Unpacking Alliances: Deterrent and Compellent Alliances and Their Relationship with Conflict, 1816–2000

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Do alliances deter aggression? I develop a typology of deterrent and compellent military alliances to better define the possible conditions for intervention and use new data from 1816 to 2000 to analyze the relationship between alliances and conflict. First, unconditional compellent alliances, a category that represents a minority of alliances, are associated with a 249% increase in the likelihood of conflict when the prospective initiator is an alliance member. Such alliances are especially associated with violent conflict. Second, conditional compellent alliances exhibit no discernible relationship with conflict. Third, deterrent alliances contingent upon the adversary's attack are associated with an 18% decrease in the likelihood a third party will initiate a conflict with an alliance member. Minor powers holding such alliances with major powers are unlikely to be attacked violently. Fourth, other categories of deterrent alliances do not deter violent conflict. In fact, deterrent alliances that permit preemptive defense can increase violent conflict.

D o alliances deter aggression? This question is important, because avoiding interstate conflict is both normatively desirable and often in leaders and citizens' best interests. Though much has been written on the topic, the question remains unresolved. Formal theories show that leaders' decisions to form military alliances can deter attacks on protégés (Fearon 1997; Morrow 1994, 2000; Smith 1995, 1998). However, empirical evidence is contradictory and fails to yield a consensus (Gibler and Vasquez 1998; Leeds 2003; Levy 1981, 1983; Senese and Vasquez 2008; Siverson and Tennefoss 1984). I reconsider the concept of alliance, arguing for a new typology based on the content of agreements that more closely relates to extant theorizing about the relationship between alliances and conflict.[1]

Schelling's (1966) work on bargaining serves as the basis for my approach to categorizing alliances. Current methods divide offensive and defensive alliances according to which player is permitted to attack. However, leaders select the content of alliances from a broader menu of commitments.

Alliances often specify the purpose of the alliance, which leaders can initiate what kinds of coercive moves, and what punishments will be imposed if demands are not met. Consequently, I divide alliances according to the signatories' objective in forming the agreement and the terms of the commitment triggering military intervention. Following Schelling, I ascertain whether the alliance contract was written *to compel* "an adversary to do something" or *to deter* it "from starting something" (1966, 69). Then I divide commitments according to the behavior that triggers military intervention. Few alliances are unconditional, promising automatic military assistance under any circumstance. Typically, they delineate some action—e.g., attack, aggression, threat of aggression, unprovoked attack, noncompliance with a demand—which activates the alliance obligations. Finally, some alliances incorporate ambiguity or uncertainty about whether alliance members will intervene. Therefore, a separate category of alliances includes those commitments in which the language of the treaty permits alliance members to

choose not to intervene even if the antecedent of the commitment condition has been completely fulfilled.

Since my typology produces a new way to organize alliances according to various conditions that obtain in conflict bargaining, it permits tighter testing of existing theories of alliances. It also lays the groundwork for additional research on third-party commitment strategies. Further, it provides a useful framework for analyzing additional theoretical extensions which will improve our understanding of why different types of alliances form.

I show that *unconditional compellent* alliances lead to a 249% increase in the predicted probability of conflict, but this alliance category only represents approximately 10% of the total number of militarized alliances.[2] This strong relationship confirms the expectation (Smith 1995) that such alliances increase the likelihood of conflict, but it is such a small percentage of total alliances that many issues remain. In particular, numerous alliances, which have traditionally been regarded as offensive, are not as dangerous as previously thought. Perhaps even more striking is the underwhelming effect of alliances specifically designed for deterrence. The most deterrent type of alliance reduces the predicted probability of militarized initiations of conflict (MIDs) by only 18%. As expected, deterrence improves when minor power protégés hold such alliances with major power defenders (Siverson and Tennefoss 1984), but the peaceful effects are limited to these cases and only the one type of alliance. The remaining deterrent types of alliances do not show a deterrent effect. And, much of what is deterred is *nonviolent* conflict. In fact, deterrent alliances designed to permit preemptive defense actually *increase* the likelihood that alliance members will be attacked. This textured analysis of alliance mechanisms and types of conflict gives a more nuanced understanding of the relationship between alliances and conflict than in the past.

The argument proceeds as follows. I begin by reviewing the literature on the relationship between alliances and conflict. Then I examine several historical alliances to justify a new typology of alliances based on content. I show that alliances within existing categories exhibit measurably different characteristics meriting division into separate categories. Accordingly, I propose criteria for classifying alliances anew and derive a novel typology. I then generate hypotheses to be tested, analyze and compare results from the data, and conduct robustness checks.

Alliances and Conflict

Alliances affect the decisions of both members and targets of the agreements. It is unclear, however, whether the commitment formed in the alliance can deter prospective targets from initiating conflict with an alliance member and whether the commitment emboldens its members to initiate conflict with targets of the alliance. To situate the importance of creating and analyzing a typology of alliance types, it is useful first to discuss briefly the findings of existing research.

Research on the *emboldening* effects primarily focuses on the impact of offensive alliances. Conventional wisdom maintains that offensive agreements reduce the likelihood that the adversary targeted by the alliance will retaliate when coerced which, in turn, increases the chances that an alliance member will initiate a conflict against the adversary (Smith 1995). Leeds (2003) tests this claim using historical offensive alliances and finds they are strongly associated with conflict initiation.

There is less agreement regarding *deterrent* effectiveness of alliances. Early studies claim alliances deter conflict by balancing power (Morgenthau 1960; Waltz 1979), reducing uncertainty, and signaling increased danger to prospective adversaries (Singer, Bremer, and Stuckey 1972). Many empirical analyses, most of which treat alliance agreements as an undifferentiated signal of alliance members' preferences and intentions, appear to support the deterrence hypothesis.[3] One of the strongest findings is that minor powers' alliances with major powers prevent the escalation of conflicts to wars (Siverson and Tennefoss 1984). Even so, it is unclear why the power of allies and prospective disputants influences the relationship between alliances and conflict. Moreover, alliances' effects on conflicts in subsequent studies are not always as Siverson and Tennefoss predict.[4]

Another perspective is that alliances function as steps to war, increasing the likelihood of conflict. Vasquez (1993) argues that leaders cannot always adequately assess the consequences of alliance formation decisions. A single alliance might be pacifying, but it often causes adversaries to form counteralliances, which actually raises the risk of conflict due to increased uncertainty and greater total military capabilities. Gibler and Vasquez

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[2]This percentage would be even smaller if neutrality pacts were included in the number of alliances.

[3]See Bremer (1992), Maoz and Russett (1993), Gartner and Siverson (1996), and Smith (1996).

[4]See Gibler and Vasquez (1998), and Senese and Vasquez (2008).

(1998) argue that great power alliances formed in unresolved territorial disputes are particularly problematic for preventing conflict.

It is clear that important questions and ambiguities remain in the study of the relationship between alliances and conflict. When Maoz (2000) and Gibler (2000) assessed the state of the empirical literature on alliances, both acknowledged that the absence of rigorous theory often left empiricists at a loss as to how to examine the relationship. Others pointed to the need for better accounting for variation in the types of possible alliances to test theories about the effects of alliances (Levy 1981, 1989; Vasquez 2008).

The Alliance Treaty Obligations and Provisions (ATOP) project is an important contribution for its collection of new data on the content of alliances (Leeds 2003; Leeds et al. 2002). Drawing primarily on the alliance categories identified by Smith (1995), Leeds (2003) differentiates alliance data into offensive agreements, neutrality pacts, and defensive agreements. She uses the data to examine the predictions of some formal theories that simple defensive promises deter attacks on protégés by decreasing the likelihood a protégé will back down when challenged (Fearon 1997; Morrow 1994, 2000; Smith 1995, 1998). Leeds (2003) finds that offensive and neutrality pacts are positively associated with conflict and defensive alliances reduce the likelihood of conflict initiation from 1816 to 1944. Even so, the ATOP categories do not map to the theory they were constructed to test. Smith's (1995) offensive and defensive alliances, implied by the game form designed to analyze those commitments, apply to a narrower set of agreements than the corresponding categories classified by ATOP. Because ATOP categories are overly inclusive, inferences drawn from them may overgeneralize the effect of alliances to dissimilar alliances that are incorrectly categorized. Moreover, other research paints a grimmer picture of the effect of alliances formed during crisis escalations (Colaresi and Thompson 2005; Senese and Vasquez 2008).

How can these findings be reconciled? One possibility is that a few alliances may be responsible for the observed correlations, which could be expected if existing alliance categories are overly inclusive. The hope, then, would be that carefully reclassifying categories to match extant theory more closely would also uncover previously unidentified and unexplained types of alliances. If influential observations overwhelm underlying competing effects associated with differing subcategories, then pulling them apart may reveal the competing effects and reconcile the disparity.

Problems with Categorizing Alliances

Scholars have long noted the importance of better operational categories and have, in particular, pointed out problems with traditional classifications of offensive and defensive agreements (Levy 1981, 610–11; Snyder 1997). Snyder (1997, 12–13), for example, claims offensive alliances can be designed to achieve defensive objectives, defensive alliances may mask offensive motives, and alliances often contain both offensive and defensive pledges. Even within categories, provisions vary dramatically and in meaningful ways. Agreements differ in terms of their level of specificity. Some agreements do not contain conditions for triggering *casus foederis*; others do. Dissimilar commitments are likely created for particular reasons, and we might expect them to affect conflict differently.

Consequently, there is a demand for a typology of alliances based on tighter categories and clear expectations mapping from theory to the empirical categories. Although the ATOP project provides a valuable start, the categories are broader than the theory they were designed to test. To highlight the nature of the problem with existing empirical categories, consider three ''offensive'' alliances in the ATOP dataset: the Pact of Steel signed between Italy and Germany in 1939, the 1832 commitment between the United Kingdom and France, and the 1856 agreement between Austria, France, and Britain at the conclusion of the Crimean War. These three agreements are particularly important because they comprise 39% of the offensive alliances in directed dyads prior to 1945, and 60% of the conflict initiations by states holding valid offensive commitments against the target of aggression prior to 1945. Yet, the terms of these three agreements resist tidy classification into one broad category.

The 1939 Pact of Steel is an open-ended commitment between Germany and Italy to provide unlimited support in war. It obligates each alliance member to assist the other contracting party ''with all its military forces'' in any ''warlike complication with another power'' (Article III). This commitment declares mutual willingness to cooperate in any war, offensive or defensive, and it does not specify how targets of the alliance can avoid war. It is the broadest

conceivable commitment, unconditionally binding alliance members to one another. It belongs to a small class of similar alliances that contain a commitment matching that modeled by Smith (1995).

In contrast, the 1832 agreement between the United Kingdom and France explicitly identifies how countries targeted by an alliance partner can avoid war. Articles II and III demand that the Netherlands evacuate troops from Belgian territory or else France and the United Kingdom will embargo Dutch vessels and use French forces to expel the troops. This alliance and the Pact of Steel are offensive in the sense that both commit to use military force to change the status quo in a way that advantages at least one of the alliance members. Unlike the Pact of Steel, however, the 1832 agreement between the United Kingdom and France obligated alliance members to support each other militarily *only if the target of the agreement refused to accede to the demands specified in the alliance*. This compellent threat implies that the target could decide to concede to the demand prior to any alliance member initiating hostilities against the target. This type of commitment is not formally modeled by extant theories of alliances.

Next consider the 1856 alliance between Austria, France, and Britain at the conclusion of the Crimean War. The agreement was written to enforce provisions of the 1856 Treaty of Paris providing for the repatriation of certain territories from Russia to Turkey and the disposition of several Balkan states. Although the parties committed to use preemptive force if necessary, the intent of the treaty was *to deter* an adversary from acting to change the status quo rather than to compel a change. Similar alliances coded as ATOP offensive but which actually have deterrent objectives include those signed by the Soviet Union and its allies targeting Germany following World War II. These agreements stipulate that the parties will actively defend one another against Germany should it "renew its policy of aggression" towards others.

The ATOP agreements are defined as offensive if alliance members commit to use military force against a nonalliance member *even if that nonalliance member did not first attack an alliance member*. The post-Crimean War and German aggression agreements are classified as ATOP offensive because the provisions permit alliance members to initiate the use of force. However, such commitments do not fit the offensive alliances in Smith's (1995) model, which does not distinguish between aggressive moves made for offensive gain and those made to prevent losing existing holdings. A bargaining framework, in which disputants can lose or gain relative to the status quo allocation, is better suited for analyzing this particular distinction. It is clear that these alliances are actually deterrent because alliance members are obligated to provide military assistance *only if targeted nonalliance members seek to change the status quo*. Alliance members' obligations in the 1856 alliance, for example, do not extend to providing assistance to allies who take actions to move beyond the settlement established by the terms of the 1856 Treaty of Paris.

Similar inconsistencies exist in the alliances categorized by ATOP as defensive alliances. ATOP alliances are classified as defensive if members promise "to assist a partner actively in the event of attack on the partner's sovereignty or territorial integrity" (Leeds et al, 2002). This definition clearly excludes some deterrent alliances, such as the post-Crimean War agreement and the post-WWII Soviet alliances mentioned above. Additionally, it logically excludes many actual agreements that are nevertheless classified as ATOP defensive. The language of several ATOP defensive alliance agreements permits preemptive military action by alliance members or a probabilistic rather than automatic commitment to defend. Consequently, many alliances designed to deter challenges to alliance members go beyond the scope of the category of defensive alliance. To illustrate the variety of commitments included in the ATOP defensive category, consider the following three defensive alliances: the agreement signed by Britain and Poland a week prior to the German invasion of Poland in 1939, the Triple Alliance between Austria, Germany, and Italy signed in 1882, and the alliance signed between the United States and the Republic of China (Taiwan) in 1953.

The 1939 alliance between Britain and Poland is classified as ATOP defensive even though the type of commitment contained in the agreement does not fit the definition. It contains a threat to use preemptive force to deter a nonalliance member from attacking an alliance member. The defensive provisions of the agreement of August 25, 1939 between Britain and Poland clearly state that each signatory is obligated to provide "all the support and assistance in its power" should a "European power," which contracting parties defined as Germany in secret protocols, engage in "aggression," "constitute a clear menace to the security of that party," or undertake "any action which threatens, directly or indirectly, the independence [or neutrality] of one of the parties, and was of such a nature that the party in question

considered it vital *to resist it with armed forces.*" The agreement allowed signatories to use preemptive action in the event an alliance member perceived Germany to be sufficiently threatening. Although classified as ATOP defensive, it is most similar in design to the post-Crimean War and post-WWII Soviet agreements, which as we saw from the discussion above are categorized as ATOP offensive. These alliances should be classified and studied as an independent category of deterrent agreements having a common commitment mechanism.

Another anomaly is the Triple Alliance. In this alliance, Germany, Austria-Hungary, and Italy committed to assist one another if one of the contracting parties was attacked and the attack was unprovoked. This bears some resemblance to the defensive commitments modeled by both Morrow (1994) and Smith (1995), with the exception of the non-provocation clause. Theoretical models of defensive alliances include costs for reneging so that alliance members do not violate the terms of their contract when the conditions for intervention have been met. However, in the case of the Triple Alliance, the signatories are not in breach of contract if they opt out of providing assistance when they interpret the conflict as having been provoked by an alliance member. This mechanism adds yet another condition to the deterrence threat in the alliance. The alliance members are obligated to fight for one another *if* an adversary attacks *and* alliance members believe the attack was unprovoked *and* the objective is to deter an adversary from acting to change the status quo. These agreements create some uncertainty about whether alliance members will intervene at the time of conflict, because they give alliance members discretion to determine whether the conflict was provoked.

Yet other agreements signal that alliance members *might* intervene if there is conflict. The agreement between the United States and the Republic of China in 1954, for example, states that each alliance member will "act to meet the common danger *in accordance with its constitutional processes.*" (emphasis added) The highlighted clause, common to many US alliances, does not make military assistance automatic. It delegates ultimate decision-making power by subjecting the decision to intervene to a domestic veto player, such as Congress. The key difference between this and other alliances is that the promise contained in the commitment is to *maybe* intervene. The agreement stipulates that there is some possibility that the United States will not intervene, and ultimate determination rests, at least in part, on factors beyond the control of the principal decision maker. Existing models of alliances do not formally analyze such probabilistic commitments, and, therefore, it is not clear from theory what effect they should have on conflict.

A New Typology of Alliances

Given the unaccounted for heterogeneity of alliance types noted above, I propose a novel classification of alliance commitments based on two main dimensions: the objective and the level of specificity regarding what triggers a signatory's obligation to provide military assistance. Table 1 presents the dimensions of the typology and the four commitment types that fill out the categories: *unconditional compellent, conditional compellent, unconditional deterrent, and conditional deterrent.* A fifth category, *probabilistic deterrent,* includes commitments that include language permitting the possibility alliance members may escape obligations once *casus foederis* has been triggered and hostilities have begun.

The first dimension, the alliance's objective, identifies what alliance members are committed to achieving. Following bargaining theory since Schelling (1960, 1966), commitments can have compellent or deterrent objectives. As Schelling explains:

> Deterrence and compellence differ in a number of respects, most of them corresponding to something like the difference between passives and dynamics. Deterrence involves setting the stage—by announcement, by rigging the trip-wire, by incurring the obligation, and *waiting.* The overt act is up to the opponent . . . Compellence, in contrast, usually

TABLE 1   Conditions for Rendering Military Assistance by Alliance Category

		Conditions for Committing Assistance	
		None	Specific
Objective of Alliance	**Compellence**	*Unconditional Compellent*	*Conditional Compellent*
	Deterrence	*Unconditional Deterrent*	*Conditional Deterrent*

involves *initiating* an action (or an irrevocable commitment to action) that can cease, or become harmless, only if the opponent responds. (1966, 71–72; emphasis in original)

The distinction between compellence and deterrence corresponds with actors' roles in the canonical tripartite alliance model (Smith 1995; Morrow 1994). In such models, three players—states *A*, *B*, and *C*—interact in a conflict sequence. State *A* wishes to compel a change in the status quo and has a move to harm state *B*, which prefers the status quo remain unchanged. The harm only ceases if *B* acquiesces. If *B* resists, then general war settles the dispute. In forming an alliance with either *A* or *B*, *C* commits to intervene on that party's behalf if war breaks out. A compellent alliance between *A* and *C* promises even greater harm to *B* if it does not concede. The agreement commits alliance partners to initiate coercive action against *B*. Consequently, *B* is given the last chance to stop conflict, for the harm inflicted on *B* can only cease if *B* grants a concession that makes *A* better off and *B* worse off, *B* is forcibly driven into submission through defeat in war, or *B* resists and *A* loses the ensuing war.

By contrast, in a deterrent alliance, *B* and *C* seek to preserve the status quo by threatening *A* with negative consequences if it attacks. In forming an alliance, *B* and *C* set the stage by establishing a threat to defend the status quo. They then wait, and the trip-wire is triggered if *A* takes action to change the status quo. Successful deterrence implies *A*'s inaction when such an alliance is present.

Alliances also differ depending on how specific the triggers are that activate alliance members' obligations. Some compellent alliances commit members to assist each other regardless of who initiates. I classify such commitments as *unconditional compellent* alliances. (The path to conflict in an unconditional alliance most closely approximates Smith's A-C offensive alliance described above.)

If an alliance contains a specific compellent threat along with demands the target can meet to avoid attack, I classify the alliance as *conditional compellent*. In such alliances, members are permitted to initiate force *only if the adversary targeted by the threat does not acquiesce* to the demands. Because the agreement spells out alliance partners' demands, the adversary targeted by the compellent threat can choose to concede before harmful action is ever initiated. (Table 1 in the appendix outlines how the game form implied by the different alliance commitments in the typology varies.)

Table 2 reveals that there are 33 unconditional compellent commitments and 19 conditional compellent commitments in the data from 1816 to 2000, but the number of directed dyad-year observations generated by each alliance category differs markedly. The 33 unconditional compellent commitments generate 2,661 directed dyad-year observations, but the 19 conditional agreements generate only 35 directed dyad-year observations. This disparity in directed dyad-year observations results because conditional compellent commitments contain specific demands, and they dissolve once the originating objective of the alliance is achieved. Because the longest duration of such an agreement was six years, there are relatively few associated directed dyad-year observations. By contrast, many unconditional commitments target all states in the system and some endure for decades.

Table 2 also shows that both types of compellent agreements represent a smaller percentage of directed dyad observations than their percentage of total number of commitments. Their relatively small proportion of associated dyad-year observations is particularly striking compared to deterrent commitments (i.e., alliances that relieve signatories from

TABLE 2   Commitment Categories in Novel Alliance Typology, the Frequency of Each Commitment Type, and the Number of Directed Dyad Observations for Each

Commitment Type	Frequency of Commitments		Frequency of Commitments in Directed Dyad Observations	
	No.	Col %	No.	Col %
Unconditional Compellent	33	0.10	2,661	0.02
Conditional Compellent	19	0.06	35	0.01
Unconditional Deterrent	64	0.20	12,842	0.10
Conditional Deterrent	139	0.44	77,450	0.63
Probabilistic Deterrent	64	0.20	30,123	0.24
Total	319	1.00	123,111	1.00

obligations to one another if fellow signatories take aggressive actions for the purpose of changing the status quo). The reason is noted by Schelling, who observed that there are "limits, probably, to how long the compellent action can be sustained without costing or risking too much, or exhausting itself or the opponents so that he has nothing left to lose" (1966, 76). By contrast, deterrent threats, which only commit alliance partners to wait and react, can survive for a long time. The longest enduring alliance, for example, is NATO, a deterrent alliance lasting 53 years in the dataset.

Deterrent alliances can also be distinguished by the conditions that require members to provide assistance. Deterrent commitments can also be classified as *conditional* and *unconditional* depending on the specificity of the trip wire in the alliance agreement. *Conditional deterrent* alliances condition alliance members' military response on a given hostile action by the adversary. Consequently, a third-party defender bound by a conditional deterrent alliance is exempt from its obligation to defend a protégé if an adversary does not initiate conflict against the protégé or if the protégé attempts to change the status quo in the course of its conflict with the adversary.

Unconditional deterrent alliances does not specify a trigger condition and therefore permit protégés to use preemptive force against a threatening adversary while conditional deterrent alliances obligate alliance partners to wait until an adversary takes an overt violent action. Because perceptions of threat are subjective judgments, there are no conditions exempting alliance members from intervening save the stipulation that alliance members' obligations are limited to deterrence. Contractually, third-party defenders are only permitted to abandon a protégé if it attempts to change the status quo by taking aggressive actions. Consequently, in an unconditional deterrent alliance, a third-party defender's obligations encompass a broader scope of circumstances, some of which involve protégés initiating conflict. Like the 1939 Britain-Poland alliance described above, several post-WWII agreements signed by the Soviet Union and various allies does not stipulate conditions on the initiator of the conflict. For example, the *casus foederis* in the 1948 USSR-Romania agreement, activates for both parties if Germany "seeks to renew its policy of aggression." Imputing aggressive motive to Germany is sufficient to justify action under the terms of the contract.

There are 64 unconditional deterrent alliances from 1816 to 2000 in the ATOP dataset, resulting in 12,842 directed-dyad-year observations. The most common type of deterrent agreement is the conditional deterrent category, which consists of 139 agreements from 1816 to 2000 resulting in 77,450 directed dyad-year observations. Comprising 44% of all alliances and 63% of directed dyads, this is not only the most common type of deterrent alliance, it is also the most common type of agreement in the entire dataset.

A final alliance type is *probabilistic deterrent*. These alliances are classified separately because their identifying property affects the obligation to intervene irrespective of the antecedent conditions triggering *casus foederis*. Such commitments seem only prevalent among deterrent alliances. Included in this category are those that allow the possibility of escape, permit discretion to determine how much assistance to provide once hostilities have begun, and include nonprovocation clauses. Table 2 reveals that the 64 probabilistic deterrent agreements result in 30,123 dyad-year observations.

A few alliances are both compellent and deterrent. Many unconditional compellent alliances, such as the Pact of Steel, guarantee military assistance against all states under all circumstances including defense. Agreements that guarantee to preserve territorial integrity against all states or a set of states but also make a demand of a specific state are less common but also present. It is also possible for a state to have many different types of alliances with other alliance partners targeting the same state. Consequently, it is possible for a state to possess multiple types of commitments valid against the other member of the dyad.

Table 3 presents a cross-tabulation of ATOP categories with the categories I propose.[5] It shows that the distinction between ATOP offensive and defensive is not the same as the distinction between compellent and deterrent in my typology. It also reveals that probabilistic deterrent commitments comprise 27% of the ATOP defensive-only alliances and 7% of those alliances coded as both ATOP offensive and defensive. The biggest change in the ATOP coding occurs when an alliance was coded as both ATOP offensive and defensive. Approximately 35% of the agreements coded as both offensive and defensive under ATOP rules are classified as some combination of both compellent and deterrent types under the categories in my typology, but 31% of the joint offensive-defensive ATOP alliances are recategorized as unconditional deterrent alliances in my typology. Many of these

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[5]The total number of commitments (Table 2) is greater than the agreements in the cross-tab, because an individual alliance agreement may include multiple different commitments.

TABLE 3   Cross-Tabulation of Alliance Agreements in the Novel Alliance Typology and the ATOP Dataset

Novel Typology Alliance Agreements	ATOP Alliance Agreements											
	Offensive Only			Defensive Only			Both			Total		
	No.	Col %	Cum %	No.	Col %	Cum %	No.	Col %	Cum %	No.	Col %	Cum %
UC	3	23.1	23.1	0	0.0	0.0	8	11.4	11.4	11	3.8	3.8
CC	4	30.8	53.8	3	1.5	1.5	2	2.9	14.3	9	3.1	7.0
AD	1	7.7	61.5	22	10.8	12.3	22	31.4	45.7	45	15.7	22.6
CD	3	23.1	84.6	120	58.8	71.1	7	10.0	55.7	130	45.3	67.9
PD	0	0.0	84.6	55	27.0	98.0	5	7.1	62.9	60	20.9	88.9
UC & CC	1	7.7	92.3	0	0.0	98.0	1	1.4	64.3	2	0.7	89.5
UC & AD	0	0.0	92.3	0	0.0	98.0	16	22.9	87.1	16	5.6	95.1
UC & CD	0	0.0	92.3	0	0.0	98.0	4	5.7	92.9	4	1.4	96.5
CC & AD	0	0.0	92.3	1	0.5	98.5	1	1.4	94.3	2	0.7	97.2
CC & CD	1	7.7	100.0	1	0.5	99.0	2	2.9	97.1	4	1.4	98.6
CC & PD	0	0.0	100.0	1	0.5	99.5	1	1.4	98.6	2	0.7	99.3
AD & PD	0	0.0	100.0	0	0.0	99.5	1	1.4	100.0	1	0.3	99.7
CD & PD	0	0.0	100.0	1	0.5	100.0	0	0.0	100.0	1	0.3	100.0
Total	13	100.0		204	100.0		70	100.0		287	100.0	

Alliance agreement legend: UC = Unconditional Compellent, CC = Conditional Compellent, AD = Unconditional Deterrent, CD = Conditional Deterrent, PD = Probabilistic Deterrent

commitments make up the WWII and post-WWII preemptive deterrent alliances discussed above. These were coded as both ATOP offensive and defensive because, as commitments with a deterrent purpose, they qualified as defensive under ATOP coding rules, but because they permitted the use of preemptive force by alliance members, they also qualified as offensive. However, this type of agreement is treated ambiguously in the ATOP coding, because 22 other agreements have the same commitment mechanism but are coded as just ATOP defensive.

Hypothesizing Effects of Alliances

Given this typology, we can now hypothesize how the various types of alliances might be related to the incidence of conflict. Consider first compellent alliances. In conditional compellent alliances, signatories specify demands the target can make to avoid conflict. Then the target chooses to accept or reject the demand. War follows if the target of a conditional compellent alliance rejects the demand, a decision resulting from the factors causing bargaining failure (Fearon 1995; Powell 2006) and not necessarily because of the alliance. Once the demand has been made, alliance members do not have further incentives to engage in conflict unless the target rejects.

Unconditional compellent alliances instead signal the willingness of allies to join forces and go "all in"

regardless of the conflict's cause. As theorized by Smith (1995), alliance members can leverage this kind of commitment to initiate a coercive action against an adversary, which will be more likely to capitulate because of the increased strength of the alliance. Therefore, compared to having no commitment at all, an unconditional compellent alliance should create an incentive for an alliance member to initiate a coercive action and a conditional compellent alliance should not.

This logic is summarized in the following hypotheses:

> *H1*: Compared to *A* having no alliance at all, *A* is no more likely to initiate a militarized dispute against *B* if *A* has one or more *conditional compellent alliances* that commit one or more allies to provide military support for *A* to initiate a conflict against *B*.

> *H2*: Compared to *A* having no alliance at all, *A* is more likely to initiate a militarized dispute against *B* if *A* has one or more *unconditional compellent alliances* that commit one or more allies to provide military support for *A* to initiate a conflict against *B*.

What kinds of militarized dispute will leaders holding unconditional commitments choose and why might leaders choose unconditional versus conditional commitments? In bargaining, a proposer makes a demand equal to the amount its opponent is expected to receive from its outside option. Therefore, alliance members would demand an amount

equal to the adversary's expected utility for war, subject to the condition that alliance members agree on the amount they wish to extract and how much they are willing to expend in a fight if the demand is rejected. Assuming contracting is costly, alliance partners who have homogenous preferences and shared expectations do not need an alliance contract for reasons beyond signaling intentions and joint capabilities to the target of the alliance. It is unnecessary for leaders to pay contracting costs to specify demands, since any leader can alone issue a demand without the other alliance partners worrying about whether the size of the demand will represent their preferences. However, when alliance partners' preferences diverge, then it may pay to negotiate and specify in a contract the size of the demand and associated punishment for noncompliance. Publicly incurring this additional cost signals information to the target, increasing the credibility of the threat specified in the contract. Such alliances are unlikely to require additional uses of force by alliance members to make the threat believable. Therefore, the specificity of conditional compellent alliance commitments reflects a costly contracting effort to pin down signatories' differences in preferred outcomes and expenditures in war, and paying higher contracting costs reduces the likelihood that alliance members will also resort to violent signals to make the threat credible.

On the other hand, if alliance members are believed to have homogenous preferences, then forming a fully specified alliance contract does not convey any information to the target about the credibility of the size of the demand and the punishment. Therefore, it is unnecessary to pay a contracting cost to specify a demand in the contract. Instead, alliance members can form an unspecific blanket contract, which signals that alliance members agree about what they want and how much they are willing to pay to get it. Any alliance member can make the demand, but using force makes it credible. According to Schelling (1966), a compellent threat is accompanied by an action that imposes enough harm or costs on an opponent until the target complies with the demand. Therefore, unconditional compellent alliances should be more likely to form when prospective alliance partners have homogenous preferences to change the status quo, and they cannot get credibility leverage out of a costly, fully-specified contract. Consequently, they sign unconditional compellent alliances, and then initiate harmful or violent actions to compel adversaries to comply with their demands. This implies:

> *H3*: Compared to A having no alliance at all, A is more likely to initiate a *violent* militarized dispute against B if A has one or more *unconditional compellent alliances* that commit one or more allies to provide military support for A to initiate a conflict with B.

According to Smith (1995), a conditional deterrent commitment to defend a protégé increases the likelihood the protégé will resist if attacked by an adversary. This, in turn, decreases the likelihood that the adversary will initiate conflict against the protégé; the larger the shift in the protégé's relative power in war resulting from a third-party commitment, the less an adversary can demand from the protégé in conflict bargaining. Consequently, deterrence should be most effective when a leader holds a conditional deterrent alliance with a major power. This results in the following hypothesis:

> *H4*: Compared to B having no alliance at all, A is less likely to initiate a militarized dispute against B if B has one or more conditional deterrent alliances that commit one or more allies to intervene on its behalf *if A* attacks *B*.

Since major powers are disproportionately powerful, we should expect the most sizeable deterrent effect to occur when a *minor* power receives a conditional deterrent commitment from a *major* power. Moreover, conditional deterrent alliances should be more effective at deterring *violent* initiations because such actions are specifically proscribed in the alliance agreement. This implies:

> *H5*: Compared to B having no alliance at all, A is less likely to initiate a *violent* militarized dispute against B if B is a minor power, has one or more conditional deterrent alliances that commit one or more major power allies to intervene on its behalf *if A* attacks *B*.

The key distinction between unconditional deterrent agreements and conditional deterrent alliances is the possibility of preemptive initiation. The expected impact of each on the possibility of conflict is unclear. On the one hand, unconditional deterrent agreements may be more likely to form if all alliance partners strictly prefer maintaining the status quo and are unconcerned about moral hazard. In such cases, the commitment should deter targets from initiating against an alliance member, and it should be more effective than conditional deterrent alliances in deterring challenges less severe than an attack because conditional deterrent commitments stipulate an adversary's attack as the threshold for intervention.

However, it is also possible that leaders may be more willing to form strong commitments when they perceive hostilities are imminent, resulting in unconditional deterrent threats that are last ditch, unsuccessful attempts to avert conflict. In such cases, the agreement serves more as a mechanism for coordinating allied defense against expected conflict, and such alliances will unlikely outperform the no commitment state when it comes to deterring an adversary from initiating conflict.

Another reason for ambiguous effects is that an alliance threatening possible preemption may cause adversaries to act even more aggressively. As Schelling notes: ''An enemy's belief that we are about to attack anyway, not after he does but possibly before, merely raises his incentive to do what we wanted to deter and to do it even more quickly'' (1966, 75). Powell (2006) argues that commitment problems due to preventative war and preemptive strikes can cause war, though it is unclear how an alliance itself promising support for preventative war affects the commitment problem. Without additional theory to disentangle these competing effects, there is no *a priori* expectation about the impact of unconditional deterrent alliances, but it is still worthwhile investigating to determine empirically whether such alliances deter or attract violent or nonviolent conflict.

Probabilistic commitments have in common the fact that the agreement leaves uncertainty about whether alliance members will intervene after war has begun. Competing incentives inhibit a straightforward prediction of effects of such agreements. The ambiguity in these agreements may emerge when tensions between alliance partners are especially high, alliance members worry about ally entrapment, there is a great deal of uncertainty in the environment, decision makers face competing pressures from international and domestic audiences, one or more alliance members worry about counteralliance or counterarming by nonalliance members, or sudden shifts in bargaining capacity lead to bargaining parity. That leaders likely to form such alliances for strategic reasons suggests that probabilistic alliances may be less likely than firm alternatives to lead to conflict. Alternatively, probabilistic commitments are also less likely to be *ex post* credible (Schelling 1960), weakening their deterrent effect. Short of new theoretical explanations to disentangle these competing effects and to help us identify the relevant factors to examine, I do not expect to find any predictable relationship between these alliances and conflict.

Testing Hypotheses: Design and Results

Having argued for a new classification of alliances that better reflects the evident differences, having provided a typology that accounts for several important differences in observed alliances, and having generated several hypotheses for how these types of alliances affect the likelihood of conflict, I now examine the support for the hypotheses using the new data.

The analysis proceeds as follows: first, I examine the effects of the new alliance categories on MID initiations and compare this estimation to models analyzing the effects of other conceptions of alliances. I then disaggregate the dependent variable into violent and nonviolent initiations to estimate the effects of commitment types and ally power status on the incidence of each.

Table 4 presents the results of a baseline conflict model that includes conventional explanatory variables and indicators for whether the prospective initiator and target in the dyad possess any type of formal military alliance (Model 1).[6] Given the results of the baseline model, it is easy to understand why Vasquez and Senese (2008) conclude that alliances lead to conflict. Model 1 in Table 4 reveals that even when alliances are not limited to major powers and dyad interactions are not limited to crisis environments, prospective initiators in an alliance are more likely to initiate a militarized dispute with the target. (Table 4 in the appendix presents the substantive effects for Models 1–5). Given that this is aggregate alliance data, the next step is to disaggregate these variables to better isolate the possible differential effects.

Model 2 estimates the effects of alliances using the ATOP offensive and defensive alliance categories. Note that Model 2 actually extends the original ATOP dataset and classification from the original time period of 1816–1945 used in Leeds (2003) to examine the relationship up to the year 2000.[7] As can

[6]Table 2 in the appendix lists and describes the outcome and control variables estimated in all the models, and Table 3 in the appendix provides a summary of the models estimated, the variables of interest in each model, and their coding rules.

[7]Leeds (2003) model also contains neutrality agreements. Their inclusion is not essential for my argument, and there is no theoretical expectation that merits their inclusion as a control. However, because they were included in Leeds (2003), I wanted to ensure the estimation of the key explanatory variables in my analysis (Model 5) are not sensitive to their inclusive or exclusion. The results are robust, so I have elected to leave neutrality agreements from the analysis.

TABLE 4   Logit Estimates of the Effects of Alliances on the Initiation of Militarized Interstate Disputes, 1816–2000. Novel Dataset

	Model 1 Baseline	Model 2 ATOP	Model 3 Compellent – Deterrent	Model 4 Ally Power Status	Model 5 New Categories
Joint Democracy	-0.729** (0.133)	-0.683** (0.134)	-0.676** (0.134)	-0.651** ((0.131)	-0.661** (0.134)
Contiguity	1.474** (0.109)	1.490** (0.109)	1.489** (0.108)	1.493** (0.108)	1.487** (0.108)
Capabilities Ratio	0.993** (0.138)	0.960** (0.138)	0.990** (0.136)	0.989** (0.136)	1.014** (0.136)
S-score	-0.706** (0.112)	-0.661** (0.123)	-0.729** (0.117)	-0.757** (0.120)	-0.764** (0.117)
Initiator Alliance	0.248** (0.075)				
Target Alliance	-0.154* (0.077)				
ATOP Offensive		0.800** (0.102)			
ATOP Defensive		-0.073 (0.073)			
Compellent			1.154** (0.116)	1.141** (0.116)	
Deterrent			-0.074 (0.073)		
Major Power Deterrent				-0.163+ (0.099)	
Minor Power Deterrent				0.004 (0.084)	
Unconditional Compellent					1.285** (0.122)
Conditional Compellent					0.316 (0.301)
Unconditional Deterrent					0.228* (0.109)
Conditional Deterrent					-0.184* (0.078)
Probabilistic Deterrent					-0.036 (0.101)
Constant	-3.763** (0.098)	-3.759** (0.101)	-3.720** (0.099)	-3.709** (0.100)	-3.684** (0.098)
N	172196	172196	172196	172196	172196
Log-Lik Intercept Only	-11477.201	-11477.201	-11477.201	-11477.201	-11477.201
Log-Lik Full Model	-9975.585	-9938.790	-9926.073	-9922.994	-9910.257
Likelihood Ratio	3003.232**	3076.822	3102.255**	3108.413**	3133.888**
McKelvey and Zavoina R^2	0.274	0.277	0.276	0.277	0.278
AIC	0.116	0.116	0.115	0.115	0.115
BIC'	-2894.725	-2968.314	-2993.747	-2987.849	-2989.212

Peaceyears variables suppressed; Standard errors in parentheses
+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

be seen in Model 2, while ATOP offensive alliances are positively associated with conflict initiation, the effect of ATOP defensive alliances, which show a relatively small deterrent effect through 1945, does not persist through 2000.

Model 3 examines the effects of the newly classified deterrent and compellent alliances discussed above. In so doing, it examines whether alliances are broad indicators or signals of shared preferences (Altfeld and Bueno de Mesquita 1989) rather than particular commitment mechanisms that constrain leaders decisions about conflict. If deterrent alliances are better thought of as broad signals of preferences, we should observe a deterrent effect even when distinctions according to type are ignored and the different categories of deterrent alliances are combined. This does not appear to be true. Model 3 in Table 4 reveals that prospective initiators holding compellent alliances are more likely to initiate conflict, but broad deterrent alliances do not deter prospective initiators from initiating conflict against targets in dyads. This suggests that the particulars of the alliance contract likely matter.

Model 4 refines the relationship further to examine the effect of an ally's power (Siverson and Tennefoss 1984). The results show that the presence of a powerful ally does not clearly deter an adversary from initiating conflict. Such an alliance arrangement is not significant at the $p < 0.05$ level, and it barely affects the predicted probability of conflict (Table 4 in the appendix shows that a major power deterrent ally reduces conflict by only 0.0011.)

I next estimate a model using the fully disaggregated alliance categories from the typology I propose. Model 5 reveals that the incidence of conflict depends critically on aspects of alliances that are currently neglected in the literature. The estimates of Model 5 reported in Table 4 demonstrate that while unconditional compellent alliances are positively associated with conflict, other compellent alliances are not. Consistent with hypotheses 1 and 2, the fact that conditional compellent alliances have no effect on conflict—a finding that persists throughout the remaining models—is particularly noteworthy. Such alliances are associated with only one MID initiation.

As expected, when conditional compellent alliances are distinguished from unconditional alliances, the size of the coefficient and resulting substantive effect of unconditional compellent alliances is larger than the effect found using ATOP offensive alliances. Compared to having no alliance, an unconditional compellent alliance increases the predicted probability of conflict by 249% from 0.0063 to 0.022.

Together, the lack of relationship between conditional compellent alliances and the incidence of conflict and the stronger relationship between unconditional compellent alliances and conflict underscores how previous studies of offensive alliances have overgeneralized the dangerous effects of such alliances. These studies misattribute the effects of unconditional compellent alliances—which should increase the possibility of conflict—to conditional compellent alliances. Once these types of alliances are distinguished, there is no relationship between conflict and the presence of conditional compellent alliances, which should not cause alliance members to initiate conflict.

Model 5 in Table 4 also reveals that conditional deterrent alliances are the only type of deterrent commitment that produces a statistically significant reduction in the likelihood that a prospective initiator will challenge a target. This finding furnishes evidence for Hypothesis 4, though the substantive effect is modest. Compared to the state in which the target possesses no alliance, the decrease in the predicted probability of conflict is 18% when at least one such alliance is added to the target's alliance portfolio—the predicted probability of conflict falls from 0.0063 in the no alliance state to 0.0052 when a conditional deterrent alliance is added to the target side. This decrease in the probability of conflict is the largest deterrent effect of any alliance category in Models 1–5, but the effect on the predicted probability is smaller than that of any other statistically significant covariate.

Other types of deterrent categories, however, do not appear to deter. In fact, rather than reduce conflict, unconditional deterrent alliances held by targets in dyads actually appear to *attract* initiations from prospective initiators. Such alliances increase the likelihood that a prospective initiator initiates a MID against a prospective target holding the alliance by 25%. On balance, Model 5 suggests that deterrent alliances are no more pacifying than dangerous.

To better characterize the relationship between alliances and conflict I refine the models to sharpen the tests for Hypotheses 3 and 5 by accounting for additional aspects of the relationship that may affect the incidence of conflict. In particular, Hypothesis 3 claims unconditional compellent commitments are especially likely to result in *violent* initiations of conflict, and Hypothesis 5 states that the impact of a deterrent alliance with a *major* power should be the most pronounced for reducing *violent* initiations against *minor* power protégés because relatively weaker protégés stand to benefit most in conflict bargaining from a shift in power associated with an ally's deterrent commitment.

I conduct the analysis by subsetting the data into samples: the first includes dyads in which the prospective target in the dyad is a minor power (Model 6), and, the second, those in which the prospective target in the dyad is a major power (Model 7). I also disaggregate the MID initiation variable to investigate whether alliance types have any relationship with the presence of violent conflict. The theory above provides the reasoning for why unconditional compellent alliances should lead to violent conflict and conditional deterrent alliances should reduce violent conflict. I have also speculated that while unconditional deterrent alliances may more effectively deter nonviolent initiations than conditional deterrent alliances, they may also result in more violence because of preemptive strikes. To explore these relationships, I use a multinomial logit to predict the probability of whether a prospective initiator in a dyad initiated a MID and chose violent actions, initiated a MID and chose nonviolent actions, or engaged in no military actions whatsoever. (The coding rule used for this variable can be seen in Table 3 in the appendix.) I assess the effects of the alliance categories I propose on this disaggregated militarized dispute variable controlling for whether the prospective dyad target is a minor power and when the target is a major power. Table 5 reports the results.

Distinguishing violent and nonviolent initiations presents a richer account of the relationship between alliances and conflict. As Hypothesis 3 predicts, unconditional compellent alliances are much more likely to result in violent initiation. Interestingly, such commitments do not result in alliance members initiating nonviolent conflict.

Compared to having no alliance whatsoever, unconditional compellent alliances increase the predicted probability of violent conflict by 245% when the target is a minor power and 330% when the target is a major power. (Table 5 in the appendix reports the marginal effects.) In contrast, conditional deterrent alliances only deter violent conflict when the dyad target is a minor power with a major power alliance partner. The predicted probability of violent conflict decreases by 39% (from 0.0051 to 0.0031) relative to the no-agreement case. In fact, military alliances deter *violent* conflict only for this alliance and this particular ally power configuration.

Unconditional deterrent alliances with major power allies reduce challenges against minor powers, but such commitments strongly deter *nonviolent* initiations when the prospective dyad target is a minor power. The effect is negative but not significant when evaluated using violent initiations. Conditional deterrent commitments also have no effect on nonviolent initiations. Unconditional deterrent alliances are strongly associated with *violent* conflict when the prospective target is a major power, however. In this case, such commitments *increase* the predicted probability major powers holding the alliance from another major power ally will be attacked by 174%. This lends some support to the possibility that major powers holding unconditional deterrent alliances pose more of a threat for preemptive attacks and, therefore, are more likely to be attacked.

Robustness

To ensure the robustness of the results, I examine whether the estimated effects of alliances depend on possible outliers in the data. Given the nature of the data described earlier—and the fact that a few observations contribute an enormous number of observations—I evaluate the sensitivity of the estimated effects using both the new alliance categories I propose (Model 5), as well as several other models of alternative alliance conceptions (Models 1–4).

Most critical for the arguments I make regarding the relationship between alliances and conflict is the fact that Model 5 performs relatively well. Each of the key explanatory variables holds up in bivariate analysis, rare events analysis, and when other independent variables are excluded, with only conditional deterrent alliances exhibiting sensitivity to the exclusion of the contiguity and s-score variables. The results are unchanged using several different measures of contiguity (direct land, 24 miles of water, 150 miles of water, 400 miles of water, direct land pre-1945 and 24 miles of water post-1945, direct pre-1945 and 150 miles post-1945, direct pre-1945 and 400 miles post-1945).

The goodness of fit measures reported in Table 6 indicate Model 5 outperforms both the baseline conflict model (Model 1) and the ATOP model (Model 2). The absolute difference between the lower Bayesian Information Criterion (BIC') in Model 5 and both the baseline model (93.124) and the ATOP model (20.897) exceeds 10, which is the recommended minimum threshold of model support on the Raftery (1996) scale. Additionally, McKelvey and Zavoina's (1975) R^2 for Model 5 improves over both the baseline and the ATOP models, as do other Pseudo-R^2 measures (Hagle and Mitchell 1992) not reported. The lower Akaike's information criterion also provides additional support.

TABLE 5   Multinomial Logit Estimates of Compellent and Deterrent Alliances on the Initiation of Violent
Militarized Interstate Disputes when Dyad Target is a Minor/Major Power, 1816-2000. Novel
Dataset

	Model 6 Minor Power Target		Model 7 Major Power Target	
	Nonviolent	Violent	Nonviolent	Violent
Joint Democracy	-0.6724** (0.2086)	-0.6653** (0.1910)	-0.3731 (0.3219)	-0.7736** (0.2757)
Contiguity	1.2931** (0.1746)	1.6465** (0.1529)	1.4966** (0.2391)	1.0660** (0.2029)
Capabilities Ratio	0.6626** (0.2060)	0.6254** (0.1825)	2.7935** (0.2889)	1.4328** (0.2539)
S-score	-0.6953** (0.2138)	-0.6663** (0.1465)	-1.5256** (0.2819)	-1.2487** (0.2499)
Unconditional Compellent	0.1777 (0.3191)	1.2679** (0.1637)	0.3804 (0.4364)	1.4771** (0.2466)
Conditional Compellent	0.2397 (0.4581)	0.5909 (0.4725)	-0.4844 (0.7138)	0.1226 (0.3746)
Major Power Unconditional Deterrent	-31.5513** (0.1811)	-0.7620 (0.5368)	0.4570 (0.6473)	1.0261** (0.3033)
Minor Power Unconditional Deterrent	-0.1948 (0.3195)	0.0113 (0.1932)	0.0743 (0.3329)	0.5123* (0.2296)
Major Power Conditional Deterrent	-0.2141 (0.1809)	-0.4463** (0.1364)	-0.6745* (0.2665)	0.1869 (0.1953)
Minor Power Conditional Deterrent	-0.0939 (0.1544)	-0.0994 (0.1326)	0.1234 (0.2983)	0.2523 (0.2111)
Probabilistic Deterrent	-0.4371* (0.1738)	-0.0763 (0.1377)	0.1443 (0.2517)	0.2165 (0.1644)
Constant	-4.9183** (0.1599)	-4.0952** (0.1334)	-6.2348** (0.2534)	-5.1299** (0.2134)
N	99,001		73,195	
Log-Lik Intercept Only	-9312.861		-3318.179	
Log-Lik Full Model	-8283.373		-2832.846	
Likelihood Ratio	2058.975**		970.665**	
McFadden's Pseudo R^2	0.111		0.146	
AIC	0.168		0.078	
BIC'	-1667.877		-589.835	

Peaceyears variables suppressed
Standard errors in parentheses
+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

To provide additional support for preferring the new typology to the existing typology used by ATOP, I reconsider the robustness of the relationship between the ATOP categories and conflict from 1816 to 1945 (Leeds 2003). As was noted while discussing Model 2, the pacifying effect of ATOP defensive alliances disappears when the dataset is extended to cover the years 1816–2000. Second, the results for the 1816–1945 period are driven by a few alliance agreements, particularly those formed in and around WWII and after the Crimean War; a few agreements comprise a large number of directed-dyad observations and minor shifts in coding rules can significantly influence estimated effects.

I employ a Cook's distance (Cook's D) diagnostic test (Cook 1977) to determine if there are influential observations, i.e., observations that most impact fitted values, which dramatically affect parameter estimates of interest. Cook's D measures the amount of influence an observation exerts on the inferences from overall model estimation, and is regularly used by political scientists as a robustness check.[8] It is an

[8]See, for example, McClain (1993), Granato, Inglehart, and Leblang (1996), and Mahler (2002).

appropriate test because it combines information on residuals and leverage. The higher an observation's Cook's D value, the more influential it is. The formula for Cook's D is

$$D_i = \frac{\sum_{j=1}^{n} \left(\hat{Y}_j - \hat{Y}_{j(i)} \right)^2}{p\,MSE}$$

where p is the number of estimated parameters in the model and MSE is the mean squared error of the model. The measure assesses the degree to which a given observation i influences the fitted values of all other observations j in the model.

The procedure for using a Cook's D test usually includes cutting the data at an appropriate value of Cook's D and observing the change in the regression coefficients when observations having a Cook's D value greater than the cut-off are excluded. If an observation significantly affects the regression coefficients, then these observations and the model should be investigated to determine whether a model can be fit to better explain these observations.

The recommended default cutoff for judging when an observation influences the analysis (Cook and Weisberg 1982) is unsuitable for this particular model because it is not sufficiently restrictive—every instance of conflict would be excluded because of the rarity of conflict in the dataset. As an alternative approach, I instead sequentially exclude the observations of the most influence to determine the point at which the results are affected. That is, I first exclude only the most influential observation, before gradually reducing the cutoff toward the recommended value to verify whether findings are sensitive to the elimination of influential observations.

I compare the influence of influential observations on both Leeds' (2003) ATOP 1816–1945 model[9] and a comparable estimation during the years 1816–1945 using the new alliance categories found in the novel typology. The Cook's D test shows that ATOP offensive agreements are sensitive to a small handful of observations. When a mere 215 of the 69,730 observations are excluded from the analysis, the coefficient for offensive agreements decreases considerably and the finding is no longer statistically significant. Of these influential observations, over

one-third of them occur between 1939 and 1944, and that group of observations comprises nearly two-thirds of the observations of dispute initiations during World War II. The deterrent effect of ATOP defensive alliances remains statistically significant, but, as can be seen in Model 2, it collapses when the data are extended through the year 2000. These results highlight the sensitivity of the ATOP model to influential alliance agreements, especially those in existence during World War II.

To verify that the estimated effects of the new alliance typology are not similarly affected by influential observations, I perform a test of a comparable estimation using the new categories through the year 1944. The key findings on unconditional compellent and conditional deterrent alliances persist even after the 300 most influential observations are excluded and when the data are extended through the year 2000. That the variables of interest hold up after excluding the most influential observations indicates that they are not as sensitive to influential observations as the ATOP categories. Additionally, the model using these categories outperforms those using existing categories, and the findings are robust.

Conclusion

Despite much work on the topic, whether alliances lead to conflict has long been an open question. Extant formal theories of alliances only apply to a modest majority of alliance commitments in practice, and empirical studies overgeneralize findings from influential commitments to overly broad categories of alliances. The typology of alliances and new dataset I present provides a useful platform for better evaluating the incentives created by different commitment mechanisms. It permits tighter tests of existing theories while also uncovering previously undefined and unexplained commitment mechanisms.

Alliance formation is a more nuanced process than prior studies reveal. *Unconditional compellent alliances*, which represent a small percentage of total alliances, correlate with a 249% increase in the likelihood of conflict when the prospective initiator is an alliance member and such commitments are strongly associated with violent conflict. By contrast, not all alliances traditionally classified as offensive create incentives for alliance members to initiate conflict. *Conditional compellent agreements*, which condition the use of military force on the adversary's nonacquiescence to a specific demand, do not lead

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[9]I perform the influence test on the Leeds (2003) model instead of my Model 2 because ATOP defensive agreements are not statistically significant in Model 2 when the ATOP coding is extended through the year 2000. To give the ATOP model the benefit of the doubt, I examine the original estimation in which defensive alliances were found to have a significant deterrent effect.

alliance members to initiate violent or nonviolent conflict.

Only *conditional deterrent alliances*, those commitments specifically promising allied intervention in the event that a fellow alliance member is attacked, deter violent conflicts. However, this deterrent effect only applies to minor powers holding such alliances with major power defenders. Other deterrent types of alliances do not appear to deter violent initiations of conflict. In fact, *unconditional deterrent alliances*, which permit active or preemptive action for the purpose of deterring challenges or threats, show some evidence of deterring nonviolent initiations and can actually *attract* violent initiations, especially if the holder of such an alliance is a major power.

Better differentiation between types of alliances also reconciles an inconsistency in the literature with respect to the influence of allies' power status. Siverson and Tennefoss (1984) argue that major power allies reduce conflict and Senese and Vasquez (2008) show that major power alliances lead to crisis escalation. I show that both effects appear simultaneously and can be disentangled when alliance commitments are disaggregated. A conditional deterrent alliance with a major power ally reduces conflict, but a major power with an unconditional deterrent alliance increases conflict.

Recategorizing alliances to better account for the particulars of the agreements and the context in which they were formed and analyzing the relationship between these recategorized alliances and conflict across a longer time period than prior studies reveals that the deterrent effects of alliances are not as far-reaching as previously believed. In addition to the conflict associated with unconditional deterrent alliances, there is no relationship with conflict for a significant percentage of militarized alliances. The lack of a relationship suggests several nonexclusive possibilities: many alliances may be unrelated to conflict, issues of endogeneity and selection bias may confound the analysis, and we know less about the relationship between alliances and conflict than previously thought. The novel characterizations I provide highlight the need for additional theory about the design and implications of unexplained commitment mechanisms and strategic factors causing possible selection effects.

Acknowledgments

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