their interaction (the reason being that these other cooperation problems make uncertainty about behavior a greater obstacle to cooperation). Aside from these, the regressors include the logged number of participants given the rational design conjecture about transaction costs[59] as well as dummies for three of the four issue areas (with economics being the omitted group).[60] The reported standard errors are ordinary ones, assuming independently and identically distributed observations; using heteroskedasticity-consistent standard errors does not affect any of the conclusions presented here, nor does the use of standard errors clustered on issue areas.

The results shown in Table 1 clearly indicate that uncertainty about behavior results in a significantly higher probability that provisions for compliance monitoring are included in an

[57] 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 monitoring provision – takes on the value of 1 when the agreement features such provisions and 0 when it does not.
[58] This variable is a dummy coded one if any of the following problems are present: enforcement problems, commitment problems, uncertainty about preferences, and uncertainty about the world.
[59] Using the logged number of participants rather than the absolute number is preferred on the basis that percentage increases should matter more than absolute increases: It is much more plausible to assume that the effect of an increase from two to three participants is of the same magnitude as the change from 20 to 30, rather than from 20 to 21, participants. That being said, the results remain virtually unchanged when using the absolute number instead.
[60] Including dummy variables for the issues areas is necessary given the sample is a conditional random sample and not weighted according to the true proportion of each issue area in the entire population of agreements.

agreement; this effect is statistically highly significant (with a p-value of 0.0009 in the absence of other cooperation problems, and of 0.0004 in their presence). But the effect is even more remarkable in substantial terms: If uncertainty about behavior prevails, the predicted probability that an agreement calls for monitoring provisions more than doubles if no other cooperation problems exist, from 44.2% to then 91.9%, and almost doubles, from 47.3% to 84.7%, if there are other cooperation problems (Table 2).[61]

The coefficient on the presence of other cooperation problems is not only small, but also statistically indistinguishable from zero (evidenced by a very high p-value of 0.712). This shows that other cooperation problems play virtually no role in the decision of states to include monitoring provisions into an agreement, whereas uncertainty about behavior constitutes the main driving force. This claim is further corroborated by the insignificant interaction term: While the effect of uncertainty about behavior is significantly different from zero in both the presence and the absence of other cooperation problems, it does not depend on them.

The number of participating states has a positive effect, as expected, but it is hardly significantly different from zero, with a p-value of 0.101.[62] In substantial terms, going from a bilateral agreement to an agreement with the average number of participants increases the probability that monitoring provisions are included by about four percentage points (if uncertainty about behavior, but no other cooperation problems, exist). This effect is not negligible, but compared to the large effect of uncertainty about behavior of rather minor importance.
Turning to the issue area dummies, the results indicate that, once we control for the underlying cooperation problems, both human rights agreements and environmental agreements are significantly less likely to include monitoring provisions than agreements in the issue area of economics, as evidenced by the p-values of 0.026 and 0.006, respectively. However, they do not differ significantly from security agreements, which in turn are not significantly different from economics agreements at the conventional 5% level.

Finally, to see how accurately the model works, one can calculate the number of observations correctly predicted; this requires defining some prediction rule. A reasonable choice is

[61] Predicted probabilities were calculated for a hypothetical average agreement, that is, an agreement for which the issue area dummies are evaluated at their sample means. Alternatively, one could calculate predicted probabilities for each issue area separately, and then average over these predicted probabilities, weighting by issue areas. Doing so, however, would change the results only marginally. For instance, the predicted probability in the presence of uncertainty about behavior would then be 91.6%, compared to 91.9% obtained by using the first method.
[62] Notice, however, that the reported p-value is based on a two-tailed test, which tests the null hypothesis that the effect is zero. Strictly speaking, one could use a one-sided test, since it is in fact expected that the effect is positive, and testing against the null that the effect is non-positive; doing so would halve the reported p-value. Nevertheless, the more conservative (though less appropriate) two-tailed test is reported in Table 1.

to set the predicted value equal to one if the predicted probability is larger than the sample mean of the dependent variable, and equal to zero otherwise. Using this rule, one obtains that 59.5% of the observations are correctly predicted; given the parsimony of the model, this is a reasonably good result.[63]

Table 1: Does the agreement call for a system of compliance monitoring?

	Coefficient	Std. Error	z	P>|z|
uncertainty behavior	1.546	0.468	3.306	0.001
other cooperation problems	0.079	0.228	0.345	0.730
uncertainty behavior x other cooperation problems	-0.454	0.568	-0.799	0.424
log(number)	0.169	0.103	1.642	0.101
environment	-0.740	0.269	-2.751	0.006
security	-0.460	0.262	-1.756	0.079
human rights	-0.662	0.297	-2.229	0.026
constant	-0.028	0.241	-0.115	0.908
Log Likelihood	-139.711			
Number Obs.	232			

Table 2: Predicted Probabilities

	no uncertainty about behavior	uncertainty about behavior	change (p-value)
no other cooperation problems	0.442	0.919	0.477 (0.001)
other cooperation problems	0.473	0.847	0.374 (0.000)

[63] Another obvious choice for the prediction rules would be to use 0.5 as the cutoff. While this is problematic in samples where a large fraction of observations has the same value on the dependent variable, this is less of a problem in this sample (the sample mean of the dependent variable is 0.573). Using 0.5 as cutoff rule, the share of correctly predicted observations increases to 67.2%.

Table 3 reports probit estimates, where the dependent variable indicates whether entities other than the state monitor compliance. These other entities may be internal bodies, NGOs, pre-existing IGOs, or any other entity which was not created by the agreement. (States may or may not monitor in addition to these other entities.) Thus, one may interpret this variable as the strength of the monitoring provisions, since it indicates whether states are willing to centralize or delegate the monitoring process. The regressors are the same as in the previous model.

The results again strongly support arguments based on rational design. First, notice that uncertainty about behavior in itself does increase the probability that an agreement includes delegated monitoring provisions, but that this effect is not statistically significant at any conventional levels (the p-value is 0.646). However, monitoring provisions become stronger in the presence of other cooperation problems, as indicated by the positive interaction term. Moreover, while the interaction term itself again is not significant, the overall effect is: Testing that the effect of uncertainty about behavior is zero if there are also other cooperation problems present yields a p-value of 0.0013. This shows that uncertainty about behavior alone is not sufficient to induce states to delegate monitoring; only if this uncertainty is aggravated by the existence of other severe cooperation problems are states willing to give up some of their sovereignty and control over the monitoring process by involving other entities.

The substantive effects are again impressive (Table 4): Uncertainty about behavior, in combination with other cooperation problems, increases the predicted probability that states transfer the authority to monitor an agreement to other entities from 32.5% to 71.2%. This underscores the importance of uncertainty about behavior for the design choices of states with respect to monitoring provisions; but it also shows how carefully states weigh the costs of delegating monitoring against the benefits, as the distinction between the decision to include monitoring provisions, on the one hand, and to strengthen them via delegation, on the other hand, makes clear: Only when the underlying problems are complex enough are states prepared to supplement the existence of monitoring provisions by a more thorough monitoring process, involving other independent actors as well. That 71.6% of the observations are predicted correctly places further confidence in the performance of the model.[64]

Interestingly, while the presence of other cooperation problems did not play a role in the decision whether to include monitoring provisions, it does matter for the question of whether monitoring is delegated. The probability of involving other entities in the monitoring process increases from 14.9% to 32.5% in the absence of uncertainty about behavior, and this effect is

[64] Using 0.5 as cutoff, the share of correctly predicted observations decreases slightly to 71.1%.

statistically significant with a p-value of 0.030. The effect is even more pronounced in the presence of uncertainty about behavior, due to the inherently interactive structure of the probit model: In this case, the predicted probability more than triples from 20.3% to 71.2% (with a p-value of 0.003), which underscores once more the powerful effects of uncertainty about behavior when combined with other cooperation problems.

The effect of the number of participants is positive, as expected, and with a p-value of 0.000 also statistically highly significant. Just as an example of the substantive effect of increasing number, in an agreement that is characterized by uncertainty about behavior as well as other cooperation problems, moving from two participating states to the mean value increases the probability that monitoring is delegated from 63.4% to 71.2%, which a substantial increase.[65] This finding again supports main conjectures from the rational design literature: As the number of actors goes up, delegation of monitoring becomes more likely.

Finally, a look at the issue area dummies provides some additional insights. In particular, states are least likely to delegate monitoring provisions for environmental agreements, followed closely by security agreements. While the difference between these two issue areas is not significant (the p-value is 0.5873), both of them are significantly different from agreements that relate to economics. Moreover, human rights agreements, often claimed to be distinct from other agreements in various respects, are evidently not any different from other agreements when it comes to the delegation of monitoring provisions once we control for the underlying cooperation problems and number; testing the null hypothesis that the effect of human rights is the same as that for any of the other issue areas results in p-values between 0.1976 and 0.4391, which does not allow one to reject the null at any conventional levels.

[65] This example is not illustrated in either Table 3 or 4, but the calculation was done using the values in these tables.

Table 3: Does some other entity than the state monitor behavior?

	Coefficient	Std. Error	z	P>|z|
uncertainty behavior	0.210	0.458	0.459	0.646
other cooperation problems	0.588	0.271	2.172	0.030
uncertainty behavior x other cooperation problems	0.803	0.553	1.452	0.146
log(number)	0.349	0.099	3.512	0.000
environment	-0.749	0.314	-2.385	0.017
security	-0.562	0.271	-2.074	0.038
human rights	-0.301	0.310	-0.970	0.332
constant	-1.201	0.284	-4.232	0.000
Log Likelihood	-121.762			
Number Obs.	232			

Table 4: Predicted Probabilities

	no uncertainty about behavior	uncertainty about behavior	change (p-value)
no other cooperation problems	0.149	0.203	0.054 (0.646)
other cooperation problems	0.325	0.712	0.387 (0.001)

[MORE TO BE ADDED]

VII Conclusions & Implications

TO BE ADDED

Appendix A: COIL Agreements

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

TABLE 1 (continued)
FINANCE AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	Signatories	Signature Date	UNTS #

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
Agreement between Denmark, Finland, Iceland, Norway, and Sweden on the establishment of the Nordic Environmental Finance Corporation	(Multilateral)	1999	36248
Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Sultanate of Oman for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income and capital	(the U.K.-Northern Ireland-Oman)	1998	35805
United Nations Convention on Independent Guarantees and Stand-by Letters of Credit	(Multilateral)	1995	38030
International Convention for the Suppression of the Financing of Terrorism (with annex)	(Multilateral)	1999	38349
FEDERAL REPUBLIC OF GERMANY AND KENYA: Agreement concerning financial co-operation--Loan to the Development Finance Company of Kenya.	(Germany-Kenya)	1987	26480
TABLE 1 (continued) **FINANCE AGREEMENTS INCLUDED IN THE SAMPLE**			
Agreement Name	**Signatories**	**Signature Date**	**UNTS #**
Agreement between the Republic of Finland and the Kingdom of the Netherlands for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income and on capital	(Finland-Netherlands)	1995	37104

(with protocol)			
Agreement on Economic and Financial Cooperation between the Kingdom of Spain and the Republic of Argentina	(Argentina-Spain)	1995	34755

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	(U.K. – Egypt)	1975	15181

protection of investments.			
TABLE 2 (continued) **INVESTMENT AGREEMENTS INCLUDED IN THE SAMPLE**			
Agreement Name	**Signatories**	**Signature Date**	**UNTS #**
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 2 (continued) **INVESTMENT AGREEMENTS INCLUDED IN THE SAMPLE**			
Agreement Name	**Signatories**	**Signature Date**	**UNTS #**
FRANCE AND ECUADOR: Agreement on the reciprocal promotion and protection of investments	(Ecuador-France)	1994	33847

DENMARK AND BULGARIA: Agreement concerning the promotion and reciprocal protection of investment	(Denmark-Bulgaria)	1993	33613
Spain and Dominican Republic: Agreement on the reciprocal promotion and protection of investments	(Spain-Dominican Republic)	1995	33395
Agreement on the mutual promotion and protection of investments.	(Belgium-Luxembourg-Union of Soviet Socialist Republics)	1989	33361
NEW ZEALAND AND CHINA: Agreement on the promotion and protection of investments (with exchange of notes)	(New Zealand-China)	1988	31058
Spain and Uruguay: Agreement on the reciprocal promotion and protection of investments	(Spain-Uruguay)	1992	31039
Estonia and Denmark: Agreement on the reciprocal promotion and protection of investments	(Estonia-Denmark)	1991	30890
Estonia and Poland: Agreement on the reciprocal promotion and protection of investments.	(Estonia-Poland)	1993	30492
Sweden and Hungary: Agreement for the promotion and reciprocal protection of investments	(Sweden-Hungary)	1987	27077
United Kingdom of Great Britain and Northern Ireland and Hungary: Agreement for the promotion and reciprocal protection of investments	(United Kingdom of Great Britain-Northern Ireland-Hungary)	1987	27032
Jamaica and the United Kingdom and Northern Ireland: Agreement for the Promotion and Protection of Investment	(Jamaica-the United Kingdom-Northern Ireland)	1987	25985
Agreement on the promotion and reciprocal protection of investments between Spain and Jamaica	(Jamaica-Spain)	2002	39125

TABLE 2 (continued)

INVESTMENT AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	**Signatories**	**Signature Date**	**UNTS #**
Treaty Between the Federal Republic of Germany and the Republic of Uzbekistan for the promotion and reciprocal protection of investments	(Germany-Uzbekistan)	1993	35902
Agreement for the promotion and reciprocal protection of	(Spain-Ukraine)	1998	36612

investments between Spain and Ukraine			
Agreement between the Government of Canada and the Government of Ukraine for the promotion and protection of investments	(Canada-Ukraine)	1994	34948
Agreement between the Kingdom of the Netherlands and the Republic of India for the promotion and protection of investments	(India-Netherlands)	1995	39911

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
LITHUANIA AND RUSSIAN FEDERATION: Agreement on reciprocal obligations concerning the introduction of Litas as the Monetary Unit of the Republic of Lithuania	(Lithuania-Russian Federation)	1992	31335
TABLE 3 (continued) **MONETARY AGREEMENTS INCLUDED IN THE SAMPLE**			
Agreement Name	**Signatories**	**Signature Date**	**UNTS #**
INDIA AND ZAMBIA: Mutual Agreement to combat illicit trafficking in narcotic drugs and psychotropic substances and money laundering (with annexes)	(India-Zambia)	1993	31241
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.	(United Kingdom of Great Britain-Northern Ireland-Egypt) (Bangladesh – U.S.)	1978 1970	18002 29460
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	(Mozambique – U.S.)	1977	17753

agricultural commodities.			
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
TABLE 4 (continued) **TRADE AGREEMENTS INCLUDED IN THE SAMPLE**			
Agreement Name	**Signatories**	**Signature Date**	**UNTS #**
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
UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND AND EGYPT: Exchange of notes constituting an agreement regarding the use of British capital untransferable accounts in Egypt (with exchange of notes of 13 February and 7 April 1992)			

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

TABLE 5 (continued)
ENVIRONMENTAL AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	Signatories	Signature Date	UNTS #
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	(Brazil - Federal Republic of	1979	17973

agreement concerning land use and soil conservation in the eastern Amazon region.	Germany)		
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
CENTRAL AMERICAN CONVENTION FOR THE PROTECTION OF THE ENVIRONMENT	(Multilateral)	1989	40570

TABLE 5 (continued)

ENVIRONMENTAL AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	**Signatories**	**Signature Date**	**UNTS #**
Agreement on the conservation of cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (with annexes)	(Multilateral)	1996	38466
Memorandum of understanding between the Environmental protection Agency of the United States of America and the Secretariat of the Environment of the Presidency of the Federative Republic of Brazil with the Brazilian Institute of Environment and Renewable Natural Resources	(Brazil-United States of America)	1990	39083
Agreement concerning safety and health in mines	(Multilateral)	1995	35009
Agreement between the Government of The United States of America and the Government of Canada on the	(Canada-United States of America)	1987	38202

Conservation of the Porcupine Caribou Herd			
Convention on the Marine Environment of the Baltic Sea	(Multilateral)	1992	36495
Canada and Russian Federation: Agreement Concerning Environmental Cooperation	(Canada-Russian Federation)	1993	32671
International Convention on oil pollution preparedness, response and cooperation, 1990 (with annex)	(Multilateral)	1990	32194
Canada and US: Agreement on Air Quality	(Canada-United States of America)	1991	31532
Denmark and Oman: Agreement for Environmental Cooperation	(Denmark-Oman)	1993	31060
Agreement on the conservation of small cetaceans of the Baltic and North Seas (with annex)	(Multilateral)	2003	30865

TABLE 5 (continued)
ENVIRONMENTAL AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	**Signatories**	**Signature Date**	**UNTS #**
Korea and Japan: Agreement on Cooperation in the Field of Environmental Protection	(Republic of Korea-Japan)	1993	30595
Estonia and Sweden: Agreement on Cooperation in the Field of Environment	(Estonia-Sweden)	1992	30486
FINLAND AND RUSSIAN FEDERATION: Agreement concerning co-operation in the field of environmental protection	(Finland-Russian Federation)	1992	29998
DENMARK AND MALDIVES: Agreement on Danish support for the establishment of a desalination plant in Male in the Republic of Maldives	(Denmark-Maldives)	1989	27580
AUSTRALIA AND UNION OF SOVIET SOCIALIST REPUBLICS: Agreement on co-operation in the field of protection and enhancement of the environment	(Australia-Union of Soviet Socialist Republics)	1990	27468
Montreal Protocol on Substances that Deplete the Ozone Layer	(Multilateral)	1987	26369
Exchange of Notes Constituting and Agreement on a Project Concerning Environmental Impact of Large Dams	(Brazil-Germany)	1997	33868

TABLE 6
HUMAN RIGHTS AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	Signator
Convention (No. 155) concerning occupational safety and health and the working environment.	(Multila
Protocol (with annex) amending the Slavery Convention signed at Geneva on 25 September 1926.	(Multila
Convention on the prevention and punishment of the crime of genocide.	(Multila
Convention on the non-applicability of statutory limitations to war crimes and crimes against humanity.	(Multila
OAU Convention governing the specific aspects of refugee problems in Africa.	(Multila
Convention for the Protection of Human Rights and Fundamental Freedoms.	(Multila
International Covenant on Civil and Political Rights.	(Multila
Convention on human rights and biomedicine.	(Multila
Convention on the prevention and punishment of crimes against internationally protected persons, including diplomatic agents.	(Multila
Convention on the Elimination of All Forms of Discrimination against Women.	(Multila
Fran-Belgian Agreement on passenger traffic.	(Belgiu France
Convention (No. 105) concerning the abolition of forced labor.	(Multila
Agreement on the fundamental rights of nationals.	(Congo France
Protocol relating to refugee seamen.	(Multila
Geneva Convention relative to the treatment of prisoners of war	(Multila

TABLE 6 (continued)
HUMAN RIGHTS AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	Signator
Convention (No. 111) concerning discrimination in respect of employment and occupation.	(Multila
International Convention on the Suppression and Punishment of the Crime of Apartheid.	(Multila
Convention (No. 118) concerning equality of treatment of nationals and non-nationals in social security	(Multila
Convention (with Final Protocol) concerning the reciprocal grant of assistance to distressed persons.	(Multila

Convention (No. 19) concerning equality of treatment for national and foreign workers as regards workmen's compensation for accidents.)	(Multila
Convention (No. 98) concerning the application of the principles of the right to organize and to bargain collectively.	(Multila
Constitution of the International Refugee Organization and Agreement on interim measures to be taken in respect of refugees and displaced persons.	(Multila
American Convention on Human Rights Pact of San Jos, Costa Rica.	(Multila
Convention (No. 143) concerning migrations in abusive conditions and the promotion of equality of opportunity and treatment of migrant workers.	(Multila
Convention of establishment.	(France Mali)
Convention on the Rights of the Child	(Multila
Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment	(Multila
International Convention against apartheid in sports	(Multila

TABLE 6 (continued)
HUMAN RIGHTS AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	**Signator**
Agreement establishing the Fund for the Development of the Indigenous Peoples of Latin America and the Caribbean	(Multila
International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families	(Multila
United Nations Convention against Transnational Organized Crime	(Multila
Memorandum of understanding between the Ministry of Interior of the Republic of Turkey and the Ministry of Internal Affairs of the Republic of Belarus on cooperation in the field of combating trafficking in human beings and illegal migration	(Belaru Turkey
Agreement between the Government of the Republic of Latvia and the Government of the Russian Federation on regulation of the resettlement process and protection of the rights of resettlers	(Latvia- Russia Federa
European Convention on the Non-Applicability of Statutory Limitation to Crimes against Humanity and War Crimes	(Multila
Agreement on readmission of persons	(Latvia- Swede
European Agreement relating to persons participating in proceedings of the European Court of Human Rights	(Multila
Exchange of Notes Constituting an Agreement Recognizing the Right of Norwegian Nationals in Spain and Spanish Nationals in Sweden to vote in Municipal Elections	(Norwa Spain)

TABLE 6 (continued)
HUMAN RIGHTS AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	**Signator**
Exchange of Notes Constituting an Agreement Recognizing the Right of Swedish Nationals in Spain and Spanish	(Swede

Nationals in Sweden to vote in Municipal Elections	Spain)
European Convention for the Prevention of torture or inhuman or degrading treatment or punishment	(Multila
Agreement on Human Contacts and Humanitarian Cooperation	(Austra Union Soviet Sociali Repub
Exchange of Notes Constituting an Agreement Recognizing the Right of Dutch Nationals in Spain and Spanish Nationals	(Nether Spain)

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	(Denma Spain)
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	(Greece – U.S.)	1976	16035	

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.			

TABLE 7 (continued)

SECURITY AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	Signatories	Signature Date	UNTS #
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

TABLE 7 (continued)
SECURITY AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	Signatories	Signature Date	UNTS #
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
Agreement between the Government of the Republic of Estonia and the Government of the United States of America concerning security measures for the protection of classified military information	(Estonia-U.S.)	2000	36675
Agreement between the Government of the Republic of Latvia and the Government of the Kingdom of Sweden concerning the protection of classified information	(Latvia-Sweden)	2002	38896
Charter of the Collective Security Treaty Organization	(Multilateral)	2002	39775
Agreement between the Government of Australia and the Government of the United States of America concerning security measures for the protection of classified information	(Australia-U.S.)	2002	39242
Agreement between the Government of the Hellenic Republic and the Government of the Federal Republic of Germany on the reciprocal protection of sensitive information	(Germany-Greece)	1999	36542

TABLE 7 (continued)
SECURITY AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	Signatories	Signature Date	UNTS #
Agreement on confidence- and security-building measures complementing the OSCE Vienna document of 1994 and on the development of military relations	(Hungary-Romania)	1996	35339

between the Government of the Republic of Hungary and the Government of Romania			
General Agreement on security between the Government of the French Republic and the Government of the Slovak Republic (with annex)	(France-Slovakia)	1997	35581
Memorandum of understanding between the Government of the Federative Republic of Brazil and the Government of the Argentine Republic for the establishment of a bilateral commission on border security	(Argentina-Brazil)	1997	34795
Agreement between the Department of Defense of the United States of America and the Ministry of Defense of the Kingdom of Thailand concerning the measures to be taken for the transfer, security, and safeguarding of technical information, software and equipment to the Ministry of Defense to enable industry to operate, maintain, and expand Royal Thai Air Force air combat maneuvering instrumentation range facilities	(Thailand-U.S.)	1993	40309
Agreement between the Government of the Republic of Hungary and the Government of the United States of America concerning security measures for the protection of classified military information	(Hungary-U.S.)	1995	35344
TABLE 7 (continued) **SECURITY AGREEMENTS INCLUDED IN THE SAMPLE**			
Agreement Name	**Signatories**	**Signature Date**	**UNTS #**
Agreement between the Government of the Republic of Hungary and the Government of the Kingdom of Sweden concerning security measures for the protection of classified military data	(Hungary-Sweden)	1995	35341
Agreement between the Government of the Federal Republic of Germany and the Cabinet of Ministers of the Ukraine on the mutual protection of classified information	(Germany-Ukraine)	1998	36200
Agreement between the Government of the French Republic and the	(Czech Republic-France)	1997	36142

Government of the Czech Republic on cooperation in the fields of police, civil security and public administration			
Western European (WEU) Security Agreement	(Multilateral)	1995	37024
Treaty on cooperation in protection of the borders of States participating in the Commonwealth of Independent States with countries not forming part of the Commonwealth.	(Multilateral)	1995	33648
Treaty on Collective Security	(Multilateral)	1992	32307
REPUBLIC OF KOREA AND UNITED STATES OF AMERICA: Memorandum of understanding pertaining to the provision of communications security equipment and service	(Republic of Korea-U.S.)	1993	30579
Exchange of notes constituting an agreement recognizing the right of Danish nationals in Spain and Spanish nationals in Denmark to vote in municipal elections			

TABLE 8
DISARMAMENT AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	Signatories	Signature Date	UNTS #
Agreement between the United States of America and Japan relating to a program for the development by Japan of the XSH-40J weapon system	(Japan-U.S.)	1987	39954
FRAMEWORK AGREEMENT BETWEEN DENMARK, FINLAND, NORWAY AND SWEDEN CONCERNING COOPERATION IN THE FIELD OF DEFENCE MATÉRIEL	(Multilateral)	n/a	37734
Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction	(Multilateral)	1997	35597
Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction	(Multilateral)	1992	33757

TABLE 9
AGRICULTURAL COMMODITIES AGREEMENTS INCLUDED IN THE SAMPLE

Agreement Name	Signatories	Signature Date	UNTS #
International Coffee Agreement, 1994	(Multilateral)	n/a	31252
International Sugar Agreement	(Multilateral)	1992	29467
AUSTRALIA AND UNION OF SOVIET SOCIALIST REPUBLICS: Agreement on the supply of agricultural and mineral commodities from Australia to the Union of Soviet Socialist Republics (with attachment)	(Australia-Union of Soviet Socialist Republics)	1990	27471