

# The other institutions: explaining informal international cooperation

Daniel Ray

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Despite the trend of increasing legalization that characterized their interactions throughout the twentieth century, states still enter into agreements that are not published, not put to paper at all, or in other ways less than perfectly formal. In the same way, despite the trend of quantitative research in the field of international relations in recent years, many of the published conjectures on why actors create these informal institutions remain untested. I carry out a statistical test of several of these theories, using data on American negotiations drawn from an events dataset covering the years 1966 through 1978. I measure nine factors held to influence agreements' formality and test them against the form the agreement takes, the level at which it is negotiated, and the degree to which it is announced by its parties. In all, I find little support for the theories, with most expected relationships not borne out and two statistically significant associations occurring in the opposite direction than was expected. The majority of the statistically significant relationships occur with the dependent variable "level."

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*“His Majesty the Emperor of the French, King of Italy, Protector of the Confederation of the Rhine and His Majesty the Emperor of all the Russias, being prompted by an equal desire to put an end to the calamities of war...*

1. *“There shall be, dating from the day of the exchange of the ratifications of the present treaty, perfect peace and amity between His Majesty the Emperor of the French, [etc.], and His Majesty the Emperor of all the Russias....”*

– Treaty of Peace between France and Russia, July 7, 1807<sup>1</sup>

\*                      \*                      \*

*“His Majesty the Emperor of the French, [etc.], and His Majesty the Emperor of all the Russias ... have ... resolved to conclude an offensive and defensive alliance....”*

1. *“His Majesty the Emperor of the French, [etc.], and His Majesty the Emperor of all the Russias, undertake to make common cause, whether by land or by sea, or indeed by land and by sea, in every war which France or Russia may be under the necessity of undertaking against any European Power.*

...

9. *“The present treaty shall remain secret and shall not be made public nor communicated to any Cabinet by one of the two Contracting Parties without the consent of the other.”*

– Secret Treaty of Alliance between France and Russia, July 7, 1807<sup>2</sup>

## Introduction

Fresh from a decisive victory at Friedland (near Kaliningrad in modern Russia) in June of 1807, Napoleon sought to cement his control in the Prussian theater. In his heart, he desired an immediate invasion of Russia, but he and his cabinet took a long view of the northeast frontier. Toward this end, the French emperor summoned his vanquished foe Tsar Alexander I to the town of Tilsit to end the War of the Fourth Coalition.

In the diplomatic communication leading up to Tilsit, Napoleon’s orders to his trusted *maréchal* Berthier were strict: the Russians were not to be humili-

<sup>1</sup> de Clercq 1917. Quoted in, and unofficially translated by, Burnham, Broughton, and Graves 2007.

<sup>2</sup> Fournier, 1886. Unofficial translation *supra*.

ated. Napoleon himself went further, at one point in the company of a Russian prince gesturing at a map and declaring his vision of two grand territories in the continent's future, one East and one West (Butterfield 1929, 250). All in all, the tsar understood that Napoleon sought peace, and he understood that this would require alienating Russia's Prussian allies. He expected a strong personal appeal from Napoleon himself, and he must have expected that there was more to be done at Tilsit than a simple peace accord. What we can be certain he did not expect, on the morning of July 7, 1807, was a raft.

Napoleon had commissioned the raft's construction before the leaders arrived in Tilsit. Lashed to the shore of the Neman River, it was to be the site of their negotiations. The French emperor considered the deal that he would propose to the Russian tsar so sensitive that only his closest advisors should be trusted with advanced knowledge of its terms; similarly, he reasoned, none should be within earshot when it was proposed. What Napoleon offered Alexander was not just the conventional peace treaty his partner had read and expected to sign, but also a secret text proposing a Franco-Russian alliance. In the end, Russia acceded: she abandoned her former allies, moved against the English navy, and ultimately, unknowingly, opened herself up to her new friend's invading army in 1812. In this sense, Napoleon's diplomatic machinations were a success.<sup>3</sup>

If the decision to meet in the middle of a river was an innovation for the time, the secret supplement to the announced treaty was anything but. Relative to the eighteenth and nineteenth centuries, Napoleon's was simply an extreme case of the accepted way that diplomacy was conducted in Europe. These were the days when treaties were published only insofar as it was convenient to their parties, upheld under the same condition, and when "international law" was at best a philosopher's expression. Though some steadfast realists may argue that

<sup>3</sup> For an exhaustively-documented account of Tilsit and its aftermath, see Butterfield 1929 202-254. A broader context is available in Niven 1978. For a brief, scholarly, and almost exaggeratedly British interpretation, see Rose 1911.

these circumstances still hold true today, most international relations scholars seem to acknowledge that the twentieth century recast the way states relate to one another. Following the First World War, the Wilsonian ideal gave rise to new conventions for public diplomacy and new channels for upfront negotiations. The United Nations codified traditional international practice, and states came to consent to the rule of law over what, only a century before, had been their private interactions. In the last fifteen years alone, the global community netted more than 700 new IGOs<sup>4</sup>, saw the first indictments issued for war crimes committed in the former Yugoslavia, and witnessed nearly an entire continent assent to an unprecedented measure of supranationalism. Overall, it is not quite hyperbole to assert that the changes in the practice of international cooperation since 1945 have been so drastic that only now can we truly speak of a single, coherent international system of relations.

So why do we still see Napoleonic agreements? Surely just as formal cooperation has expanded since the middle of the twentieth century, so too has the “vast sub-structure of intergovernmental paper” that underlies it (Baxter 1980, 549). Clearly, there is a niche for cooperation that is secret, non-legalized, or otherwise outside the boundaries of recognized channels. But what exactly is it?

Several researchers have submitted answers to this question, but none are comprehensive and very few have been tested empirically. The literature remains unconsolidated. To begin, many statesmen (and in some cases states themselves) are perfectly willing to outline the conditions under which they will negotiate informal vehicles to express their cooperation. Works from this group can be assumed empirically valid (insofar as their authors have no incentive to misrepresent their policies) but they are very rarely grounded in theory and never seek to explain the broader universe of political interactions. The prob-

<sup>4</sup> I arrive at this estimate by subtracting the figure from the 1992 edition of the *Yearbook of International Relations* (given in Shanks, Jacobson, and Kaplan 1996, 596) from that series' 2005 volume.

lem with negotiation literature is not dissimilar: it gives important insights into how agreements are made at a very high resolution, but it typically pays no attention to the peculiarities of negotiations conducted in, say, the antechambers of the General Assembly building compared with the boardroom or the flea market. Many of the most promising theories come from the literature that assumes international actors act rationally in designing their institutions. These take the form of the hypothetical imperative: “if an actor seeks to gain  $x$ , it should create an informal agreement.” Clearly, these create quantifiable, testable implications, yet very few have been tested conclusively.

This thesis aims to do just that. I begin by briefly clarifying what I mean by “cooperation” and “institutions,” before describing in more detail the scope of what I consider formal and informal cooperation. I introduce the principles of the Rational Design framework, which informs my own approach to the creation of informal institutions. I then move to the state of the literature on this subject, drawing from it several theories<sup>5</sup> that describe cases in which a rational actor would design an informal vehicle for cooperation. I introduce my sample, drawn from event data and consisting of publicly announced intentions to negotiate, before I return these theories. I operationalize each into a hypothesis and describe how I code each corresponding independent variable. I also break the concept of informality into three quantifiable aspects, which serve as my dependent variables. When I have finished this section, my final model consists of nine independent variables (ACTOR STATUS, ISSUE SALIENCE, INTRINSIC and EXTRINSIC URGENCY, UNCERTAINTY ABOUT THE STATE OF THE WORLD, COMMITMENT PROBLEM, NUMBER, and ENFORCEMENT PROBLEM), as well as the three dependents (FORM, LEVEL, and PUBLICITY). Together, each represents an expected relationship between negotiating context and corresponding institutional feature.

<sup>5</sup> Throughout, I attach use the word “theory” exclusively to refer to the reasons for informality (or formality) that I pull from existing literature and intend to test. By contrast, I refer to my own operationalized versions of these theories as “hypotheses.”

I run a series of bivariate tests on these hypotheses to test their validity. In general, most expected relationships do not hold up to empirical reality. Three relationships appear as expected, with a fourth at the edge of statistical significance, while two relationships appear in the opposite direction than was expected. I take advantage of my data to run a secondary test on the probability of failure for those negotiations that are predicted to produce formal institutions versus those that “should” have produced less formal ones, before moving to draw what general conclusions I can.

In order to hazard any useful guesses at the significance of my negative results, I first outline potential sources of error that might invalidate them. From here, I conclude that while few of the theories I intended to test saw any significant support, the idea that informal cooperation can be rationally designed is not seriously threatened. Because most of the hypotheses that were confirmed involved the dependent variable *LEVEL*, I propose that it is uniquely suited for rational manipulation.

Finally, I close with two appendices. The first attempts to describe my “best practices” for researching informal cooperation as I justify several of the choices I made in my research design, while the second covers the published theories I found compelling but was nevertheless unable to test.

## Definitions

The last quarter of the twentieth century proved heady times for young paradigms of international relations, and the body of literature in the field today is nothing if not multifaceted. Needless to say, all these new schools of thought seek to answer the same basic problem of international relations: how do nations relate to one another? Similarly, from neorealism to constructivism, they all refer in some way to cooperation and institutions. But each school of thought keeps its own definition of each of these terms. Since this paper intends to test theories from several schools, I feel it behooves me to begin by laying out exactly what I mean when I use these terms.

International cooperation in its general form refers to the ways actors on the world stage sometimes coordinate their actions. Of course, a definition this simple adds nothing to our understanding of international relations. Instead, the questions remain why and under what circumstances actors do choose to cooperate. Axelrod's "Cooperation Theory" revolutionized international relations, *inter alia*, for answering both of these questions in great part using the lens of game theory (Axelrod 1984). I appreciate Axelrod's ecumenical idea of cooperation, in that it does not assume that actors must consciously set out to "cooperate" as such. Indeed, whenever at least two actors, mutually aware of their own preferences and the other's existence, arrange their affairs such that all are better able to realize their goals, cooperation has occurred. When I say that I intend to test theories about how nations cooperate, this is the precise phenomenon I am thinking of. Since this paper deals specifically with cooperation by means of institution-building, the only further bound I place on the population I seek to explain is that in each case, an institution must be one possible means of cooperating.

Given my liberal definition of "institutions," however, I do not consider this condition very limiting at all. Whereas international relations scholars have traditionally distinguished between organizations (as concrete entities) and regimes (as less tangible rules or guidelines), I consider them both under the heading "institutions" (Simmons and Martin 2002, 3-6).<sup>6</sup> In this sense, nearly all arrangements are institutions for my purposes. The main condition here is that, to fit with my focus on actors' rational choices about the institutions in which they participate, I consider only agreements that actors can be said to have actively designed. In practice, this means that I consider only arrangements that are in some way deliberated.<sup>7</sup> One important application of this rule

<sup>6</sup> Indeed, as I shall show, at the level of formality that concerns me here, the distinction between the two can be blurry.

<sup>7</sup> In actual fact, my sample is limited to agreements that have been negotiated to some degree by all parties.

is my exclusion of global norms themselves from my definition. As constructivists have shown, on the other hand, institutions can be rationally designed so as to create norms (Wendt 2001). Naturally, I include these institutions in my population.

As my brief definitions above imply, I am not particularly interested in judging what is or isn't cooperation or an institution. Instead, I focus the range of institutional formality, and for that reason I treat it in greater depth here. By describing several styles of both informal and formal cooperation, I hope to at least indicate the breadth of my working definition of each. Despite this paper's name, I begin not with informal cooperation itself, but rather with its opposite number. For better or for worse, the field considers formal international agreements to be the rule; informal ones, the exception, and I feel I should follow suit (Aust 1986, 792; Baxter 1980, 549).<sup>8</sup>

The simplest understanding of formal cooperation is, of course, to simply equate it with treaties. This is not entirely without merit: treaties conducted under the rules of international law are indeed the most formal vehicle for international cooperation. But what makes this so? My reference to international law here is intentional, for the first major characteristic of formality is its official character with respect to the United Nations. The Vienna Convention on the Law of Treaties defines its subject as

“...an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation.”<sup>9</sup>

Officially-sanctioned treaties must also be registered with the United Nations Treaty Collection:

<sup>8</sup> Though I am nothing of a linguist, I find it hard not to note the value-laden words that suffuse the field's terminology. Treaties are “hard” law while other agreements are “soft”; formal cooperation is “strong” while informal cooperation is “fragile.” As we shall see, the differences between the two large categories are much less easily generalized.

<sup>9</sup> May 23, 1969, 1155 U.N.T.S. 331 art. 2 § 1a: “The Vienna Convention.”

“Every treaty and every international agreement entered into by any Member of the United Nations after the present Charter comes into force shall as soon as possible be registered with the Secretariat and published by it.”<sup>10</sup>

I cannot simply adopt the legal definition of a treaty as my own working definition of formal cooperation, however. One problem is these two treaties’ wide scope: as Aust quotes commentary from the time that the Vienna Convention was drafted:

“Very many single instruments in daily use, such as ‘an agreed minute’ or a ‘memorandum of understanding,’ could not appropriately be called formal instruments, but they are undoubtedly international agreements subject to the law of treaties. A general convention on the law of treaties must cover all such agreements...” (Aust 1986, 794; Eisemann 1966, 188).

It is as plain to me as it is to the Convention’s drafters that there are some features that characterize formality that are not expressed in any official international document. Among these are the three factors that comprise Abbott and Snidal’s concept of legalization. Rather than appealing to the UN’s definitions of a treaty, they identify high degrees of obligation, precision, and delegation as constituting an “ideal type” of legalized agreement (Abbott and Snidal 2000, 421-456). I treat each of these variables independently in my own definition.

To Abbott and Snidal, “obligation” stands for the extent to which parties are bound by their agreements. Since we are speaking in terms of legal obligation, it only makes sense to draw in domestic laws on treaty commitments. In the US<sup>11</sup> and elsewhere, bindingness hinges on parties’ intent to be bound (Aust 1986, 787). Of course, this intent is a legal issue that is not always expressed manifestly in the agreement itself. Nevertheless, in an ideal world, I concur with the authors that obligation should be a part of any definition of formality. I

<sup>10</sup> United Nations Charter, art. 102 § 1. Fawcett argues that the article’s wording is vague enough to apply to political, otherwise non-legal agreements (1963, 389-96). Because registration is ultimately voluntary, this principle is not uniformly observed.

<sup>11</sup> 22 C.F.R. 181

disagree, however, about “precision.” As I will show, many otherwise perfectly informal agreements contain some *very* precise terms, and overall I submit that even vague, hortatory language can be precisely calculated to be so (Hillgenberg 1999, 500-1).

“Delegation” of the kind to which Abbott and Snidal refer (“authority to implement, interpret, and apply the rules; to resolve disputes; and (possibly) to make further rules”) is not so much a necessary condition of formality as it is a sufficient one (Abbott et al. 2000, 401). Indeed, delegation provisions are much rarer than formal instruments. Nearly half of all UN-registered agreements, for instance, including those otherwise formal by my standards, contain no dispute resolution provisions at all, let alone delegated ones (Koremenos 2007, 189-212). To my mind, then, delegation is simply an ability of formal agreements that informal ones lack.

If a formal agreement is one that is meant to be governed by international law, is meant to bind its actors, or is able to delegate responsibilities elsewhere, then what might an informal agreement look like? Of course, I am not content to simply invert my definition of formality; on the contrary, I set out from the supposition that informal agreements have their own set of positive, useful attributes and abilities that explain why they are often chosen over more formal institutions.

One major component of scholarship on informal cooperation deals with its ability to create norms. Referring to its subject as “soft law,” these theories tie actors’ behavior to their reputations or simply bound the scope of potential actions by rendering some actions beyond the pale (Raymond 1997, 205-245). Though I have stated above that I do not consider norms themselves to be institutions, I would be amiss to exclude all agreements whose main intent is normative, since these represent a significant portion of the population of informal agreements. To take a famous example, the taboo against use of nuclear weapons is rational in almost every way, but I am not prepared to argue that it was

*designed*, as such. On the other hand, President Reagan and General Secretary Gorbachev certainly did plan and draft their joint statement that, “A nuclear war cannot be won and must never be fought.”<sup>12</sup>

A second understanding of informal agreements might be the most widely held among nonspecialists. I refer to classical diplomatic agreements of the kind often associated with off-the-record conversations, shadowy back rooms, or (by some, at least) the Trilateral Commission. Certainly, they are among the least formal of all international interactions. Though I delve into the particulars of these individual-centered agreements when I discuss coding below, suffice it here to say that these agreements deserve serious consideration. Hillgenberg, for one, does not include such gentlemen’s agreements in his treatise on normative cooperation, arguing that “the concept of pledging one’s own reputation ... cannot be simply transferred to relations between the states” (1999, 500). I acknowledge that the process is not simple, but for my own purpose here, any agreed institution that alters actors’ behavior away from the status quo is an institution worthy of explanation.

The definitions I give above represent what I consider the universes of formal and informal cooperation, respectively. For several reasons, however, I am unable to design a research method that can take in every aspect of both these concepts and test them directly. Instead, I strive to include as much of each as possible in as valid a quantitative test as possible, and if possible allow me to generalize my conclusions to the rest. This requires a wide-ranging framework from which to hang those theories I can test.

## Rational Design

I now turn my attention to a more recent branch of thought in international relations. Rational Design<sup>13</sup> is rooted in neoliberal thought and game theoretic

<sup>12</sup> “Reagan-Gorbachev Talks End; New Effort on Arms Planned.” *New York Times*, November 22, 1985. p. A12.

<sup>13</sup> I use “Rational Design” to refer to the specific, published theory laid out by Koremenos, Lipson, and Snidal and in the article cited above. I use “rational design,” in lowercase, to

decision-making models (Abbott and Snidal 1998 and Calvert 1995, respectively, are proximate sources). In a single sentence, the theory sets off from the postulation that states construct the agreements they participate in order to achieve their goals (Koremenos, Lipson, and Snidal 2001, 761-799). These goals are hindered by any number of situational barriers to cooperation (such as the incentive to defect, or uncertainty about future developments), which serve as the theory's independent variables. Any agreement that states negotiate, then, must overcome these "cooperation problems" by means of its features (for instance, provisions for compliance monitoring or suspension). One important feature of the Rational Design project is its empirical grounding (indeed, a quantitative test is underway). Subsequent additions to the Rational Design camp have more clearly elucidated the interactions of individual cooperation problems and treaty features, and the theory shows promise for continued growth.

Rational Design's greatest achievement is its explanatory power: properly applied to sufficient information about actors and situations, it can turn a diverse set of preferences and problems into an ideal-form agreement. As written, however, Koremenos, Lipson, and Snidal's original theory misses much of the body of informal cooperation. This is intentional: the authors explicitly leave out unpublished and unstated agreements (Koremenos, Lipson, and Snidal 2001, 762). In criticizing Rational Design, Duffield counts its narrow definition of institutions as a flaw (Duffield 2003, 412). He argues that informal understandings between actors on the world stage are, *ipso facto*, international institutions; a body of literature concurs (Keohane 1989). Because of this definition, Koremenos, Lipson, and Snidal's selection of variables focuses on traditional treaties with discrete conditions, provisions, and rules. It is easy to find situations, using the characterization of informal cooperation given above, in which variables of these types might be inadequate to describe the separate palette of

refer to any theory (including my own) that consider international institutions or agreements to be created intentionally to overcome cooperation problems.

characteristics seen in informal agreements. An agreement that is never put to paper, for instance, cannot have an amendment provision.<sup>14</sup> My hope is to amend the main branch of Rational Design theory to expand its explanatory power into the domain of informal cooperation.

Before I presume to tack on new variables to the established theory, it would be well that I ensure informal cooperation does indeed fit the scope of Rational Design. In essence, this means proving that informal agreements, too, are designed rationally. What assumptions does the theory make about the institutions for which it was originally intended? I find three main qualifications.

First, actors must be free to choose the medium of their cooperation. If this is not the case, of course, they can hardly be said to have *designed* the medium at all. Path dependency theorists (Greif chief among them) contend that situational outcomes are at least sometimes the product not of preferences, but of precedent (Greif 2003; Greif and Laitin 2004). It is not difficult to imagine how institutional design could hinge on small but crucial events within negotiations themselves or exogenously, from the negotiation's context (Berins and David 1991). If this framework accurately and frequently captured the way actors negotiate informal institutions, it would be wrong to apply Rational Design's principles to the process. However, I am confident that this is not the case. States show their conscious understanding of the tradeoffs between formality and informality every time they use one instead of the other. This is particularly clear in the Helsinki Final Act (a favorite of informal cooperation theorists<sup>15</sup>), which lays out more than twenty thousand words of provisions and pledges before finally specifying that it is "not eligible for registration under Article 102 of the Charter of the United Nations" – that it is not a formal, binding treaty.<sup>16</sup>

<sup>14</sup> I cover the problem of common "features" in the universe of informal cooperation in Appendix A.

<sup>15</sup> Lipson, 1991, Abbott and Snidal, 2000, and especially Schachter, 1977, all make reference to the agreement's infamous final clause.

<sup>16</sup> Final Act of the Conference on Security and Co-operation in Europe § "Follow-up..." Aug. 1, 1975, 14 I.L.M. 1292

Can statements like these reflect anything but a conscious choice? This is not to argue against the entire body of work in historical institutions. On the contrary, I am very interested in Jupille and Snidal's recent work, applying a sort of path-dependent inertia to states' desire to minimize transaction costs by resorting first to preexisting "focal institutions" (Jupille and Snidal 2006). I contend only that the very reasons that "critical junctures" are critical can be captured by variables in a rational choice framework. I will strive to do so when I select my independent variables for this project.

To fit into the scope of Rational Design, informal agreements must also be able to "prescribe, proscribe, or authorize behavior" of their parties, in the words of Koremenos, Lipson, and Snidal (2001, 762). It is plain that formal agreements can do any one of these; in fact, at least one of them is typically written into the first clause following any treaty's preamble. At the outset, this may not appear to hold for informal agreements, which common wisdom assumes cannot be binding. It is hardly a novel statement, however, to say that a nonbinding resolution can still affect the behavior of nations. Indeed, the constructivist approach takes this as one of its primary conclusions, viewing norm-building as a key function of institutional obligations, even if they may never be contested legally (see for instance Etzioni 2004; Wendt 1992). In this way, bindingness is a red herring as far as prescription, proscription, and authorization are concerned. To take one sort of unenforceable agreement as an example, the "political treaties" with which nineteenth- and twentieth-century wars were frequently ended could never stand up to a court of law (even once those courts came into existence), but Ghent, Versailles, and Yalta, *inter alia*, certainly created credible expectations about how their signatories would behave (Bell 2006; Baxter 1980, 550-2).

Finally, it ought to be true that the independent variables used in the Rational Design project can apply just as validly to the creation of less formal institutions. This only makes sense, since Rational Design takes as its independent variables cooperation problems that are assumed to be universal – to paraphrase the moral philosophers' formulation, the context precedes the institution. Of course, it would be foolish to expect every variable to apply

equally to both varieties of agreement (after all, Rational Design is meant to show how different cooperation problems lead to different types of institutions), but the project's assumptions do not require this. In fact, I find that I see many of Rational Design's original independent variables<sup>17</sup> crop up as I code for my own. Where, by Koremenos, Lipson, and Snidal's conjectures, an independent variable predicts an institutional feature that fits easily within my own definitions of "formal" and "informal," I code for it as a control.

## Existing Theories

Having conceptually justified that informal cooperation may be designed rationally, the next question is, what rationales do actors have for designing them? As my source of variables, I identify several reasons why an actor might prefer informality from a careful review of theoretical literature on the subject, the majority written in the last twenty years. The theories I test separate naturally into two groups: reasons for choosing informality and reasons for choosing formality (my "control hypotheses," which have already been tested elsewhere<sup>18</sup>). I outline these below, using empirical examples when possible:

<sup>17</sup> These are the distribution problem, the enforcement problem, number, and uncertainty about behavior, the state of the world, and preferences (Koremenos, Lipson, and Snidal 2001). Mitchell and Keilbach (2001) add symmetric and asymmetric externalities.

<sup>18</sup> *International Organization*, no. 3: "Legalization and World Politics," Summer 2000, pp. i-xiii+385-703

Table 1: Summary of theories to be tested

<i>Actors negotiate in- formal instruments to...</i>	avoid recognizing currently unrecognized actors
	avoid uncomfortable questions at home
	achieve speedy effects
	avoid setting a political precedent
<i>Actors negotiate formal instruments to...</i>	preserve flexibility in uncertain environments
	lock in unreliable partners
	accommodate numerous involved parties
	delegate information and monitoring functions

### Reasons for informality<sup>19</sup>

**To avoid recognizing currently unrecognized actors** Perhaps the easiest answer to the question, “why do states cooperate informally?” is a functional one: when one actor in a negotiation considers its partner unqualified to sign a formal agreement, it will pursue an informal one. This can be for political reasons: a state may consider its partner illegitimate (for instance, an unwelcome successor state or, in some cases, the entire *Dar al-Harb*), yet still see some utility in negotiating with it (Khadduri 1956, 1-2). In the case of multilateral treaties, states may enter reservations to the effect that their signature does not imply diplomatic recognition of a cosignatory.<sup>20</sup> For bilateral negotiations, on

<sup>19</sup> Of course, this discussion (and in fact, this thesis) shouldn’t be taken as arguing that informal forms of cooperation are always superior to formal ones. The advantages of formalized agreements – lock-in, pre-contracted adjudication, and the creation of precedent, to name three – are well-attested in the literature. See for instance the Rational Design project itself (Koremenos, Lipson, and Snidal 2001) or its theoretical forbears, including Abbott and Snidal 1998 and Goldstein, Kahler, Keohane, and Slaughter 2000.

<sup>20</sup> “Nonrecognition” reservations have been a constant presence since the systemization of treaty law in the twentieth century. When the Provisional Revolutionary Government of

the other hand, this is not an option – signing a treaty implies recognition. This consequence of agreement type was a major point of contention in the negotiation of what became the Anglo-Irish Treaty, for instance, which for the first time indicated the United Kingdom’s recognition of Irish sovereignty.<sup>21</sup> Cooperation without diplomatic recognition can only come through less formal instruments.

Legally, non-sovereign actors are not typically eligible to enter into binding agreements governed by international law.<sup>22</sup> For this reason, informal instruments are sometimes simply the only option available. Despite its status as the United States’ ninth-largest trading partner, the US and Taiwan have never signed a formal trade agreement, since recognizing the disputed island’s sovereignty would enrage the US’ third-largest partner. Instead, all talks are routed through the former’s de facto embassy, the American Institute in Taiwan (Young 2006). Though simple ineligibility is not a particularly interesting reason for choosing informality, it is one rational basis for doing so, and it therefore merits inclusion.

I represent the issue of status and recognition by the variable “ACTOR TYPE.”<sup>23</sup>

the Republic of South Vietnam acceded to the Geneva Conventions in 1975, the United States registered a retroactive reservation declaring its disapproval of the Communist government and its reservations (1975, 972 U.N.T.S. .403). Some Arab states have used similar reservations to avoid recognizing Israel: see, for instance, Iraq’s, Libya’s, Syria’s, and Yemen’s statements in signing the Supplementary Convention on the Abolition of Slavery, the Slave Trade, and Institutions and Practices Similar to Slavery (1957, 266 U.N.T.S. 3).

<sup>21</sup> December 6, 1921, Documents on Irish Foreign Policy vol. I

<sup>22</sup> The Vienna Convention on the Law of Treaties specifies that it covers only treaties negotiated by states (*supra*, art. 1). Twenty-five years later, the Vienna Convention on the Law of Treaties between States and International Organizations or Between International Organizations was drafted to extend the earlier document’s rules to heterogeneous treaties, but it has not entered into force (1982, 25 I.L.M. 543). Nevertheless, international institutions have in some cases signed as a party to a registered treaty, though this is usually the case only for institutions that themselves have standing in the UN (for instance, the European Union or the International Development Bank).

<sup>23</sup> Information on coding this and all variables appears below.

**To avoid uncomfortable questions at home** Sometimes, negotiations cannot be conducted, or an agreement published, without embarrassing at least one actor. In some cases, this advantage is closely tied to the previous one: merely negotiating with a party may be enough to raise pointed questions from domestic opposition that views the negotiating partner as illegitimate or unworthy. This was certainly the case in the American political dialogue surrounding the first years of the Cold War, and this created a distinct aversion to direct negotiations in any form. What resulted was a set of “unspoken rules” implicitly acknowledged by both sides (and in fact eventually put to paper, in 1972’s Basic Principles Agreement<sup>24</sup>) (McWhinney 1966, 1-33; Lipson 1991:496 n.7). In this way, informal cooperation can skirt problematic negotiations completely.<sup>25</sup>

A similar problem can face agreements whose main subject is a state secret. These often involve the military, either as weapon designs, intelligence, or as arrangements similar to the web of clandestine ententes that is often cited as a proximate cause of World War I (see for instance Fay 1934; Hamilton and Herwig 2003, 537).<sup>26</sup> The select sharing of national secrets is nothing new – NATO members, for one example, have created an extensive public bureaucracy for precisely that purpose (Office of the Deputy to the Under Secretary of Defense (Policy) for Policy Support 1993). When future interactions on secret subjects are expected to be minimal, on the other hand (or perhaps when the sharer desires the protection of “plausible deniability”), actors may have rational incentives to conduct their agreements secretly. This was certainly the

<sup>24</sup> June 26, 1972 D.S.B. pp. 898-9.

<sup>25</sup> Regrettably, this facet of the theory must remain untested here. Capturing even a semi-random sample of unspoken “understandings,” which may only be known well after the fact, is an impossibility within the constraints of my test. (Lipson 1991, 530).

<sup>26</sup> Though I do not intend to focus on military alliances in this analysis, I note that Morrow, in setting up his argument that formalizing prewar coalitions can increase credibility or refigure the costs of not intervening, cites the drive for flexibility as a dominant reason *not* to write these agreements down (Morrow 2000). I suspect that a project aiming to outline a “Rational Design of Military Alliances” would find a considerable foothold in this and related literature (see also, e.g., Kann 1976).

case in 1956, when France expressed its support for Israel's nuclear program in a secret technology transfer pact, and again in 1968 when the US tacitly assented to Israel's admission to the nuclear club (Farr 1999, 3-7; Cohen and Burr 2006, 22-30).

Finally, some agreements simply cannot be reached under the scrutiny of the public. Writing on the goal of the new League of Nations to put diplomacy in the public eye, Herbert Fisher expressed the problem memorably:

“It is easier for eight or nine elderly men to feel their way towards unanimity if they are not compelled to conduct their converging maneuvers under the microscopes and telescopes of the press, but are permitted to shuffle about a little in slippers” (Fisher 1921).

Koremenos has written on the effect of clandestine negotiations on treaties' robustness. Specifically, she notes that in Fisher's time, the primary beneficiaries of open access to negotiations were journalists; today, they are the innumerable vested interests and advocacy groups whose rise has coincided with that of globalization itself (Koremenos 2005a, 1). If we accept that informal cooperation is, *prima facie*, less public than formal cooperation, it is easy to see why some international issues might be dealt with in such a way. While there is certainly a normative argument to be made that open negotiations enhance democracy in some ways, there can be no denying that states seeking to achieve their own ends may rationally choose informal instruments based on this issue. I map this concept with the variable `ISSUE SALIENCE`.

**To achieve speedy effects** One widely accepted reason states conclude formal, legal treaties is their desire to reduce operating costs in the future. “Complete contracting” lets all parties to an agreement know in advance how the institution will respond to any future choice they might make (Abbott and Snidal 1998; Abbott 2000; Abbott and Snidal 2000, 430, 436). Yet this takes time: the average time spent negotiating a successful multilateral treaty is nearly two and a half years (Simonelli 2006, 20). Clearly, this is a major transaction cost. What about those issues that are so pressing that thoughts of future cooperation yield precedence to simply averting disaster today?

Not surprisingly, in many cases the answer seems to lie in an informal agreement. Cooperating outside the normal system of meetings and adjournments, signatures and ratifications, no doubt lowers actors' costs. Lipson gives the well-known example of the Cuban missile crisis, in which the penalty for not reaching an agreement was nuclear escalation potentially to the point of war. In that case, the standoff between the US and USSR was resolved by a series of absolutely secret, absolutely informal letters exchanged between President Kennedy and Premier Khrushchev. In the end, a situation that was entirely unfit for more formal negotiations was resolved in only thirteen days (Kennedy 1971).

I am interested in another sort of urgency as well, not of the situation that the negotiation is meant to resolve but of the negotiation itself. This variety of urgency is at hand whenever one actor tries to force its partner's hand, by issuing an ultimatum or by turning a credible deadline into an advantage. Though I have found no published support for this theory, my own readings on international negotiations lead me to believe that "artificial" urgency in negotiations often yields lesser agreements in principle to keep negotiations going. This was the case in the Kennedy round of GATT negotiations, when the US ran out the clock on its negotiators' authority and thereby procured a generous, unwritten agreement from the EEC (Evans 1971, 273-7; Fearon 1998, 288-9). While I strive to code only final agreements, I do recognize that sometimes these small understandings are themselves the ultimate product of the negotiations. By my definition, these should tend to be informal. Therefore, I propose to test the hypothesis that "EXTRINSIC URGENCY" increases informality just as "INTRINSIC URGENCY" can. I distinguish between the two terms as variables.

**To avoid setting a political precedent** When one country's diplomats can point to a public agreement between two of its peers, it may be in a good position to demand similar terms with one of them. Of course, diplomatic precedent doesn't entitle its claimants in any legal sense to such a deal (nor any deal at all, of course), but it is plain to see why states might like to avoid announcing certain agreements just the same. For one thing, precedents on the international

stage can become full-fledged norms (Florini 1996, 363-389). These, in turn, can become international legal precedent as customary law.<sup>27</sup>

“Precedents” set by existing treaties can apply not only to other actors, but also to other situations and other issue areas. The Antarctic Treaty,<sup>28</sup> for instance, provided a model for cooperation on nonarmament, from outer space<sup>29</sup> to Latin America<sup>30</sup> (Graham 1997; Koremenos 2001, 312-3). At the basic level, the presence of a previous institution is a good thing, since it can provide a common frame of reference for potential cooperators and generally lower the transaction costs for crafting a similar agreement (Jupille and Snidal 2006). Assuming rational actors, however, means assuming that sometimes keeping transaction costs high is part of one actor’s strategy. If a state prefers to cooperate with one partner but not its neighbor, then all else equal it is in that state’s interest to structure its cooperation so that it cannot easily be copied. Such an agreement, in turn, is likely to fall under my definition of “informal.”

Because precedents only become important when other parties might make claims against them, this concept is tracked with the variable ISSUE UNIQUENESS.

**To preserve flexibility in uncertain environments** Of all my theories to be tested, this is easily the broadest. Fortunately, it is also the best attested to in previous work. In Rational Design’s terms, flexibility is a key variable, dependent on, *inter alia*, actors’ uncertainty about the payoffs their cooperation will

<sup>27</sup> The Statute of the International Court of Justice recognizes four sources of international law, the second of which is “international custom, as evidence of a general practice accepted as law” (ch. I art. 38, §1, cl. b. June 26, 1945, Y.B.U.N., 1976, p. 1052) Additionally, the Vienna Convention provides that “Nothing in articles 34 to 37 precludes a rule set forth in a treaty from becoming binding upon a third State or a third organization as a customary rule of international law, recognized as such” (*supra*, art. 38).

<sup>28</sup> December 1, 1959, 402 U.N.T.S. 71

<sup>29</sup> Treaty of Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies. October 10, 1967, 610 U.N.T.S. 205.

<sup>30</sup> Treaty for Prohibition of Nuclear Weapons in Latin America. April 22, 1968, 634 U.N.T.S. 326.

yield in the future (Koremenos, Lipson, and Snidal 2001, 761-799). In formal institutions, the requisite flexibility can be achieved by specifying a limited duration (after which the agreement can be annulled or renegotiated) – Koremenos points to the example of the G8’s manifest agreements, which respond to the extremely volatile world of macroeconomics by including hardwired time limits (Koremenos 2005b, 552).

As I have said, however, informal agreements by definition do not always draw from the same palette of features as more formal ones. In this case, however, they do not need to specify a particular time limit or procedure for leaving. If an agreement is not intended to bind, or if it is never acknowledged at all, then the reputation costs for unilateral withdrawal are limited (Lipson 1991, 508-512). The legal costs may also be lower, since informal agreements rarely contain legalized dispute delegation procedures and since their very existence may be difficult to prove. I contend that informal agreements, by their very nature, are more flexible than their counterparts. As such, I expect that they should be used more often when the future is uncertain. I retain Koremenos, Lipson, and Snidal’s variable name, UNCERTAINTY ABOUT THE STATE OF THE WORLD, here.

### **Reasons for formality**

Finally, I have also adapted some of the Rational Design conjectures. Since Rational Design focuses on the terms of formal treaties, to avoid unattractive inversions I express these theories in terms of choosing formality, not avoiding informality.

**To lock in unreliable partners** The problem of future actions is a long-standing concern of game theorists. The classic response is to lengthen the shadow of the future, always allowing a wronged party to avenge him- or herself before the end of the game (see for instance Axelrod 1984; Oye 1986, 260; Schelling 1960, 309). Setting aside the language of game theory, however, institutions can be compelling solutions to the COMMITMENT PROBLEM even (I argue) when they do not bind. As long as an institution to which the potential defector is party can sufficiently alter that actor’s payoffs (be it through threat of sanctions, reputation costs, etc.), institutions can effectively “lock in” waver-

ing partners. However, this is more effectively (at least, more efficiently) done through formal institutions than informal ones. The Rational Design project finds that the mechanisms of lock-in are features like delegation of disputes and minimum durations before exit or renegotiation, not often found in less formal vehicles for cooperation (Koremenos, Lipson, and Snidal 2001, 1051-1082). Snidal and Thompson apply institution theory to the problem of future-term costs at the domestic level, showing that agreements can be structured to get around otherwise problematic political disinclinations (Snidal and Thompson 2003, 197-230).

**To accommodate numerous involved parties** In some cases, it is simply too hard to engage every involved party in the kind of talks that typically characterize informal arrangements.<sup>31</sup> For this reason, it is easy to imagine how formal agreements might better take in a large population of implicated actors: once the general framework is established, it is easier for new states to simply sign on to a treaty than to negotiate identical terms with all the previous parties to, say, a memorandum of understanding. Rational Design makes references this principle in the conjecture that institutional centralization<sup>32</sup> increases with NUMBER (I carry this variable name over to my own project here), based on the issue of marginal participation in established institutions that I mentioned above. When a central “headquarters” can coordinate the terms of cooperation for the rest, transaction costs are minimized (Koremenos, Lipson, and Snidal 2001, 788-9). Pahre further explicates this association, showing how clustered negotiations precede and enable massively participatory cooperation on tariffs (Pahre 2001,

<sup>31</sup> As the number of parties rises linearly, the number of their dyadic conversations rises geometrically, potentially past the point of manageability.

<sup>32</sup> I would be remiss to suggest that Rational Design’s concept of centralization maps precisely to my own definition of formality. Indeed, the two are not equivalent: an institution can have a centralized broker (perhaps a neutral third party) but maintain a low FORM, LEVEL, or PUBLICITY. For the type of centralization invoked in this conjecture (a centralized conductor of information), though, I do believe the comparison holds. Martin, for one, connects centralization and formal organizations with the latter as means for the former (2005, 770; cited in Duffield 2003, 421-2).

859-890). Empirically speaking, Martin compares American treaties to executive agreements and finds that multilateral agreements are fifteen times as likely to be the former than are bilateral agreements (2005, 18).

Koremenos, Lipson, and Snidal also cite an inverse relationship between NUMBER and institutional flexibility. In general, more participants increases costs of flexibility (for the reasons mentioned above), and more formal, codified expressions of flexibility (for instance, clauses authorizing periodical renegotiation) tend to be more expensive (Koremenos, Lipson, and Snidal 2001, 794-5). For this reason, states should negotiate cheaper forms flexibility when NUMBER is high, and these forms correspond to the characteristics of less formal institutions.

**To delegate information and monitoring functions** Perhaps the most infamous problem in game theory is the incentive to defect. As such, it receives much attention in the literature on institutional design. Koremenos, Lipson, and Snidal propose three ways of solving the dilemma (2001). Of these, I intend to include the conjecture that “centralization increases with the severity of the enforcement problem” because it maps very well to my own definition of what constitutes institutional formality. In this case, centralization means the power to delegate some functions of cooperation to a disinterested third party. To the extent that the institution at hand values these delegated functions, then to delegate is to grant the central actor control of a significant resource, and therefore a significant power. Rational Design’s authors consider information distribution and compliance monitoring particularly in their conjecture (Koremenos, Lipson, and Snidal 2001, 789-91). Writing in the Rational Design special issue of *International Organization*, Oatley explicitly illustrates this design technique in the creation of the European Payments Union, which, among other feats, prevented European nations from subverting the Marshall Plan through monetary policy defections by promulgating policy decisions (essential to each member’s economy) from a central, majority-rule body (Oatley 2001, 963-8).

This kind of centralization, I contend, is really only possible through formal cooperation. Informal agreements that attempt to broker information or compliance monitoring necessarily become fairly formalized if they create a new in-

stitution to do so, and would likely face strong objections on the grounds of sovereignty if they delegated the powers to a third party nation.<sup>33</sup> Here again, I preserve Koremenos, Lipson, and Snidal's term: the ENFORCEMENT PROBLEM.

## Methodology

As I have stated, I hope my contribution to the field of international relations is a solid test of some of the theories surrounding informal institutions that to date remain unproven. Moving past the scattered, anecdotal evidence that characterizes some earlier work, a random sample is the first step in this process.

## Sample

To test these theories, then, I employ a large- $n$  dataset compiled by the World Event/Interaction Survey, developed by Charles McClelland at the University of Southern California in the middle of the twentieth century. Using a team of coders, Prof. McClelland compiled the database from stories printed in the *New York Times* from January 1, 1966 through December 31, 1978.<sup>34</sup> The dataset's unit of analysis is not news stories, however: instead, the research team intended to capture thirteen years of international interactions, so each datapoint represents a single action. Given this scope, it is not surprising that

<sup>33</sup> One well-known counterexample is OPEC, an organization whose members live and die on the production information it metes out yet operates largely through short-term, informal agreements. However, this is an unusual case in that, despite sporadic cheating, the issues that most threaten cooperation concern quota distributions and the uncertainty about how much oil each member actually produces. These are solved by the short-term agreements, and I note that OPEC's basic charter, mandating its form and much of its information-sharing architecture, is a formal document (Statute of the Organization of the Petroleum Exporting Countries. September 14, 1960, 443 U.N.T.S. 247). For a useful introduction to the issue, see the early chapters of Terzian (1985) or Skeet (1988). The enforcement problem figures heavily in Griffin (1997).

<sup>34</sup> I describe the features of and potential issues with the WEIS data in depth in Appendix A.

the database should be enormous: 98,783 datapoints in its original form<sup>35</sup>, ranging in type from “praise, hail, applaud, condole” to “make complaint (not formal)” to “military engagement” (McClelland 1978, 6-12). To extract data useful for my own project, I employed a series of filters.

First, I limited the data to category 082, representing announcements of one states’ intent to negotiate with another.<sup>36</sup> I elected this code instead of 081, representing concluded agreements, for two reasons. First, since much of informality’s attraction, as attributed in the theories I aim to test, is lent by its potential for secrecy, a successful test must include secret agreements as well as publicized ones. Naturally, no secret agreement will ever be published in the pages of the *Times*, but I propose that some of the initial intentions to negotiate them might be. It is very likely the case that many secret agreements are intended from the start to be so, and as such negotiators never announce their intentions to convene at all. However, I consider my plan a compromise between tracking down a comprehensive, large- $n$  set of secret agreements (a formidable task!) and ignoring them completely by relying on a published treaty collection.

The other reason I prefer to look at opportunities for agreements rather than agreements themselves is so that I can include failed negotiations as well as successful ones. Though none of the theories I cite above are meant to predict when negotiations will yield cooperation, it is nevertheless useful to check whether conditions that appear to favor the creation of informal agreements (or formal ones, for that matter) are more likely than their counterparts to end in-

<sup>35</sup> This number includes multiple-coded events – that is, when a story reports country A taking an act directed at countries B and C, and C subsequently responds, A’s actions and B’s reaction will be coded individually and the story appears three times. As well, the same story might be classified under multiple event categories. By looking at the average number of unique stories per day for several days throughout the dataset, I estimate that the number of unique stories cataloged in the set is closer to 40,000.

<sup>36</sup> The codebook reads, “Agree to future action or procedure; agree to meet, to negotiate. This category includes the acceptance of invitations from other states,” (McClelland 1978, 8).

conclusively. Should I find such a relationship, accounting for it could be another project in itself.

I also filtered the data to include only negotiations in which the United States was involved. Though I did not set out to write a paper focusing only on international relations as they relate to the US, limiting my cases was an easy choice given the advantages of doing so. I cover my reasons in more depth in Appendix A, but in summary American negotiations guarantee English-language agreements and literature, control (roughly) for power and preferences, and, coupled with the age of the data themselves, permit me to reference contemporary documents in the State Department's *Foreign Relations of the United States*.

Finally, I eliminated by hand approximately fifty stories that would either fall below even the most generous cutoff for "international negotiation" or were so minor as to be uninteresting to scholarship. In rough order of frequency, these included

- invitations for state or informal visits with no particular issue under discussion,
- calls to strengthen relations, with no respect to any particular issue,
- statements on logistics of negotiations (venues, postponements, etc.), and
- participation in general conferences with no particular issue on the table (commemorative events, etc.).

After applying these filters, my dataset comprises 252 political *pacta de negotiando* proclaimed by or about the United States over thirteen years. Given my resources, I did not expect that I could code the entire set, but I did not wish to set an arbitrary sample size from the outset. Instead, I randomized the order of the datapoints and coded from the top of the new list, effectively using a simple random sample of any convenient size. In the end, my overall sample came to 43 entries. Of these, six negotiations proved fruitless, so my sample featured 37 sets of dependent variables. In the tests below,  $n=37$ .<sup>37</sup>

<sup>37</sup> I treat the size of my sample as a potential source of error in the section by that name, below.

## Variables and hypotheses

Table 2: Summary of operationalized hypotheses

<i>FORM, LEVEL,</i> <i>and</i> <i>PUBLICITY de-</i> <i>cline as...</i>	ACTOR STATUS rises
	ISSUE SALIENCE declines
	INTRINSIC URGENCY rises
	EXTRINSIC URGENCY rises
	ISSUE UNIQUENESS declines
	UNCERTAINTY ABOUT THE STATE OF THE WORLD rises
<i>FORM, LEVEL,</i> <i>and</i> <i>PUBLICITY</i> <i>rise as...</i>	COMMITMENT PROBLEM rises
	NUMBER rises
	ENFORCEMENT PROBLEM rises

### Independent Variables

At this point I have at a list of purported reasons for crafting informal instruments of cooperation and a set of negotiations sufficient to evaluate each of them. I now identify the data I need to collect on each negotiation. Each of the variables given below is expected to vary (in one direction or the other) with formality, the overarching phenomenon of interest. In order to draw valid conclusions from my entire sample about the exact ways these variables interact, I must give some information about how I code for each of them:

**Actor Status** This variable, the simplest of all, refers to the non-American actor's status under international law. In theory, international standing is a wide-ranging concept. Practically, however, the ACTOR TYPE has only two values: eligible to accede to formal, UN-registered treaty; or ineligible. Since my sample is restricted to negotiations in which the US took part, I am able to use its perspective on its partners' statuses. Where there is an uncertainty about recognition, I refer to the appropriate edition of the State Department's *Diplomatic List* in lieu of any more official "list of recognized states" (United States Dept. of State, 125).

**Issue Salience** Roughly speaking, I intend ISSUE SALIENCE to answer the question, “how closely are people paying attention?” Of course, this definition raises one question immediately: with which people’s attention am I concerned? Since the theory to which ISSUE SALIENCE corresponds (that is, the proposition that states create informal agreements in part to avoid uncomfortable domestic questions) centers on the principal-agent problem, the group in question ought to be the principal in whose name agreements are negotiated. Ultimately, in liberal democracies if not worldwide, this is the public, thereby creating Putnam’s two-level game: if voters are not happy with their leaders’ foreign policies, these leaders are eventually turned out of office (Putnam 1988, 427-460). This assumes a government that seeks to deflect public attention whenever possible. Generally speaking, arms control treaties are very salient (and this was even more true during the Cold War, when my sample was taken); administrative and agricultural treaties (as categorized by the *UN Treaty Series*) are not.

I propose that the public’s attention to a treaty can be approximated by the coverage it receives in national newspapers. Of course, because my sample is drawn from the *New York Times*, each negotiation will have at least one story. When possible, I try to search the US’ negotiating partner’s local papers – however, for the vast majority of cases, this is not practicable (lack of time) if not outright impossible (lack of public, translated archives). For this reason, my ISSUE SALIENCE values display an America-centric character. This is problematic for issues that are clearly more salient to the public of one country than another – for instance, those meting out foreign aid. In these cases, I attempt to compensate by first learning as much as I can about the domestic pressures at work in the foreign country (from scholarly sources and available news reports), then approximating salience.

**Intrinsic and Extrinsic Urgency** I have split the idea of “urgency” into two variables, as I feel the two types are different enough that they may have different effects on the type of instrument negotiated. The first, INTRINSIC URGENCY, is a measure of the importance of reaching a solution quickly, based on an “objective” evaluation of the issue itself. To continue my examples from above, the Cuban missile crisis is an example of an extremely urgent situation in the in-

trinsic sense, while the situation addressed by 1989's Agreement Establishing the Terms of Reference of the International Copper Study Group<sup>38</sup> was considerably less so. I use EXTRINSIC URGENCY, by contrast, to show urgency derived not from the issue at hand, but rather introduced by one actor's conscious strategy. Importuning tactics are well-covered in negotiation literature (see for instance Nierenberg 1968; Nierenberg 1973 ;Williams 1992). For my part, I consider ultimatums, self-imposed deadlines, and similar tactics to fall under this heading. As an example, the terms of United Nations Security Council Resolution 1441, granting Iraq "a final opportunity to comply with its disarmament obligations," introduced a higher degree of EXTRINSIC URGENCY to the disarmament crisis.<sup>39</sup>

**Issue Uniqueness** A state need only worry about third parties demanding the same terms it has granted to one partner if there are, in fact, other states in a position to request a similar deal. This is the frame of mind with which I approach ISSUE UNIQUENESS. Some types of agreements are by their very nature limited to only a few partners: only a small number (though a growing one) of states are in a position to discuss coordinating their space programs, whereas nearly every state has some interest in such common areas of cooperation as reciprocal extradition or agricultural imports. Some issues' uniqueness varies by national actor: though all mainland nations worry about border treaties, the issue is, by my definition, more "unique" in the United States' case, with two neighbors, than in China's, with fourteen.

**Uncertainty about the State of the World** By definition, the state of the world is always uncertain to some degree – no actor, however hegemonic, can fully control the future. Within the limited world of the negotiations, however, some situations are clearly more uncertain than others. Koremenos, Lipson, and Snidal invoke the example of the Spratly Islands, the chain in the South China Sea whose several claimants became much more adamant about their rights

<sup>38</sup> 1989, 1662 U.N.T.S. 249

<sup>39</sup> UN Security Council resolution 1441, November 8, 2002

when an oil deposit of uncertain size was discovered there in 1968 (Koremenos, Lipson, and Snidal 2001, 778; Stein Tønnesson 2002, 484-5). Certainly, each state's choice to contest the islands' ownership was made with this uncertainty in mind, and therefore represented a gamble. If nothing else, then, institutions robust enough to get around UNCERTAINTY ABOUT THE STATE OF THE WORLD should increase overall efficiency in the economic sense by reducing the effects of the unknown. To contrast, situations such as one-time commodity or arms sales imply less risk from an unknown future. Certainly, the price of sorghum may plunge or a neighbor may invade in six months' time, but the bill of sale negotiated between the two actors need only be concerned with the transaction at hand. In coding for UNCERTAINTY ABOUT THE STATE OF THE WORLD, I looked for situations whose payoffs lay sufficiently far in the future to be essentially veiled.

**Commitment Problem** When one actor has an incentive to make a cheap agreement today to execute a costly plan in the future, there exists a COMMITMENT PROBLEM. Since much of international cooperation is not resolved instantly, but instead requires future commitments, it would appear that some degree of COMMITMENT PROBLEM suffuses almost every negotiation. I expect that my five-level coding strategy mitigates this issue: I am able to distinguish between a negotiating situation whose goal is an abstract improvement in relations at some point in the future, and one that intends to develop a schedule for quantifiable reductions in carbon monoxide emissions over the next thirty years. As I hope this example illustrates, I consider the likelihood that the agreed-upon "debt" will ever be called in (trying, as ever, to code only the situation rather than the eventual agreement).

A second source of COMMITMENT PROBLEMS is doubt about one's partner's ability to carry out the terms of the deal no matter when it is to be done. In practice, this often reflects the problems of negotiating with a shaky regime – no national leader would make an important agreement with another head of state if he or she knew that the other would be deposed within the week. This is another area where using old data is convenient: in cases where there is reason to believe that a leader or government's rule is less than secure, I can look at

contemporary sources to check approximately how dire the internal situation would have appeared to American negotiators.<sup>40</sup> There is some risk of teleology here (knowing, for instance, that the Iranian Revolution was successful in 1979, it is hard not to pay more attention to the negotiations with Iran in 1978 than with another country that may not have had a successful revolution), but overall I believe the variable can be coded with enough objectivity to make it useful.

**Number** How many actors are implicated in a given negotiation? Of course, it is often the case that not every party with an interest in the matter at hand is invited to the negotiating table. On the other hand, it takes only trivial imagination to think of a situation in which almost any nation could be implicated in almost any international matter. I set forth from the assumptions that every negotiation must involve at least two actors, and that anyone present for the negotiation itself must be involved as well. Beyond this, I count “third party” actors who have a history of meaningful interaction with one or several of the primary parties on the issue at hand. For instance, the negotiations ending the “Cod War” between the United Kingdom and Iceland would also involve the United States, which was bound by a separate agreement to defend Iceland and would no doubt be asked to intercede by its charge if the hostilities between the countries intensified. Had these negotiations come up in my sample, however, I would not include the Soviet Union as an involved party – despite its status as a major importer of Icelandic cod, it did not appear to take sides in the dispute, whereas American policy plainly backed Iceland (Jóhannesson 2004, 543-574). This example should show my conservative approach to including outside actors, stressing previously-expressed ties and active statements of involvement.

**Enforcement Problem** The enforcement problem is easy to understand on a conceptual level: it occurs whenever one actor has a rational incentive to

<sup>40</sup> By looking only at the credibility of the US’ negotiating partners, this concept of the COMMITMENT PROBLEM assumes that the Americans themselves are always credible actors. For the duration of my sample, I believe this is a safe assumption, save perhaps for the height of the Watergate scandal.

defect rather than to cooperate with its partner. How does one capture this incentive quantitatively, though? First, I code the enforcement problem as its own entity, rather than as adjusted by other factors at work – a “gross” quantity, perhaps, not a “net” one. This means that, for situations that closely resemble the prisoner’s dilemma, such as those surrounding arms reduction, the enforcement problem is high no matter what other disincentives might apply to a defection. When the only problem is one of coordination (say, in the International Postal Union), the ENFORCEMENT PROBLEM is nonexistent – there is no reason to prefer defection. In between these two extreme cases, I simply try to weigh the payoff for defection versus that for cooperation, again not considering any external factors.

Table 3: Summary of coding values for independent variables

ACTOR STATUS	{0,all actors sovereign}, {1,one actor non-sovereign}, {2,2 actors non-sovereign}, {3,3 or more actors non-sovereign}
ISSUE SALIENCE	{0,low}, {1,mid-low}, {2,mid}, {3,mid-high}, {4,high}
INTRINSIC URGENCY	{0,low}, ... {4,high}
EXTRINSIC URGENCY	{0,low}, ... {4,high}
ISSUE UNIQUENESS	{0,low}, ... {4,high}
UNCERTAINTY ... WORLD	{0,low}, ... {4,high}
COMMITMENT PROBLEM	{0,low}, ... {4,high}
NUMBER	{0,2}, {1,3 to 6}, {2,7 to 10}, {3,more than 10}
ENFORCEMENT ...	{0,low}, ... {4,high}

### Dependent Variables

I also introduce three variables to describe different aspects of informal agreements themselves. In naming the three variables below, I do not mean to imply a sort of “index of informality” in the way that Abbott and Snidal created a tripartite index of hard law (Abbott and Snidal 2000, 421-456). I grant that such an index can help to wrap one’s mind around legalization (or informality, for that matter) as a phenomenon. When indices of this kind are subjected to

empirical verification, however, it becomes clear that the picture is much more complex than three equally-weighted factors (Koremenos 2005a). I resist running a factor analysis after coding, as well: to do so would be to tailor my index to one particular sample, with all its in-built problems and limitations, not the theoretical population of all agreements. Of course, the three indicators are not mutually independent – for instance, the highest FORM score all but implies the highest PUBLICITY score.<sup>41</sup> Instead, I endeavor to justify their use as related but separate variables that in aggregate map the salient features that make institutions formal or informal.

**Form** At first sight, FORM might seem to be *the* measure of agreements' formality. After all, there is no shortage of distinctions drawn between the various types of agreements conducted,<sup>42</sup> and if institutions are truly rationally designed, these distinctions must have some functional meaning. But what is the precise difference between, say, a memorandum of understanding and a joint communiqué? Coding FORM in any useful way depends on answering this question.

A major problem in simply using these vehicle types as categories as-is is disentangling any theoretical "objective" distinctions between them from the vagaries of national practices.<sup>43</sup> Aust, former Legal Counsellor to the United

<sup>41</sup> Two-tailed Pearson correlations (a ballpark test when applied to this data, to be sure!) reveal a strong connection ( $r=.523$ ,  $p=.001$ ) between FORM and PUBLICITY, and no significant correlation between either and LEVEL.

<sup>42</sup> Indeed, the rattling off of perhaps three to five agreement types is a minor motif throughout the literature on institutions. Baxter (1980, 550) lists "treaties, in the strict sense, ... declarations of policy, joint communiqués, ... resolutions of the General Assembly, [and] commitments of varying character made on the highest levels of government to the lowest." Aust (1986, 788) attests to "gentleman's agreements," "non-binding agreements," "*de facto* agreements," and "non-legal agreements" (it is unclear whether he intends these terms to be synonymous), and from an American perspective Lipson (1991, 502) adds "executive agreements and nonbinding treaties," "joint declarations, final communiqués, agreed minutes, memoranda of understanding, and agreements pursuant to legislation." If it were possible to simply preserve all these institution types as distinct entities, the variable FORM would have an unwieldy number of categories.

<sup>43</sup> In the absence of any "global or cosmopolitan vision of international law," Jouannet (2006) observes, considerations of how treaties are made or applied must take into account

Kingdom's Foreign and Commonwealth Office, cites a number of illustrative policies on the form of agreements that are particular to that organization.<sup>44</sup> While the US State Department provides some guidance to its negotiators in choosing agreement types, and there is no reason to doubt that other states' equivalent agencies do the same, two problems prevent me from simply taking governments at their word. First, to an American researcher, it is very unlikely that other government's standard operating procedures as accessible as the State Department's *Foreign Affairs Manual*. Certainly, even if other governments do publish them, they have no incentive to offer official English translations. Second, I have a well-founded scholarly doubt about the goodness of fit between published rules and observable behavior. Be this incongruity introduced by the principal-agent problem or simple, bureaucratic aloofness, I am hesitant to assume that institution-making is essentially an exercise in following the published rules.

These objections mean that it is up to me to create a valid classification of agreement types. What is more, in order to use the best possible statistical techniques, these categories must reflect an inherent hierarchy, from most to least formal. Clearly, some agreement types must be included: tacit agreements at the bottom, and registered treaties at the top. In between these poles, some room must be left for the special cases of oral promises, written but unsigned agreements, and treaty-type documents that are not governed by international law (such as the Helsinki Final Act, mentioned above), as well as more traditional types. In the end, I code six categories, to wit,

1. tacit agreements,
2. oral agreements,
3. written but unsigned agreements,

the "inevitable multiplicity of particular national, regional, individual, and institutional views."

<sup>44</sup> Agreements exclusively between members of the Commonwealth, for instance, are more likely to be informal than if the same negotiation had taken place with a non-member (Aust 1986, 788).

4. joint communiqués (comprising other midrange signed pledges, such as memoranda of understanding and agreed minutes)
5. non-legalized treaties, and
6. legalized treaties.

In coding for all these types, I try to give less consideration to the title of the document than its manifest content.<sup>45</sup> This is in keeping with the problems of varying terminologies outlined above.

**Level** The idea that the level at which agreements are conducted is important is not a new one. Certainly there are differences in the expected issues that different levels of government will address – evinced throughout the creation of the European Union, for instance, when big-picture debates on transformation were carried out in intergovernmental bodies composed of heads of state, not foreign ministers (Nuttall 20004). This is only natural, as heads of states are more politically accountable, more able to gain domestic support through public appeals, and perhaps in a better position to articulate long-term policy goals than their deputies (Kernell 1986). Heads of state have another useful ability in global politics: as speakers for their governments, they are able to put their own necks on the line. Since establishing personal credibility is a major boon in many game models, it stands to reason that actors will sometimes put this reputation on the line in order to enhance it (Sobel 1985, 557-573). In general, it has been proposed that these reputational considerations make parties to high-LEVEL agreements consider binding (Lipson 1991, 498; Martin 2005a 8-9).

But LEVEL is not simply a codeword for issue areas, bindingness, or reputation costs. Low-FORM agreements should stem from another set of circumstances. A substantial wave of scholarship over the last decade contends that this is happening within global policy networks: loose, nonhierarchical, inter-governmental associations that coordinate generally sub-executive govern-

<sup>45</sup> Martin (2005 n.5) raises the point that “the agreement need not take the same form in all states party to it.” My coding ignores this possibility, and in case of a known discrepancy reflects the United States’ FORM.

ance. Abetted by advances in information technology and the rise of non-state actors, these networks are held to carry out international cooperation much more agilely than traditional international law can (Slaughter 1997, 183; Reinicke 1999, 44-57; Raustiala 2002; Slaughter 2004, 368). Agreements implemented by bureaucrats remain less binding than those implemented by heads of state, but this criticism misses the “point” of transgovernmentalism. Transgovernmental agreements of this sort are not built to hold up in court; rather, they are built to permit *ad hoc* policy coordination among legislators, regulators, and even adjudicators<sup>46</sup> working in participating governments.

So, overall, how does LEVEL work? Agreements at high levels are likely to bind, so should be more frequent in situations where commitments could otherwise be dubious. Agreements at low levels, all else equal, are easier to conduct and can therefore be used for urgent issues. Too low, however, and agreements are subject to a *de facto* veto by higher authorities (if they are salient enough to be noticed, of course). Varying hierarchies among governments complicate the issue of ordinal categories here, however, just as varying national practices prevent a simple carrying over of any one set of FORMs. In the end, I code for only two values: agreements at the level of Secretary of State (or equivalent) or above, or at the level of other cabinet members or below. I expect that this classification preserves the distinctions between “traditional” cooperation made by those levels of government for whom brokering international agreements is a significant duty, and those for which it is more incidental. At the same time, it does not arbitrarily rank domestic (or worse, foreign) agencies unnecessarily. As with FORM, when there is a discrepancy between the American LEVEL and that of her partner, I code for the American.

<sup>46</sup> Slaughter gives the interesting example of the Organization of the Supreme Courts of the Americas, which hopes to “promote and strengthen judicial independence and the rule of law among the members, as well as the proper constitutional treatment of the judiciary as a fundamental branch of the state.” Underscoring its dissimilarity from traditional international institutions, the association’s charter specified that it must be ratified by five member nations’ supreme courts (Slaughter 1997, 183).

**Publicity** Lipson saw the form an agreement takes and the level at which it is negotiated as “two principal dimensions” on which international agreements vary (Lipson 1991, 498). However, I consider the degree to which states publicize their agreements to be a third dimension, sufficiently independent from the others to permit, for example, a well-publicized oral bargain or a treaty-form document whose terms are kept secret. In coding, I develop three categories for PUBLICITY.

Of course, the lowest level of publicity must be an agreement that is entirely secret. These might be freestanding pacts, such as that governing intelligence-sharing between the CIA and Mossad; they might instead be what Eisemann terms “*accords informel supplétif*,” like those that surround Britain’s published air service agreements (Eisemann 1966, 188-9; Aust 1986, 788, 795; Lipson 1991, 498-9 n.8). The advantages to actors who can conduct secret agreements are covered above, so for now I turn to agreements that are in fact made public.

I consider PUBLICITY to come in two top-level categories that I term existence publicity and terms publicity. Existence publicity is simply an announcement or admission that an agreement has been reached.<sup>47</sup> This is usually done through press conferences (or the occasional leak), but it typically reaches the interested public via the mass media. Since my aim is to explain the agreements themselves, it may not seem useful to gather information that is more commonly in the domain of media researchers. I contend, however, that the public’s knowledge that an agreement exists is first, not at all a given, and second, a significant characteristic of the agreement itself. All else equal, publicizing negotiations lets negotiators operate in a different environment than the conventional “closed room” model. Why, then, wouldn’t actors in a position to take advantage of publicized cooperation do so?

<sup>47</sup> I assume throughout that publicity is always a rational choice made by negotiating actors. Only in the rarest cases does investigative journalism uncover agreements that all actors truly and at all levels intend to keep secret.

Measuring existence publicity is a matter of checking for contemporary references to the agreement in question. In determining whether the negotiations that comprise my units of analysis resulted in an agreement or not, I find myself already poring through the *New York Times* as well as the *Washington Post*, the *Wall Street Journal*, and similar, so coding is trivial. More than occasionally, an agreement receives no (or sparse) coverage in these papers, and I am forced to turn to more specialized publications: chiefly, *Foreign Affairs* and any of several academic journals. Since I am concerned here with publicity at the time of the agreement, I only take these into account when they are contemporary with the agreement itself.

One step beyond simply acknowledging the existence of an agreement is the publication of its actual terms. In the same sense as above, designing an agreement that will accommodate professional scrutiny should mean designing a different agreement entirely from one whose terms are never meant to be published. For treaties as such, terms publicity is accomplished by registration with the UN. Lower-FORM agreements are often published, as well, of course. In the United States, federal law requires the State Department to publish its agreements in the series *Treaties and Other International Agreements*, but the law grants exceptions to agreements that have not “been brought into force for the United States after having received Senate advice and consent pursuant to section 2(2) of Article II of the Constitution”<sup>48</sup>. This essentially makes terms publicity a voluntary, and thus a strategic, choice. In some cases, agreements’ terms are published in full in the *Times*; other times, in the State Department’s own weekly *Bulletin* (now styled *Dispatch*). There are very few gray areas regarding the publication of terms, but I should clarify the case of terms published not

<sup>48</sup> The law also permits exceptions when the agreement is no longer in force, it does not affect private law, the public interest is narrow enough to be satiable by another means, or if it would “be prejudicial to the national security of the United States” (1 U.S.C. §112a(b)(1-4)). The first three of these conditions do not seem prime candidates for strategic manipulation, and I can find no information on the frequency with which subsection (4) is invoked. Other regulations introduce specific areas of cooperation that are exempt from 112a (22 C.F.R. §181.8).

quite in full. In cases where any terms of substance are kept secret (in one case, for instance, the Soviet Union requested that a precise interest rate not be divulged), I code the agreement as acknowledged but not published.

In laying out these three dependent variables, I do not mean to imply that they constitute some unimpeachable definition of “informality.” In fact, I would prefer to code for bindingness, the issue that Abbott and Snidal and I would likely agree is central to the choice between legal and nonlegal, formal and informal. Researchers on legalization can refer to the exact terms of the document in question when coding for what Abbott and Snidal term obligation (Abbott and Snidal 2000, 421-456). My intent to include inexplicit agreements in my explanation, on the other hand, prevents me from checking for manifest signals indicating whether parties intended their cooperation to be binding. Even when the terms of an agreement are spelled out, the intent to be bound is rarely unmistakable, since terminologies often vary by state.<sup>49</sup> Noting only that making this determination is seemingly enough to occupy the world’s supply of treaty lawyers, this cobbler will stick to his last.

Table 4: Summary of coding values for dependent variables

FORM	{0,Tacit}, {1,Oral }, {2,Written but unsigned agreements}, {3,Joint communiqué}, {4,Treaty-form but non-legalized}, {5,Legalized treaty}
LEVEL	{0,Cabinet (excluding Secretary of State or Foreign Minister) or lower}, {1,Secretary of State or Foreign Minister or higher}
PUBLICITY	{0,Existence unannounced}, {1,Existence announced but some or all terms unpublished}, {2,All terms published}

<sup>49</sup> Hollis notes that most countries recognize that using “will” in naming their commitments can signal obligation, while “shall” typically implies no such intent. The phrase “agree” is another frequent signal of the intent to be bound, as is naming the document an “Agreement.” Even such an insubstantial rule of thumb is not without its exceptions, however: in the Commonwealth, use of “will” and “shall” is reversed (Hollis 2007).

## Testing

My aim in choosing a statistical mechanism is to test the validity of the hypotheses I outlined above. Each hypothesis is of the form, “*dependent variable* should increase as *independent variable* increases (or decreases).” For this reason, my statistical methods are univariate, testing the strength of association between each dependent and independent variable individually.

Since my coding produced exclusively categorical, ordinal data, my options fall exclusively within the range of rank correlation tests, which make few demands on the data’s underlying normality or linearity. Because of my high ratio of categories per measure to overall observations, many expected category counts were well under the minimum of five necessary for an accurate chi square. Between the other two obvious contenders, I chose Kendall’s tau over Spearman’s rho for its comparative ease of interpretation and comparison between variables: when the value of  $\tau$  approaches one, the two variables are positively correlated, with negative one indicating a perfect negative correlation and a value of zero indicating no association whatsoever (Noether 1986; Vlamincx et al. 2001, 715). Throughout, I refer to Kendall’s tau-c, for its robustness when facing data categories larger than a  $2 \times 2$  table. The results are summarized in Table 5.

Table 5: Summary of univariate Kendall's tau tests<sup>50</sup>

	FORM		LEVEL		PUBLICITY	
	$\tau$	approx. sig.	$\tau$	approx. sig.	$\tau$	approx. sig.
ACTOR STATUS	-.077	.467	-.140	.313	-.208	.019
ISSUE SALIENCE	-.108	.461	.377	.031	.048	.714
INTRINSIC URGENCY	.121	.362	.377	.016	.055	.666
EXTRINSIC URGENCY	.009	.922	.056	.674	.026	.794
ISSUE UNIQUENESS	-.042	.760	.053	.769	-.092	.507
UNCERTAINTY ... WORLD	.047	.719	.421	.005	-.101	.477
COMMITMENT PROBLEM	-.073	.573	.178	.298	-.057	.697
NUMBER	.021	.866	.237	.055	.101	.375
ENFORCEMENT ...	.131	.225	.310	.030	.191	.127

Briefly, the results bear out three hypotheses:

1. PUBLICITY declines as ACTOR STATUS increases.
2. LEVEL increases with ISSUE SALIENCE.
3. LEVEL increases with ENFORCEMENT PROBLEM.

In addition, a fourth hypothesis (LEVEL increases with NUMBER) is on the cusp of statistical significance. Curiously, two variables bear a very strong relationship in the opposite direction predicted in my hypotheses:

1. LEVEL *increases* with INTRINSIC URGENCY.
2. LEVEL *increases* with UNCERTAINTY ABOUT THE STATE OF THE WORLD.

By any measure, the results are not strong in favor of the majority of my hypotheses, and have the potential to cast doubt on the theories they are designed to test. To determine whether it is the theories themselves that are faulty

<sup>50</sup> This and all following statistical analyses were carried out using SPSS software, version 13.0 and 14.0.

or my operationalization and subsequent test of them, I aim first to eliminate any sources of statistical error that might influence my results. There is a possibility that the varying size of my tables from test to test (that is, the varying number of values attached to different variables) could throw off the test statistic in Kendall's test. This would indicate a problem with my data, not necessarily disputing the theories in the least. Somers' d test skirts this problem, while also providing a directional test statistic ("d") with a range equal to Kendall's tau. By design, the approximate significance values returned by the two tests are equal, and are thus unreported below.

Table 6: Summary of univariate Somers' d tests

	FORM	LEVEL	PUBLICITY
(directional)	d	d	d
ACTOR STATUS	-.142	-.194	-.385
ISSUE SALIENCE	-.113	.248	.042
INTRINSIC URGENCY	.140	.273	.053
EXTRINSIC URGENCY	.020	.075	.047
ISSUE UNIQUENESS	-.042	.033	-.077
UNCERTAINTY ... WORLD	.052	.287	-.092
COMMITMENT PROBLEM	-.075	.115	-.049
NUMBER	.034	.252	.143
ENFORCEMENT ...	.169	.249	.205

Though it presents a more believable account of the strength of association between the hypotheses already confirmed by Kendall's tau, Somers' d is unable to confirm any new relationships. More importantly, the difference between d and tau is not enough to flip the direction of the relationships of the three unexpected results. This leads me to believe that the results of my first test were not significantly harmed by the presence of too many categories. However, it could instead be the case that I have divided my variables into too

*few* categories – Kendall’s tau and Somers’ d both compensate for ordinal ties, but the high number of tied values that comes with a low ratio of categories to variables could affect both statistics. To guard against this contingency, I will employ Fisher’s exact test. Note that this test requires binary ordinals, so I will actually compact my categories to yield the necessary  $2 \times 2$  tables. Tables 7 and 8 cover my recoding method.

Table 7: Summary of binary recoding for independent variables

	Low value		High value	
	Old range	New value	Old range	New value
ACTOR STATUS	0	0	1,2	1
ISSUE SALIENCE	0,1	0	2-4	1
INTRINSIC URGENCY	0,1	0	2-4	1
EXTRINSIC URGENCY	0,1	0	2-4	1
ISSUE UNIQUENESS	0,1	0	2-4	1
UNCERTAINTY ... WORLD	0,1	0	2-4	1
COMMITMENT PROBLEM	0,1	0	2-4	1
NUMBER	0	0	2,3	1
ENFORCEMENT ...	0,1	0	2-4	1

Table 8: Summary of binary recoding for dependent variables

	Low value		High value	
	Old range	New value	Old range	New value
FORM <sup>51</sup>	0-2	0	3-5	1
LEVEL	0	0	1	1
PUBLICITY	0,1	0	3	1

With my variables temporarily recoded, I am ready to run the analysis. Fisher's exact test is not dissimilar in interpretation from the more popular Pearson's chi-square test, but it demands no minimum expected count. Importantly, the test does not yield a test statistic *per se*, but I report the p-value for significance in Table 9 in order to determine whether the test confirms any further hypotheses. Each cell, then, report the likelihood of a non-random association between independent and dependent variables in the direction noted, with "left" indicating an inverse and "right" a positive relationship.

<sup>51</sup> FORM is the only variable that resists simple refactoring, because it represents such a range of (to my mind) discrete categories. Certainly a treaty-form document can be placed higher, say, than an oral bargain, but near the middle of the list the distinctions between categories make it difficult to place the line between "0" and "1." In the end, I placed the division between written but unsigned agreements and joint communiqués. The chief difference between the low and the high value, then, is the gravity attached to the instruments' signature or conclusion. I have confirmed that moving the line of division up or down one category creates no new significant associations.

Table 9: Summary of univariate, unidirectional Fisher's exact tests

	FORM		LEVEL		PUBLICITY	
	p	direction	p	direction	P	Direction
ACTOR STATUS	.379	left	.278	left	.037	Left
ISSUE SALIENCE	.593	left	.008	right	.761	Left
INTRINSIC URGENCY	.965	left	.999	left*	.778	Left
EXTRINSIC URGENCY	.700	left	.704	left	.750	Left
ISSUE UNIQUENESS	.874	right	.613	right	.982	Right
UNCERTAINTY ... WORLD	.813	left	.966	left	.481	Left
COMMITMENT PROBLEM	.688	right	.104	right	.694	Right
NUMBER	.643	right	.058	right	.253	Right
ENFORCEMENT ...	.121	right	.102	right	.243	Right

\* If testing for a positive correlation, the p-value (right-directional) becomes .013, and the relationship is significant.

The Fisher's exact test underscores the strong association between LEVEL and ISSUE SALIENCE and INTRINSIC URGENCY, as well as that between PUBLICITY and ACTOR STATUS. However, it supports no previously unsupported hypotheses, and in fact negates the link between LEVEL and ENFORCEMENT PROBLEM from the two earlier tests.

## Other analysis

**Failed negotiations** Having compiled the data in order to test my main hypotheses, I would nevertheless miss an opportunity if I did not try to draw out some measured inferences about other topics. I begin by looking at failed negotiations. Of my 43 coded negotiations, six reached no concrete agreement. I created a dummy variable, FAILURE, to track these. How does FAILURE associate with the independent variables surrounding all negotiations? I designed a simple two-step linear regression test to find out.

Table 10: Summary of linear regression models on FAILURE

	R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Err. Est.	Δ F	Sig. Δ F
Model 1*	.364	.132	-.012	.353		
Model 2**	.638	.407	.245	.305	5.093	.005

\* Predictors are a constant, ACTOR STATUS, ISSUE SALIENCE, INTRINSIC URGENCY, EXTRINSIC URGENCY, ISSUE UNIQUENESS, and UNCERTAINTY ABOUT THE STATE OF THE WORLD.

\*\* Predictors as above plus COMMITMENT PROBLEM, NUMBER, and ENFORCEMENT PROBLEM.

Table 11: ANOVA for regression models on FAILURE

	Σ Squares	df	Mean Square	F	Sig.
Model 1	.684	6	.114	.916	.495
Model 2	2.101	9	.233	2.517	.026

The test indicates that a model built from only the independent variables expected to correlate positively with informality does a poor job of accounting for FAILURE. Coupled with the discouraging results most of these variables generated in the univariate tests above, this could indicate coding issues as easily as it could mean that these variables have nearly no effect on the failure rate. The second model, however, incorporating all independent variables, does significantly better, predicting approximately a quarter of the variance in FAILURE. Model 2's predictive powers were effective at the 0.05 level. Overall, the final three variables, intended to correlate negatively with informality, did a better job predicting failed negotiations. This is evinced by the presence of NUMBER and the COMMITMENT PROBLEM in the significant individual correlations, summarized below:

Table 12: Significant correlations from Model 2 (with FAILURE)

	B	Std. Error	t	Significance
EXTRINSIC URGENCY	.109	.050	2.189	.036
NUMBER	.130	.043	2.997	.005
COMMITMENT	.083	.035	2.363	.024
PROBLEM				

Interpreted roughly (but, I think, no more precisely than the data allows), an increase of one coded “point” in each of these three factors means between an eight and thirteen percent higher chance of failure. On their face, these relationships make sense (adding participants increases the difficulty of coming to a combined agreement, for instance, as does artificially increasing the pressure on one’s partner), but I urge only a cautious use of these results. One problem lies with the test itself: it assumes the data are linear, when in fact all variables are categorical. Using an otherwise more appropriate method, logistic regression, I was unable to produce any reasonable model that did not result in an integer overflow from a colossal cell count. While this probably does not point to anything useful about the underlying data or failed negotiations themselves (rather, it points to a limitation of modern computer hardware architecture), it does force me to use a suboptimal test. Second, the data reflects only the six failed negotiations in my sample. This is both a small observed count in its own right, and one drawn from the population not of all negotiations, but only of those appearing in the *New York Times*. All the negotiations in my data, propitious or not, were deemed newsworthy by the paper’s editors, and thus bear a bias. There being no other dataset of failed agreements, I have nothing to compare my results to, and so I resist applying these correlations to failed negotiations in general.

## Conclusions

### Summary of main findings

I set out to test several theories about the reasons for creating informal agreements against real-world data. I operationalized eight theories with nine independent variables, and coded for three dependent variables representing three aspects of informality. The majority of the hypothesized relationships were not borne out in statistical testing, but three relationships did appear as expected, and two others exhibited a significant correlation in an unexpected direction.

Table 13: Summary of test results

	FORM	LEVEL	PUBLICITY
ACTOR STATUS	—	—	as expected
ISSUE SALIENCE	—	as expected	—
INTRINSIC URGENCY	—	inverse of expected	—
EXTRINSIC URGENCY	—	—	—
ISSUE UNIQUENESS	—	—	—
UNCERTAINTY ... WORLD	—	inverse of expected	—
COMMITMENT PROBLEM	—	—	—
NUMBER	—	as expected, nearly sig.	—
ENFORCEMENT ...	—	as expected	—

### Potential sources of error

Because taking these noncorrelating results at face value would present a strong challenge to some mature theories in the field of international relations, I am especially watchful for possible sources of error influencing them. I separate these potential errors into two types, given in order of introduction: first, operationalization error; second, sample- and coding-based error.

**Operationalization** Problems with operationalization, if they exist in my design, could account for a situation in which many of my hypotheses were indeed negated, yet the theories underlying them are actually correct. To begin, it is possible that I chose poor variables to represent some of them. As I have said, the operationalization process was a function of feasibility as much as it was one of capturing each concept's perfect essence. This is, naturally, true of all social science research. The specific constraints on my research design (e.g. no funding, no redundant coders) draw the limits of what is feasible to code tighter, however, than they might otherwise be. For instance, I have no doubt that the theory, "Actors negotiate informal instruments to avoid uncomfortable questions at home" would be better operationalized by coding for a statistically weighted index of the radicality of the principals' true preferences compared to the status quo, the relative freedom with which domestic mass media operates, and the tenuity of all leaders' hold on power. Compared to this grand measurement, ISSUE SALIENCE is barely a crude decoy for the drive to minimize political embarrassment. Similarly, I have mentioned my wish to code for the degree each agreement is intended to bind as a fourth dependent variable, but I realize that this is not possible. Instead, I have simply outlined my reasoning for choosing the variables I chose, and tried to justify that reasoning.<sup>52</sup> If any of the theories I aimed to test were improperly operationalized, then I will have simply proven that those theories do not work in the ways indicated, not that they do not work at all.

**Sample and coding** Presuming that my choice of variables is valid, there are still avenues through which error might be introduced into my method. In this case, it is likely to be systematic measurement error, either in my sample itself or the resources I used to research and code individual negotiations. While several issues with the data are covered in Appendix A (as I expect that they are of interest not just to this project, but to research on informal cooperation in

<sup>52</sup> I deemed several interesting theories wholly untestable, even with less than ideal variables. I give a list of these in Appendix B.

general), I do note two issues that are particular to my own hypotheses. First, the data is between forty-one and twenty-nine years old. My theories of interest, by contrast, were put to paper almost exclusively after 1990. It is possible that the so-called “Negotiation Revolution”<sup>55</sup> of the intervening 1980s has caused some major differences between the population of agreements coming before and after. I am thinking here particularly of the rise of transgovernmental policy networks, a trend I cite as an example of low LEVEL but one that was first described only in 1974 (Keohane and Nye, 39-62 (cited in Raustiala 2002, n.8)). If prior to the rise of this type of cooperation agreements were not conducted at low levels as often as they are in its wake, I would expect the fact to affect my findings.

A second difficulty might lie with the distribution of informal agreements in the sample. Just as with the Rational Design project itself, applying several theories (and several variables) to a sample returns the best results when the phenomena the theories described occur frequently (Duffield 2003, 426-7). My own project does not fill this condition, since extreme marks in several of the variables occur only once or twice. Of course, a theory may still be true of every case to which it applies even if those cases themselves are extraordinarily rare, but this certainly makes confident empirical verification more difficult.

The third potential source of systematic error lies with my sources not of data, but of information for coding. In the end, many of my variables rely on observations provided by the actors themselves, particularly from the United States. Ideally, I could refer to a single, objective source for the context surrounding each of my negotiations. Since no such repository exists, I acknowledge first that some important nuances surrounding each negotiation have probably been lost to history and second, that what remains has often been filtered through biased sources. This problem is particularly likely to come up

<sup>55</sup> Lukov uses this term to describe the “dramatically increased role of negotiations as a means of managing the international system.” In reference to my point, he contends that it “has produced a fundamental evolution of the functions, agenda, structure, and intensity of international negotiations” (Lukov 1985, 139-40).

where actors' preferences are concerned (by my count, in the variables ISSUE SALIENCE, INTRINSIC URGENCY, and ISSUE UNIQUENESS), where actors have a special incentive to misrepresent the information they bring to the negotiating table. Of course, true preferences are unknowable no matter what resources the researcher wields<sup>54</sup>, but even the accuracy of stated preferences may be improved if one can reference the right statements. The State Department's series, *Foreign Relations of the United States*, is an invaluable source for cataloging communications that were never meant to be seen by bargaining partners, and therefore more likely to contain true positions. The collection is not perfect, however: as edited volumes, they do not give a complete index to American negotiations, and present publication has only reached as late as the Ford administration. Of course, for the US' partners, similar catalogs of internal documents are almost unknown.

Finally, my sample is responsible for one source of error that could invalidate some of my results. Carrying out a power test (based on p-value, expected size of effects of each independent variable, and sample size) can give an estimate of the likelihood that a given test's negative result was mistaken – that is, that it was a Type II error. Calculating the power of the test and varying the effect size and the sample size (including only valid cases) yields the following:

Table 14: Power of t-test of correlation, varying  $n$  and  $r$ <sup>55</sup>

$N$	$r$ (effects size)	$\alpha$	Power ( $1 - \beta$ )	$\beta$
37 (current $n$ )	.10	.05	.1479	.8521
"	.30	.05	.5913	.4087
"	.50	.05	.9639	.0361
74 ( $2n$ )	.10	.05	.2152	.7848
"	.30	.05	.8496	.1504

<sup>54</sup> For a more than thorough guide to the problems of preferences and several ways of divining actors true goals, see Plott 1976.

<sup>55</sup> For the power test, I used G\*Power (Erdfelder and Faul 1992).

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"	.50	.05	.9995	.0005
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In each row,  $\beta$  is the ratio of positive results that were reported as negative (false negative or Type II errors). Given the size of the correlation in the hypotheses that did test positively (.208, .377, and .421), I expect a true average effect size for my hypotheses should be near .30; a medium effects size as reckoned by Cohen's rule of thumb (1992, 155-159). Given my sample size and the number of positive results, this leads me to expect that up to one other hypothesis should be true:

$$\beta \times \text{Positive count} = \text{Expected Type II error count}$$

$$.4087 \times 2 = .8174 \cong 1$$

As to which hypothesis might be correct, the test gives me no way to guess. Had I been able to double my sample size, I would have only fifteen false negatives for every 100 true positives, likely answering that question while providing better results overall. Nevertheless, my current test's power (near 0.6) is a comfortable one in the social sciences.<sup>56</sup>

## Interpretation

Assume now that the sources of error I identified do not pose a problem. If my tests are correct, some conventional wisdom about the way states conduct their agreements is mistaken. I hope to guide an interpretation of these findings so that they are not misunderstood.

First, rejecting some hypotheses about the creation of informal institutions does not mean rejecting the institution of informality altogether. It is an empirical fact that informal institutions exist, and I see no reason to believe that their creation and use has diminished in the thirty years following the endpoint of my data. In a similar way, though the theories I tested are drawn from the rational

<sup>56</sup> By way of anecdotal comparison, it is also better than the annual mean for articles published in the *Journal of Abnormal and Social Psychology* in 1960 (0.48) and 1984 (0.37) (Nix and Barnette 1998, 5).

choice school of international relations, I do not see my negative results as a challenge to the precept that actors create their institutions rationally. Indeed, rejecting some theories of states' motivations for acting informally only adds (indirect) support for others. For instance, Martin cites evidence that what she calls the "evasion hypothesis" – that presidents employ executive agreements to dodge the Senate – does not hold up in the real world. Rather, she finds, executives choose the forms of their agreements to signal their commitment, balanced with both chambers' likeliness to pass it (Martin 2005b, 444). Finding no relationship between COMMITMENT PROBLEM and FORM lends some support to this alternative theory, since it accommodates presidents' use of Senate ratification even when they face divided government. Though I hesitate to speculate about the implications of rejecting my other hypotheses, future research may delve into the question of what explains, for instance, the preponderance of informal exchange rate deals if not the difficulty of involving all implicated actors, or of low-level intelligence-sharing agreements if not an overpowering need for secrecy. In short, I am hopeful that my tests will help press the debate over actors' choice of institutional design forward to a more nuanced, more universally valid whole.

Moving past the level of the individual hypothesis, what does it mean that neither FORM nor PUBLICITY appeared to vary significantly with the predictors? It appears that LEVEL is the variable of interest to actors. This might be because it is the only one that truly captures an aspect of informality (caused by any of the coding errors I outlined above), but I believe it more likely indicates that LEVEL, out of all my dependent variables, is the best candidate for rational, unilateral manipulation. Though FORM can in theory vary between parties,<sup>57</sup> it seems more common to negotiate the same basic FORM among all. Similarly, PUBLICITY must always have one negotiated value: if actors' preferences for degree of PUBLICITY vary, then the actor or actors who favor the lower degree

<sup>57</sup> *Supra*, n.45

must bargain with the partner who prefers the highest, lest the latter unilaterally “leak” the agreement and take its optimal payoff. By contrast, there are essentially no insuperable restrictions on what LEVEL an actor negotiates at.<sup>58</sup> If this interpretation is correct, it means that rational institutional design is most effective when it can be carried out independently of one’s partners. Future work examining this implication would certainly contribute to a better understanding of informal cooperation.

I hope, too, that my work may contribute to international relations methodology. Above and in especially in Appendix A, I outline the familiar and particular difficulties with testing theories about cooperation. Nevertheless, when the theoretical underpinnings of one or another school in the field are tested, the results are often fascinating and very constructive, and I believe firmly that the field ought to move ever further in this direction.<sup>59</sup> I am certain that that my method of using events data to get at micro-level units of analysis can be refined significantly, and I hope it helps in developing a new set of “best practices” for others interested in informal cooperation.

<sup>58</sup> Of course, the objection might be raised that LEVEL is bounded by partners’ expectations: negotiating at the “wrong” level can signal, for instance, low commitment (Martin, 2005). However, in a world of rational actors, I assume that these signals are consciously intended. In the same way, domestic bureaucracies may mandate that certain issues be conducted at certain levels. Again, however, to the extent that rational actors are able to control their bureaucracies these too can be consciously designed to grant negotiating advantages.

<sup>59</sup> For rich arguments favoring this quantitative direction, see and Garzke, Hafner-Burton, and von Stein [forthcoming]. For a survey of current methods, see Bederman 2001.

## Appendix A: Systemic issues in researching informal agreements

Several systemic problems confront a researcher interested in the full range of international cooperation. Some of these are evident immediately upon taking the subject up, while others announce themselves only after putting some time into the study. My hope in writing this appendix is to move as many of these issues as I can from the second category into the first, and, by describing my collected experiences with them, to help future researchers perhaps defeat those in the first category altogether.

The first problem is one of scope: what is international cooperation? How much of the body of rules and understandings governing the interactions of international actors should be included in the study? From the start, I was interested in the sometimes-overlooked branch of informal agreements. These in particular posed a definitional problem: even if it is justifiable to place every variety of cooperation on an ordinal axis of “formality” (a simplified but useful convention!), just where do we place the lower bound? Should a definition of “informal cooperation” include secret memoranda? Classical Talleyrandian diplomacy? Tacit Nash equilibria? As we shall see, categories near the bottom of the formality spectrum bring their own problems.

My initial drive in undertaking this project was to broaden Rational Design theory’s explanatory power by fitting it to agreements less formal than those to which it was originally tailored. For that reason, I hoped to include all these categories. On one level, it only makes sense: just as rational design predicts relationships between the cooperation problems actors face and the features of the agreement at which they ultimately arrive, shouldn’t it be possible to name new relationships between a similar set of cooperation problems (universal) and a new set of features that are particular to informal forms of cooperation? The question is quickly raised, however: do informal agreements have “features” in the same way formal agreements have? The domain covered by Koremenos, Lipson, and Snidal (2001) comprises written documents that may clearly pro-

vide for, say, compliance monitoring or future amendments. In the realm of informal agreements, especially those that are never put to paper, proper “features” are more elusive. For my own project, I have worked around the problem by adopting a set of theories specifically intended to explain informal institutions (coded for only three dependent variables, applicable to all agreements), and augmented them with those Rational Design theories that seemed to most directly predict the creation of formal instruments as a sort of control set. This approach has worked for testing theories, but its use in generating new theories about informality is limited. The issue of informal institutional features demands more work before embarking on such a project.

If the previous difficulties of definition apply to informal cooperation around the world, a related set of problems are distinctly American. As I mentioned in the main body, limiting my sample to US-involved negotiations brought many advantages; however, it also required me to gloss over many of the distinctions among treaty types peculiar to American law. The United States Constitution requires the Senate to provide its “advice and consent” to executive-negotiated treaties, but in practice this is, of course, not the only way the US enters into agreements.<sup>60</sup> The president may negotiate and agree directly with the head of another nation as “the sole organ of the federal government in the field of international relations”,<sup>61</sup> or he may introduce the terms of their agreements to Congress as domestic legislation, able to be passed with a simple majority (see for instance Yoo 2001, 757-852). To domestic courts, these distinctions between agreements’ forms affect the application, and even the legality, of their terms; in international law, these differences mean nothing (Lipson 1991, 498; Yoo 2001, 757-852; Martin 2005a, 4;). My original intent was to study the range of international institutions broadly, not simply as they pertain to the United States. In a way, ignoring local complexities has made studying the forms institutions take that much simpler, but a researcher trained in

<sup>60</sup> U.S. Const. art. II, § 2, cl. 2.

<sup>61</sup> *United States v. Curtiss-Wright Export Corp.*, 299 U.S. 304, 320 (1936)

American foreign policy law would no doubt arrive at a different picture of American practice in this area.

Another wrinkle that affects the definitions of “international institutions” that we can apply to US-involved agreements is the fact that the United States is not a party to the Vienna Convention.<sup>62</sup> As a document, however, the Convention reflects customary international law, so it is likely that the US practice is, if not constrained, then at least influenced by its terms (Kirgis 2003, 1). Nevertheless, though I cite the Convention frequently in the main body, I do so with reservations about its application to the United States.

Researching informal international cooperation hardly becomes easier once we settle on a useful and justifiable definition of our subject. To create a workable research plan, we must also consider where we can find information on individual instances of the subject of interest. When researching purely formalized cooperation between nations, this is hardly an issue: the *UN Treaty Series* (U.N.T.S.), available online, registers every such agreement.<sup>63</sup> Obviously, this is not the case for all informal agreements, which may be unpublished, unreported, or even unacknowledged by their parties. Each of these possibilities complicates the research plan, and a wide conception of “informal agreements,” which likely includes agreements made obscure in several different ways only compounds the problem. Indeed, in my own research, the necessity of finding representative data was the chief obstacle in my early research.

Solving the problem is a matter of thinking intuitively about the types of agreements we seek and eliminating as many biases from the data we can collect as possible (while adding as few new sources of bias as possible!). I never saw the WEIS dataset, from which I culled my set of negotiations, as a perfect sample from the overall population, but instead only as a workable, defensible

<sup>62</sup> President Nixon signed the treaty on April 24, 1970, but it was never ratified. Ironically, the Convention itself provides for circumstances under which signed but unratified treaties may be considered binding (Vienna Convention, art. 11, 12).

<sup>63</sup> United Nations Charter, art. 102.

stand-in.<sup>64</sup> As much as any aggregate of data can have a “purpose,” WEIS’ is surely not institutions research. The majority of papers using the dataset use its event data to study global conflicts and crises (Dolan 1975 and Eberwein, Hubner-Dick, Jagodzinski, et al. 1979 are representative). McClelland himself bemoans the “many inappropriate, improbable, and, occasionally, downright foolish applications of the WEIS data” he has seen already by 1983 (171). However, I argue that the use of events for research on cooperation is valid, as long as its limitations are borne in mind throughout. For my work, these are two: first, that the data is subject to all the biases of its sources, and second, that the data resists some conventional statistical techniques.

On the first point, there can be no doubt that the source’s coverage influences the data.<sup>65</sup> Though Azar, Cohen, Jukam, et al. found that the *New York Times* covered seventy percent of the total events covered by any source during a foreign conflict, its coverage of international communications slanted towards official visits, requests for meetings and bilateral discussions, and joint declarations, where a regionally specialized publication covered more end results of cooperation (1972, 380-2) . If this bias applies to the *Times*’ coverage across regions, it should actually aid my sample. As for the geography of coverage, Vincent notes (and McClelland acknowledges) WEIS’ focus on Europe, Asia, and the global powers, while the *Times*’ coverage of lesser-known foreign negotiations in order to fill gaps in the news layout is well-known (McClelland 1983, 175; Vincent 1983, 161-168; Shafer 2006). While I cannot claim to have solved

<sup>64</sup> Though its release date (December 2006) precluded its use in my own work, I feel optimistic about the Diplomatic Exchange Dataset now published as part of the Correlates of War project, and would be very interested to see it applied to research of a similar scope (Bayer 2006).

<sup>65</sup> On the other hand, there can be little doubt that coverage also influences the “covered” themselves. I defer to Whaley, who observes that the *Times* and other international papers are “used by most persons regardless of their station in the polity or their access to conventional intelligence sources. Indeed, the ‘prestige’ newspapers are known to draw readers from a far higher proportion of senior government officials than of the literate adult citizens in general...” (Whaley 1973, 238-9, cited in Schrodtt 2001).

these problems, I did manage to work around it. These concerns were what motivated me to filtering my sample to only US-involved negotiations.

The second major challenge to using events data as I have is that of analysis. Once the categories are drawn up and the data coded, what tests are valid to test the relationships therein? Certainly, the seemingly-random dispersal of nominal data, with far more misses than occurrences (as it were) stymies everyday linear regression and chi square tests (Schrodt 1994, 35-53). Importantly, however, even logit analyses (and, *a fortiori*, logistic regression) can grossly underestimate the odds of the rare event occurring (King and Zeng 2001, 137-163). In large part, this problem informed my decision not to code binary variables. As I have mentioned in the main body, however, that decision can mean “overcoding” the small distinctions between levels in some categories. Though my own limited background in statistics (and to a lesser extent the software available to me) doesn’t permit me to use them, some of the higher-order tests suggested in the literature are said to partially offset another of my problems: a sample of limited size (King 1988, 838-863; King and Zeng 2003, 693-715). Nevertheless, I hope that subsequent researchers might design their research from the start for these methods.

One thing the WEIS data does do well, though indirectly, is catalog unfruitful negotiations. A problem I considered early in my work is that of failed institutions: certainly, some agreements break down after they are concluded, while some talks never reach the stage of agreement at all. Depending on what aspect of cooperation we seek to research, it might be very important to include all these cases in our sample to avoid adding selection bias. In its variable for type of interaction, WEIS includes a value indicating instances of two nations agreeing to negotiate a cooperative solution to an issue. This essentially provides a list of “potential agreements”: from it, I was able to pursue each datapoint in the *Times* itself and elsewhere to learn what became of the negotiation. In doing so, I was not limited to studying actual agreements, as I might have been using the U.N.T.S. or the US’ *Department of State Bulletin* or *Dispatch*. This deduction does not assign causation, of course: it is generally impossible to tell whether a set of talks broke down because it aimed to create an improperly formal or informal

instrument, or whether the ill-fated talks themselves were flawed such that they precluded negotiating the “right” vehicle for cooperation. Still, the function was useful for drawing some secondary conclusions in this project, and could be used more widely in a different application.

Once the dataset itself is found, justified, and sampled from, the next problem comes up as soon as we begin to research individual talks. If it is hard to find a comprehensive set of primary sources on talks from the middle of the last century, it is nearly impossible to find one exclusively in English. Therefore, we are forced to cast a wide net for sources, and I have not tried to document the small library of books and articles I made use of in my own coding. Of course, priority was granted to primary sources and, for the variables that would benefit from it (I have outlined these above), contemporary sources. Newspapers, though I rely on them for my datapoints themselves, cannot generally be relied on to report all the salient ins and out of negotiations (Schrodt 2001, 8-9). I have supplemented daily news accounts with *post hoc* reports in journals and the like, as well as with internal State Department documents when they are available. I hope that using this combination of sources will help to counter the inherent biases of each; but, truth be told, since I aim to minimize the information missing from my variables, I don’t have a viable alternative.

## Appendix B: Theories not tested

My research design is built around testing theories from international relations literature. I attempted to cast a wide net for the theories that became my own hypotheses, but in the end I had to make some concessions to available data and difficulties in operationalization – in general, to concerns of testing feasibility. I outline these theories here, as well as the problems inherent in them, in the interest of providing a jumping-off point for future research.

**Informality increases when future developments are not expected** Incomplete contracting allows negotiators to expend less effort (measured as transaction costs) in actually drafting an agreement, but it trades these low costs up front for more uncertainty – and thus, higher costs – in the future (Koremenos 2001, 289-325; Koremenos, Lipson, and Snidal 2001, 781) For this reason, rational actors should create informal instruments of cooperation when they do not expect future interactions under the institution to be numerous or unpredictable. For instance, agreements coordinating a specific technical issue might well be “one-time” issues, done and solved after simply agreeing on the matter at hand. An agreement to pursue a large scientific or technical project in the first place, on the other hand, might involve several of these smaller coordination problems, and thus be expressed in a more formal vehicle.

The variable of interest to capture this relationship would be something like SHADOW OF THE FUTURE. Immediately, though, the problem of capturing it is apparent: how can we judge what the negotiators thought? Some issues are naturally recurrent (intrinsically high SHADOW OF THE FUTURE), but for the majority it becomes necessary to look into the past to judge how negotiators would have evaluated their cooperation’s future prospects. To escape problems of teleology it would be necessary to refer to only contemporary sources both in the mass media and internal , and for a dataset that reaches back more than forty years, this is simply impossible.

**Informality increases when executives seek to avoid modification during the ratification process** Only twice in the twentieth century did the United

States Senate reject negotiated treaties outright (Kyl 2000, 325-343).<sup>66</sup> On the other hand, writing in 1956, Henkin noted that no Senate reservation had ever been invalidated (1956, 1151-2). The fear among those who initially negotiate the terms of cooperation is not, I contend, that their entire agreements will simply be axed, but rather that critical provisions might instead be altered by domestic politics. By definition, all treaties are subject to ratification, and non-self-executing treaties rely on domestic legislation to take effect. To be sure, the process of ratification can combine two of the theories I test above, being a source of both embarrassment and slowdowns. But this issue adds another layer: “poison pill” modifications can conceivably sink the negotiator’s cherished agreement. In this case, when negotiators fear modifications to their agreements, they will create institutions that are not subject to ratification.

Not entirely separate is the legislative branch’s tendency to resent anyone *else’s* post hoc input once it has become involved with a given treaty. Indeed, at least within the United States, the most famous attempt by an executive to “re-interpret” the terms of a signed treaty during the ratification process earned a stiff Congressional rebuke.<sup>67</sup> Whether executives should have the power to unilaterally change the terms of a previously-agreed instrument is a normative question; the fact that they might often *prefer* to do so, on the other hand, pro-

<sup>66</sup> The first rejection was of Wilson’s Treaty of Versailles in 1919; the second, Clinton’s Comprehensive Test Ban Treaty in 1999.

<sup>67</sup> In 1983, US President Ronald Reagan moved to fund the “Strategic Defense Initiative,” a missile defense system whose construction appeared to directly violate the Anti-Ballistic Missile Treaty’s fifth article: “Each Party undertakes not to develop, test, or deploy ABM systems or components which are sea-based, air-based, space-based, or mobile land-based” (1972, 944 U.N.T.S. 13 art. 5 §1). Rather than acting through the frameworks established by the treaty and the relevant annex (*supra*, Agreed Statement D, cited in Koplw 1989, 1367) that accompanied it, the State Department construed these sections’ references to “new technologies” to mean that “Star Wars” novelty shielded it from the treaty’s proscription. It cited among other things internal State Department memos from the period of negotiations to show the United States’ intent in agreeing to the treaty’s text. The Senate was not convinced: Senators Nunn and Levin disputed the administration’s use of the memoranda, testimony from Constitutional scholars disputed the President’s ability to alter the terms of treaties generally, and the body finally attached a condition meant to legally forbid further reinterpretations to Reagan’s INF treaty in 1988 (Biden and Ritch 1989, 1529-36; Koplw 1989, 1366-73).

duces a theoretically testable hypothesis: that when negotiating executives would like to unilaterally alter the terms of their agreements, they will employ informal agreements that grant them this ability.

The problem in testing both these hypotheses may already be clear: the independent variable implied in each is almost impossible to code. Given the choice, no rational executive wants a third party to intervene in his or her agreements, and all rational executives would prefer the power to reinterpret their agreements at will. Further, even if this is not the case (as Martin's work on Presidential signaling seems to imply) I am at a loss for a valid coding mechanism (2005). Without a source of reliable information on this fairly specific executive preference, the theory remains intriguing but untestable.

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