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Executive Decision-making Constraint and Alliance Institutionalization

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An abstract of
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Abstract

Executive Decision-making Constraint and Alliance Institutionalization
By Christina Parowczenko

Neither states nor the military alliances that they negotiate are monolithic entities. Whether democratic or autocratic, regimes vary by the number of veto players participating in the foreign policy decision-making process. And as the number of veto players increases, reaching consensus on a deviation from the status quo policy becomes more difficult. Alliances may or may not require members to provide upfront costs—the construction of a standing security organization, strategic military coordination, monetary or materiel grants, et cetera. So, does the extent to which a state's leader is constrained influence the likelihood that his state will provide higher levels of military institutionalization as a demonstration of commitment to the overall terms of the alliance treaty? I hypothesize that a state with a minimally constrained leader will more often agree to provide higher levels of military institutionalization when entering into an alliance with a partner with a maximally constrained leader. Using the Alliance Treaty Obligations and Provisions (ATOP) dataset, I code directionality for military institutionalization obligations across bilateral alliances existing between 1919 and 2001 and run a statistical analysis to assess the effect of the interaction of members' regime types on the provisions agreed to by individual states in treaty text. Only tenuous support is found in favor of the hypothesis. Otherwise, the data suggests that the international environment is inordinately threatening to only some combinations of regime types, prompting higher levels of military institutionalization, and that members' power status influences military institutionalization in a manner more consistent with arguments concerning collective action and balance of power than with arguments concerning commitment.

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Introduction

Neither states nor the military alliances that they negotiate are monolithic entities. Two independent states, or several, enter into an alliance when their official representatives sign a written, formal agreement requiring cooperation in response to a current or future military conflict.[1] Alliances are worthwhile pursuits when the security benefits that each state derives from formalized cooperation outweigh the costs of negotiation and commitment. But neither this broad definition nor the emphasis on states' rationality provide sufficient traction in explaining why significant variation in the institutional design of military alliances exists, an understudied topic within the international relations literature.

Just as the main purpose of the alliance, or what action is required of members in the event of an international crisis,[2] varies across treaty texts, so does the level of military institutionalization required of alliance members. All, some, or none of an alliance's members may agree to provide specific military obligations such as integrated command, foreign deployment of troops, or technology transfers. Again, why these obligations are present to greater or lesser degree and why they may be distributed asymmetrically across an alliance's membership are incompletely addressed issues within the literature.

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[1] See Leeds, Ritter, Mitchell, and Long (2002, 238-40) and Leeds (2005b, 4-5). Similarly, note Gibler and Sarkees (2004, 212-3); Morrow (2000, 63-65); Russett (1971, 262-3); and Singer and Small (1966). See Holsti, Hopmann, and Sullivan (1973, 3-4) and Dingman (1979, 249) on formal agreements pertaining to national security interests more broadly. In contrast, note the inclusion of informal security agreements by Walt (1987, 1, fn 1; 12-3, fn 35). For a discussion on the substantive difference between alliances and alignments—"conceptually, alliances hinge upon wars whereas alignments do not"—see Modelski (1963, 773-6). For a discussion on the efficacy and desirability of flexible obligations in international security agreements, see Kann (1976).

[2] Conceptualization of alliance type varies in the literature. For example, the Alliance Treaty Obligations and Provisions Project (v3.0) (Leeds, Ritter, Mitchell, and Long 2002) differentiates between offensive pacts, defensive pacts, neutrality pacts, non-aggression pacts, and consultation pacts whereas the Correlates of War Formal Alliances dataset (v4.1) (Gibler 2009) does not code for offensive pacts and only recently began coding neutrality and non-aggression pacts separately.

In line with rational choice analysis, especially as presented by Koremenos, Lipson, and Snidal (2001, 762), the institutional design of alliances should be interpreted as the product of a deliberate effort on the part of member states to further their national security interests. The codification of higher levels of military institutionalization into treaty text serves a dual purpose: the costliness and upfront nature of certain military obligations reassures states of their partners' commitment to the overall terms of the alliance and credibly signals the alliance membership's collective commitment and enhanced war-fighting capabilities to potential adversaries (Morrow 2000, 67-73; Fearon 1997). Although some variation in level of military institutionalization is explained by members' consideration of how threatening the international environment is and what joint defense capabilities are required to maintain the deterrent capacity of the alliance, I argue that when states cannot demonstrate their commitment to the alliance via other means, they will generally agree to provide higher levels of military institutionalization.

Recent literature has focused on reputation as an indicator for whether concerns over commitment should exist within the alliance membership. Many scholars argue that states' (or leaders') reputations for violating past alliance agreements condition the likelihood of later alliance formation or level of alliance institutionalization (Crescenzi, Kathman, Kleinberg, and Wood 2012; Gibler 2008; and Mattes 2012). But reputation is a highly incomplete indicator. To whom does a history of unreliability attach?—the state or the leader? Which instances of alliance violation are salient informationally? And what beliefs should be formed over a state's likely future behavior if it has no alliance history at all?

Many works reference regime type as an indicator for judging a state's likelihood of remaining committed to international agreements. Regime type offers several informational advantages over a reputation for unreliability: it is an "always on" inherent characteristic of the state, and it should be readily observable to a fairly accurate degree by any state willing to consider alliance ties. But regime type's treatment in the literature has been inconsistent and often under-theorized. When considering the role of domestic institutions, studies of alliance relations or states' credibility regarding international agreements or threats have variously assessed regime type as a binary contrast between democracies and autocracies,[3] as democratic or a sub-form of autocracy based on which actors regulate control to power and influence,[4] or as a point along a continuous democracy-autocracy spectrum.[5] These varying operationalizations attempt to proxy for one (or several) of three basic mechanisms linking regime type to the state's likelihood of remaining committed in the future: democratic norms, the consequences of accountability, and level of executive constraint.

I propose that level of executive constraint is the more straightforward means by which negotiating states judge each other's likelihood of remaining committed to an alliance. Norms may not be readily observable or their importance may be misinterpreted by politically or culturally dissimilar states. And debate still exists over whether a democratic voting public (or an influential element of the autocratic elite) punishes

[3] See Chiba, Johnson, and Leeds (2015); Crescenzi et al. (2012); Fearon (1994); Gartzke and Gleditsch (2004); Gibler (2008); Gibler and Wolford (2006); Lai and Reiter (2000); Leeds (1999, 2003); Mattes (2012); and Siverson and Emmons (1991). See Bennett (1997); Gaubatz (1996); and Reed (1997) for works incorporating Doyle's (1983) classification of liberal democracies.

[4] See Ezrow and Frantz (2011); Mattes and Rodriguez (2014); and Weeks (2008, 2012) for works incorporating Geddes's (1999, 2003) classification of autocratic regimes.

[5] See Simon and Gartzke (1996). This form of operationalization usually appears when the dissimilarity of two regimes is assessed: see Crescenzi et al. (2012); Gibler (2008); Gibler and Wolford (2006); Lai and Reiter (2000); and Mattes (2012).

leaders for the specific act of reneging on publicly stated policy or for the undesirable content of implemented policy (Snyder and Borghard 2011, 440). Rather than assume a leader will or will not deviate from a signed treaty should his national security policy preferences change because he will not or will be punished, the simpler question for negotiating partners to ask prospectively is whether or not the leader is *able* to deviate from his alliance obligations. Do several veto players exist in the state's foreign policy decision-making process? The conclusion of a military alliance represents a new status quo. The leader's ability to deviate from this status quo is reduced as the number of veto players in the decision-making process increases, the ideological distances between all veto players increases, and the cohesion within clusters of veto players increases (Tsebelis 2002). States should recognize how easily their regimes should be able to change policy in the future, should be aware that their prospective partners have a relatively informed view on this matter as well, and should be willing to tailor treaty text for reassurance purposes if necessary in order to conclude a desirable military alliance.

Thus, I hypothesize that a state with a less constrained leader is expected to agree to provide higher levels of military institutionalization when entering into an alliance with a state with a highly constrained leader. All states may situationally see some utility in providing higher levels of military institutionalization for deterrence and joint war-fighting capability purposes. But only in this regime combination is the less constrained state under the additional pressure of needing to reassure its prospective partner of its commitment with an upfront cost. Expectations for the provision of military institutionalization as a commitment device can be formulated for other regime combinations, but military institutionalization's utility as a deterrence device may cause

these expectations to be indiscernible in a statistical analysis. Highly constrained states are not expected to agree to provide higher levels of military institutionalization because reneging on the treaty in the future should be difficult. The very process of foreign policy decision-making carries the burden of reassurance, making an upfront sunk cost unnecessary. But when two less constrained states enter into an alliance, neither is expected to agree to provide higher levels of military institutionalization because either's reneging on the treaty should be relatively easy. Both states are in need of having to demonstrate their commitment, but because both are of the same type, that very demonstration is more risky than if either state were negotiating with a highly constrained state. Both less constrained states will likely calculate that the risk of their partner predating on their provision of the upfront sunk cost is too high to justify providing the sunk cost purely for commitment-inducing purposes.

I test these expectations using a set of bilateral alliances existing between 1919 and 2001 with a series of linear, logistic, and ordered logistic regressions. Proposing and testing whether the provision of a commitment device varies within a dyad is the innovative component of this analysis relative to other works in the literature. Overall, only tenuous support is found for the main hypothesis, so several alternate explanations are discussed for why the results do not conclusively conform to the expectations of commitment theory.

The analysis proceeds as follows. In the subsequent section, I discuss the literature positing that reputation influences the formation and design of military alliances. Next, the means by which democracy is expected to enable credible commitment are reviewed and the manner in which regime type has been classified in the

literature is discussed. Then, the manner in which executive constraint has been defined and coded in the literature is addressed. After, military institutionalization's potential as a commitment device is assessed. Next, the importance of analyzing commitment devices in a directional context and the hypothesis and related expectations are presented. Then, I explain the research design and findings of the statistical analyses. I conclude with a discussion of alternate explanations for the null result.

Reputation

Recent literature on alliance formation and institutionalization argues that states or leaders assess their alliance partners retrospectively: the potential ally's present and future commitment is judged based on his reputation for upholding past international agreements. Gibler (2008) finds that a leader's reputation for having honored the terms of past alliances within the state-dyad, region, or international system substantially increases the probability that he will form a subsequent alliance. Correspondingly, a leader's reputation for having violated the terms of past alliances within the region or international system substantially decreases the probability that he will form a subsequent alliance. The relative worth of the past commitments (e.g., defection in the face of an unwinnable conflict should carry a less severe reputational penalty) does not generally have an impact on alliance formation.

Similarly, Crescenzi et al. (2012) find that a state is more likely to form an alliance with a potential ally that has previously upheld its alliance obligations with other states. The potential ally's experiences with states similar to the alliance-seeking state as per Signorino and Ritter's (1999) S-similarity score receive greater weight than experiences with states dissimilar to the alliance-seeking state. Whether the potential ally has previously upheld its alliance obligations with the alliance-seeking state does not appear to affect subsequent alliance formation.

Analyzing how states specify their alliance agreements, Mattes (2012) notes significant variation in the inclusion of provisions that the credible commitment literature would view as reliability-enhancing: precisely defined core obligations, issue linkages, and centralized military institutionalization. She argues that in symmetric alliances

(major-major or minor-minor power dyads), more reliability-enhancing provisions will be codified for alliances with at least one disreputable member than for alliances with no disreputable members.[6] And because minor powers tend to have little bargaining leverage vis-à-vis major powers, she expects that in asymmetric alliances, there will be no significant variation in the codification of reliability-enhancing provisions between those alliances with at least one member with a reputation for unreliability and those alliances with no disreputable members.

While reputation undoubtedly informs the decision to enter into an alliance as well as how the treaty is written, it remains an incomplete indicator of a potential ally's future reliability. Which of the potential ally's past foreign policy actions are salient for generating a reputation of reliability? Has the potential ally even had the opportunity to comply with or renege on a salient international agreement?

Gibler (2008) and Crescenzi et al. (2012) both find that past relations between two states have only a marginal bearing on their likelihood of entering into an alliance, an unintuitive finding. Consider Reiter's (1994) finding that the decision-makers of minor powers appear to update their beliefs on the utility of neutrality or alliance based on their individual state's outcomes in past conflicts more so than on the aggregate outcomes of their peer states. In line with several judgmental heuristics employed under conditions of uncertainty (Reiter 1994, 492-5; Tversky and Kahneman 1974), a state should consider its personal experience more informative than the experiences of other states, even peers.

[6] Here, disreputability originates from actions in breach of either peace- or wartime obligations that subsequently lead to the termination of the alliance prior to its expected end date (Mattes 2012, 693). This conception captures more instances of reneging than conceptions limited to *casus foederis* violations and avoids an inferential selection bias concerning what reliability in times of war actually signifies. See Gibler's (2008, 446-8) findings that states with defense pact partners with honorable reputations are more likely to be targeted for fatal militarized disputes. Alliance-seekers may view previously steadfast leaders as reliable, but adversaries may view said leaders as trivial value-added to the alliance-seeker's deterrent capability.

According to the availability heuristic, decision-makers privilege information that is easier to recall due to either the situation's proximity or frequency. According to the representativeness heuristic, decision-makers draw analogies: to what extent is the present scenario similar to a past scenario? Crescenzi et al. (2012, 269) note that dyadic reputation's lack of significance can be explained if additional alliance ties are not considered necessary given past compliance. But this proposition does not preclude the possibility that decision-makers are evaluating a potential ally's credibility on the basis of other dyadic relationships or other institutional cues. Additionally, what information might decision-makers rely on to judge a potential ally's credibility absent a salient reputational history?

Democracy: Mechanisms Enabling Credible Commitment and Regime Classification

Due in part to the extensive study of the democratic peace, the body of work narrowly examining the influence of domestic institutions[7] on alliance formation, institutionalization, and outcomes slightly predates the cluster of works focusing on the influence of reputation.[8] But despite recent innovative findings on the institutional similarities between democracies and some forms of autocracy, there is still a tendency in the empirical literature on alliances to dichotomize the conception of regime type. Given that the explanatory mechanisms often cited within these works do not conclusively conform with a dichotomous treatment of regime type, the role of executive decision-making constraint should be revisited and reanalyzed within the context of credible commitment and alliance institutionalization.

Arguments for why democracies are more capable of upholding their international commitments[9] generally point to either normative explanations or one of two institutional mechanisms—accountability and constraints on decision-making. While Gaubatz (1996) discusses both aforementioned institutional mechanisms and the role of democratic transparency in providing adversaries with information about government-domestic audience interaction, he focuses first on several often normative factors explaining

[7] See Bennett (1997); Chiba, Johnson, and Leeds (2015); Gartzke and Gleditsch (2004); Gaubatz (1996); Gibler and Wolford (2006); Lai and Reiter (2000); Leeds (2003); Reed (1997); Simon and Gartzke (1996); and Siverson and Emmons (1991).

[8] See Crescenzi et al. (2012); Gibler (2008); Mattes (2012); LeVeck and Narang (2011); Mattes (2012); Mercer (1996); and Miller (2003).

[9] This is not an uncontroversial argument. See the following selected works for discussions on democracies' acting as shallow or faithless partners in a variety of contexts. Chiba, Johnson, and Leeds (2015) find that democracies negotiate shallower or highly conditional alliance treaties, and Gartzke and Gleditsch (2004) maintain that, while alliances may induce more cooperative behavior, they are generally insufficient to compel democracies to intervene on behalf of their allies more often than non-democracies do.

democracies' enhanced ability to maintain their commitments. He argues that democracies may select into agreements pertaining to only their most vital interests, reducing the likelihood that they will later renege. But this conclusion is part of a counterpoint rather than a complete critique of Tocqueville's contention that democratic political culture is isolationist, so while the concept of a selection effect is valid (Downs, Rocke, and Barsoom 1996), the normative context in which it is discussed seems historically outmoded.

Gaubatz's (1996) argument that liberal democratic political culture uniquely respects rule of law is the more salient point. Liberalism in the domestic sense is premised on "negative freedoms" protecting the polity from arbitrary authority (e.g., free speech and property rights protections), "positive freedoms" enabling socioeconomic progress (e.g., equal access to education and employment), and participation and representation rights in the political process (Doyle 1983, 206-7). This realization of individuals as subjects rather than means toward governmental ends translates to foreign policy by discouraging interventionist interactions between liberal states (Doyle 1983, 206, 213). The mutual benefits of the resultant tendency toward economic and political interdependence in the liberal democratic domain should increase democracies' willingness to abide by their international agreements (Gaubatz 1996; Oneal and Russett 1999).

Many works examining democracies' propensity to uphold alliance commitments or other forms of international cooperative agreements draw on accountability arguments raised by Fearon (1994). Although Fearon focuses on international crises and signaling mechanisms such as military mobilization and public threats, the core of his argument is

easily adapted for the analysis of commitment to international cooperative agreements. The public nature of most alliances should encourage compliance by "focus[ing] the attention of relevant political audiences and creat[ing] costs that leaders would suffer if they backed down" (Fearon 1994, 586). Public foreign policy actions "engage the national honor": domestic audiences electorally punish reneging as the leader's domestic political opponents protest a potential loss of international credibility (Fearon 1994, 581).[10] Although Fearon (1994, 581-2) notes two conditions under which autocratic regimes may be able to generate audience costs—a political environment in which elites are capable of sanctioning decision-makers and a weak, unstable regime under which a leader may point to his expected post-tenure fate as cause for present credibility—he still expects democracies to more easily generate audience costs than autocracies because democratic institutions allow the principal (voters) to sanction the agent (the government) more robustly and consistently.

However, the audience costs accountability mechanism can be problematic because of the assumptions made concerning issue salience and the constancy of public policy preferences. The propositions that leaders seek lock-in rather than flexibility and that the democratic public cares more about consistency between commitments and actions than about policy preferences are strong assumptions (Snyder and Borghard 2011, 440). And if, instead, the leader is obligated to heed public policy preferences, alliance agreements should collapse or be revised if public opinion turns against the treaty. But empirically, negative public opinion does not appear to affect coalition cohesion (Kreps

[10] International audiences—the state's adversaries and allies—can impose costs as well, but because domestic audiences are more likely to control the leader's continued tenure, *domestic* audience costs are typically invoked in this variant of the accountability argument.

2010). Another mechanism must explain policy persistence given important actors' contrary preferences.

Level of executive decision-making constraint and its relation to policy flexibility has been cited as an influence over different regimes' varying commitment to international agreements. Changes in preferences do not automatically lead to changes in policy: for policies to be purposefully altered, the salient actors must change their preferences and then these changes must be processed by the domestic institutions of the state (Choi 2012, 630). Tsebelis (2002, 2) argues that "in order to change policies—or […] to change the (legislative) status quo—a certain number of individual or collective actors have to agree to the proposed change." These veto players may be institutional (generated by the constitution) or partisan (generated by the political game). The winset or set of feasible alternatives to the status quo is dictated by the configuration of veto players, which is a function of the ideological distance or cohesion among them. When the winset is small—due to a large number of veto players, an unbridgeable ideological distance between them, or high internal cohesion within clusters of actors—deviation from the status quo is nearly impossible.

Much of the international relations literature referencing executive decision-making constraint assumes either explicitly or via exclusion (i.e., only democracies are the subject of analysis) that this mechanism is applicable solely to democratic regimes. Ikenberry (2001) notes that policy viscosity is an implication of a democratic political system's decentralized policy process and contributes to democratic advantage in the construction of credible commitments. Choi (2012, 631) states that "although changes in preferences of relevant publics or actors may occur in democratic states as often as in

non-democratic states, only democratic states have effective veto players, thus enhancing the stability and consistency of their policies." More nuance emerges in Cowhey (1993). The divided form of government found in the United States, wherein both the executive and legislative branches hold veto power over one another, is associated with difficulty over the establishment of new international commitments but ease in the maintenance of these commitments. In contrast, Japan's parliamentary system provides few institutionalized checks over the decisions of the majority party, making both the initiation and reversal of international commitments easier than in the United States. But regardless of whether they rely on executive decision-making constraint or accountability arguments, most analyses of alliance formation, institutionalization, or outcomes rely on explanatory variables or controls following Lai and Reiter (2000): a dummy variable for jointly democratic dyads is coded 1 if both states have aggregate *polity* scores of at least 5 or 6[11], and dyadic regime similarity is measured by the absolute difference of the states' aggregate *polity* scores.[12]

Recent literature suggests that the dichotomization of regime type is inappropriate for accountability and executive decision-making constraints arguments. Tsebelis (2002, 77-8) disagrees that autocracies necessarily lack veto players:

> However, transparency does not necessarily mean multiple veto players, and lack of it does not imply a single one. […] Therefore, what distinguishes democratic

[11] The Polity project on state authority characteristics has evolved considerably since data collection began in the 1960s (Gurr 1974). Recent work typically uses data from Polity III, Polity98, Polity IIId, or Polity IV and Polity IVd (Jaggers and Gurr 1995; McLaughlin, Gates, Hegre, Gissinger, and Gleditsch 1998; and Marshall, Gurr, and Jaggers 2014). Polity IV and Polity IVd (1800-2014) are the most current datasets.

[12] Analyses employing primarily accountability arguments include Chiba, Johnson, and Leeds (2015) and Lai and Reiter (2000). Crescenzi et al. (2012), Gibler (2008), and Mattes (2012) make reputational arguments but include Lai and Reiter's (2000) variables as controls. Leeds (1999, 2003) discusses both accountability and executive decision-making constraint mechanisms. Gartzke and Gleditsch (2004) and Gibler and Wolford (2006) argue against the applicability of audience costs, but employ controls similar to Lai and Reiter's (2000) variables.

> from nondemocratic regimes is whether the veto players are decided by competition between elites for votes or by some other process and there is no necessary distinction in terms of representation or in terms of the actual number of veto players.

In analyzing the likelihood that targets reciprocate threats in militarized interstate disputes, Weeks (2008) argues that some autocratic regimes[13] are as capable as democracies in generating audience costs provided that a political elite exists that is capable and willing to coordinate to sanction the leader, that the political elite disapproves of the leader's retreat from publicly stated policy, and that outside actors can observe the leader's vulnerability to domestic sanction. In her analysis of the initiation of militarized interstate disputes, Weeks (2012, 328) references the argument that ex ante constraints[14] may hinder the leader's ability to implement policy, but she primarily extends her previous audience costs argument to explain why militarized interstate dispute initiation rates vary among autocratic regimes categorized as per Geddes (1999, 2003). In the realm of international cooperation, Mattes and Rodriguez's (2014) findings generally correspond with those of Weeks (2008): in pure dyads, single-party regimes

[13] Specifically, single-party regimes, military regimes, dynastic monarchies, and mixed non-democracies. Weeks (2008) argues that single-party regimes and military regimes both feature robust bureaucratic institutions that decentralize influence over policy and political appointments across a collective political elite. Because an individual leader's ouster does not necessarily imperil the political elite's position, the political elite may be able to credibly threaten to sanction the leader for undesirable foreign policy actions (which is analogous to the link between voters and leaders in democracies proposed in previous literature). In contrast, personalist leaders (those who have consolidated power such that their political elite has little influence over policy or appointments) are not constrained by expectations of audience costs because their political elite depends on the leader's largess too much to credibly threaten sanctioning. See Geddes (1999, 2003) for more information on the institutional characteristics of single-party, military, and personalist regime types.

[14] Because Weeks (2012, 328) references Reiter and Stam (2002), the alluded to constraints are not of the veto player type discussed earlier. Reiter and Stam (2002, 144-63) actually make an argument similar to the traditional audience costs argument insofar as the possibility of prospective punishment appears to be the operative mechanism. Democratic publics are not normatively pacific but instead rationally evaluate the potential national security benefits of different foreign policy options. Democratic leaders generally need the informed consent of their publics to initiate wars.

cooperate as often as democratic regimes; and in mixed dyads, cooperation occurs more often if personalist regimes are excluded.[15]

The use of Geddes' (1999, 2003) autocratic regime classifications or aggregate *polity* score as an ordinal variable for a more granular view on regime type still does not neatly capture the mechanisms cited by most credible commitment arguments, however. The present analysis proceeds on the logic that the executive decision-making constraint argument is more theoretically appealing because the mechanism is likely observable before an alliance is even negotiated whereas audience costs are only directly observable after a state has reneged on the alliance.[16] Svolik (2012, 28-9) warns that most typological classifications of regime type are significantly flawed because they collapse "multiple, conceptually distinct dimensions of authoritarian politics," and the resulting regime types "are neither mutually exclusive nor collectively exhaustive and […they] require difficult classification judgments that weigh incommensurable aspects of authoritarian politics." So, although analyses by Mattes and Rodriguez (2014) and Ezrow and Frantz (2011) argue that policy flexibility should be highest in personalist regimes, intermediate in military regimes, and lowest in single-party regimes (and democracies), these expectations are likely too heavily stylized given the manner in which Geddes (1999, 2003) identified these regime types.

Consider Geddes' classification of a military regime. An affirmative answer to the question of whether "officers occupy positions in the cabinet other than those related to

[15] Cooperation is measured according to the 10 Million International Dyadic Events dataset (Bond, Bond, Oh, Jenkins, and Taylor 2003; and King and Lowe 2003). The lower rate of cooperation for jointly military dyads is attributed to the rarity and non-contiguity of military regimes over time (Mattes and Rodriguez 2014, 533).

[16] Theoretically, reneging on a commitment in the face of audience costs should be a corner case, but see Levendusky and Horowitz (2012) for experimental findings on how audience costs can be strongly mitigated if leaders provide the public with new information indicating why reneging on an offer to militarily assist a threatened neighbor is actually the correct course of action.

the armed forces" moves a regime closer toward being classified as a military regime rather than a single-party regime or personalist regime (Geddes 2003, 226). But this affirmative answer provides no firm conclusion on whether policy flexibility should be higher in a military regime than in a single-party regime.[17] Additionally, of Geddes' (2003, 227-32) 172 originally coded autocratic regimes, 40 regimes are considered hybrids with features of single-party, military, or personalist regimes in some combination. The codebook for the latest iteration of this dataset (Geddes, Wright, and Frantz 2014b, 12) suggests a convention for aggregating the hybrid types,[18] but the convention has no offered theoretical justification.

If Geddes' regime classifications conflate too many dimensions to be neat proxies for level of executive decision-making constraint, then aggregate *polity* scores function no better. A regime's aggregate *polity* score[19] is derived by subtracting the regime's score on autocratic authority characteristics from its score on democratic authority characteristics, with possible scores ranging from +10 (strongly democratic) to -10 (strongly autocratic) (Marshall, Gurr, and Jaggers 2014b, 14-7). The democracy indicator (*democ*) is additively derived from weights assigned to particular codings within several

[17] Policy flexibility could be higher in a military regime because officers' doubling-up on cabinet positions indicates that there are numerically fewer veto-holding actors to coordinate. But these officers would still need to have cohesive preferences in order to actually depart from the status quo. Mattes and Rodriguez (2014) and Ezrow and Frantz (2011) argue in that vein, pointing to officers' organizational interests in military efficacy and autonomy. However, see Barros (2003, 206-9) for an example of inter-branch dissent preventing change from the status quo. The Chilean navy and the air force were strongly opposed to Pinochet's 1977 proposal to change the legislative and constituent act voting rule from unanimity to majority, with the president holding a tie-breaking vote. Because the head of the Carabineros General Mendoza rarely advocated policy contrary to Pinochet's preferences, the proposal would have created a permanent dictatorship by the army under Pinochet. Evidence suggests that several air force generals preferred scheduling a deadline for termination of the junta and resumption of elections. Hence, policy flexibility could in some circumstances be very low in military regimes.

[18] Essentially, all regimes with party characteristics are collapsed into single-party regimes and all remaining regimes with military characteristics are collapsed into military regimes. This leaves pure personalist and pure monarchical regimes as two residual categories.

[19] *Polity2* scores sometimes referenced in the literature substitute conventional *polity* scores or missing values for interruption (-66), interregnum (-77), and transition (-88) codings.

dimensions: competitiveness of executive recruitment (*xrcomp*), openness of executive recruitment (*xropen*), constraint on the chief executive (*xconst*), and competitiveness of political participation (*parcomp*). The autocracy indicator (*autoc*) is additively derived from weights assigned to particular codings within slightly different dimensions: competitiveness of executive recruitment (*xrcomp*), openness of executive recruitment (*xropen*), constraints on the chief executive (*xconst*), regulation of participation (*parreg*), and competitiveness of participation (*parcomp*). Munck and Verkuilen (2003, 14, 26) note that several dimensions are theoretically redundant[20] and that the weighting scheme for the democracy and autocracy scales is under-theorized. Moreover, the Polity project investigators themselves warn against what has become common practice—use of the *polity*/*polity2* scale as a regime spectrum:

> The simple combination of the original DEMOC and AUTOC index values in a unitary POLITY scale, in many ways, runs contrary to the original theory stated by Eckstein and Gurr in *Patterns of Authority* (1975) […] The original theory posits that autocratic and democratic authority are distinct patterns of authority, elements of which may co-exist in any particular regime context. […] Researchers should note that the middle of the implied POLITY "spectrum" is somewhat muddled in terms of the original theory. (Marshall, Gurr, and Jaggers 2014b, 16-7)

[20] E.g., regulation and competitiveness of participation refer to elections' competitiveness; and competitiveness and openness of executive recruitment refer to the manner in which executives take office.

Executive Constraint

Several scholars have coded level of executive constraint directly. The Database of Political Institutions (Beck, Clarke, Groff, Keefer, and Walsh 2001; Keefer and Stasavage 2003; Keefer 2013), the Political Constraint Index dataset (Henisz 2013), and the Polity IV dataset (Marshall, Jaggers, and Gurr 2014a) all contain variables assessing the degree to which institutional actors are able to limit the chief executive's decision-making capabilities or the degree to which these actors' preferences appear to diverge from those of the chief executive. Most of these measures are not well-suited for this analysis of military alliances, however.

The *checks* and *checks_lax* variables in the Database of Political Institutions tally the number of veto players in the political system, with slightly different cutoffs defining when the non-competitively elected nature of the legislature indicates that the chief executive wields sole decision-making power (Beck et al. 2001, 170; Keefer 2012, 18-9). The value of *checks* and *checks_lax* are incremented for each of several conditions: most generally, the presence of a chief executive, the chief executive's being competitively elected, and opposition control of the legislature; for presidential systems, the number of legislative chambers (absent strong presidential control of the party holding the lower legislative chamber) and the number of allied parties with ideologies more closely aligned with that of the main opposition party than with that of the president's party; for parliamentary systems, the number of parties required to maintain parliamentary majority and the number of coalition parties with economic platforms more closely aligned with that of the main opposition party than with that of the prime minister's party. Thus, the value of these variables roughly reflects both the number of actors with the capacity to

meaningfully affect decision-making as well as the likelihood that these actors hold diverging preferences over policy (both *checks* and *checks_lax* are ordinal variables ranging from 1 to 18, with higher values indicating a greater number of veto points). Unfortunately, the latest version of the Database of Political Institutions covers only the years 1975-2012, which would severely limit any analysis of military alliances.

More appealingly, the Political Constraint Index covers the years 1800-2012, with the *polconiii* variable bearing a similar theoretical foundation to that of *checks* from the Database of Political Institutions. The primary difference between *checks* and *polconiii* concerns the assumption underlying the construction of *checks* that the addition of parties to parliamentary ruling coalitions should linearly increase the number of veto points independent of the size of the coalition parties relative to one another (Henisz and Zelner [2002], 5). In contrast, the *polconiii* variable is constructed under the assumption that the preferences of the chief executive, the lower legislative chamber, and the upper legislative chamber and the status quo policy are "independently and identically drawn from a uniform, unidimensional policy space" (Henisz 2002, 363). This assumption allows a more nuanced view into which policies are acceptable to which actors and how much policy overlap exists for various sets of actors. Thus, level of political constraint by Henisz's formulation reflects a complex interaction accounting for the number of institutional veto players, the independence of each collective actor, the ideological distance between collective actors, and the policy fractionalization within each collective actor (*polconiii* is a continuous measure from 0 to 1, with higher values indicating a higher level of political constraint on the chief executive).

The *polconiii* variable is not necessarily informative for an analysis of military alliances, however, because many alliances are signed by non-democracies. Because the chief executive and the legislature are considered the only valid sources of veto players, regimes that are considered autocratic are overwhelmingly coded as having maximally unconstrained chief executives.[21] This lack of variation in coded level of executive constraint comports neither with foundational theory on veto players or regime-based sources of credibility nor with recent empirical analyses on commitment in international relations.[22][23]

For an analysis of military alliances, the *xconst* variable from the Polity IV dataset is currently the most appealing measure of executive decision-making constraint. The Polity IV dataset covers the years 1800-2014, and the manner by which *xconst* is coded results in more intuitive variation in executive constraint for non-democracies. The *xconst* variable is an ordinal variable ranging from 1 to 7, with higher values indicating a greater degree of limitations on the chief executive's decision-making authority (Marshall, Gurr, and Jaggers 2014b, 24-5). Several types of "accountability groups" may impose these limitations: while legislatures and perhaps courts are most relevant in democracies,

[21] The *checks* and *checks_lax* variables from the Database of Political Institutions are affected by this issue as well.

[22] See this paper's earlier reference to Tsebelis's (2002, 77-8) comment that non-democracies are not by definition devoid of veto players; rather, any veto players that may exist are likely chosen via mechanisms other than a democratic vote. Tsebelis (1995, 306-7) cites several examples of non-executive, non-legislative veto players, often unique to a particular policy debate: the army, interest groups, unions, firms, and courts. Fearon (1994, 582) notes that autocracies may be able to generate audiences costs if the executive can be institutionally sanctioned, as the post-Stalin Politburo could generally do to the Communist Party General Secretary. Several works have noted variance in outcomes for non-democracies dependent on level of executive constraint or accountability: Chyzh (2014); Kinne and Marinov (2013); Mansfield and Milner (2010); Mattes and Rodriguez (2014); Peceny and Butler (2004); Weeks (2008; 2012).

[23] The *polconv* variable, which adds the judiciary and sub-federal entities as potential veto players, is not considered because data is severely curtailed temporally for most countries. The *polconvj* variable, which adjusts for the High Court's alignment and fractionalization, is not considered for the same reason.

single-ruling parties, monarchical councils of nobles, and the military are explicitly mentioned and relevant for the codification of various forms of autocracy.

Despite caution about the construction of the aggregate *polity* score and its temporal consistency (Gleditsch and Ward 1997; Munck and Verkuilen 2002) and the possibility that its included components may be tautologically driving findings (Vreeland 2008), it is still uncommon to see analyses within the international relations or comparative literature that use individual Polity component variables such as *xconst* rather than the aggregate *polity* score as a primary means of describing regimes' type. The *xconst* variable in isolation mostly commonly appears in studies on political economy topics as a measure for executive constraint or strength of veto players (Hall 2008; Jensen 2008)[24] or sometimes as a proxy for level of corruption (Fosu 2010). In the international relations literature, *xconst* and other component measures from the Polity dataset have been used to gain insight into what specific aspect of democracy leads to improvements in a state's human rights performance (Bueno de Mesquita, Downs, Smith, and Cherif 2005), variation in the incidence and success of counterinsurgency wars (Getmansky 2012), or the reduction in initiation of militarized inter-state disputes (Boehmer 2008).

In their study of how the combination of the manner of executive decision-making and the way in which decisions are enforced is associated with the initiation of militarized inter-state disputes by autocracies, Lai and Slater (2006) utilize *xconst* in a form similar to that which will be used in the present study of the specifications of military alliances. In constructing their typology of how decisions are *made* (via personalized or via collective procedures) versus how decisions are *enforced* (by a single

[24] More political economists prefer using Henisz's measures for this purpose, however.

party or by the military), they define a personalized regime as one wherein the chief executive has unlimited or near unlimited authority (*xconst* is coded as a 1 or a 2). Although Weeks (2012) critiques this use of *xconst* as a measure of the power of the domestic audience because *xconst* does not account for "irregular limitations such as the threat or actuality of coups and assassinations" (Marshall, Gurr, and Jaggers 2014b, 24), for a study of military alliances, the *xconst* variable is still a preferable measure of executive constraint than the regime codings from Geddes' body of works that Weeks (2012) suggests as an alternative. Signing a military alliance is an interactive process between two or more states. The regular limitations that *xconst* does account for are likely more observable to a state's potential signatory partners than irregular limitations, particularly in earlier time periods when intelligence and diplomatic networks and rapid inter-state communications may have been less robust or lacking. Moreover, the chief executive himself may not be fully aware of the threat of coup or assassination, making these phenomena less limitations on his decision-making capabilities and more latent evidence of a breakdown in the state's political process. Lastly, the latest iteration of Geddes' regime data—the Autocratic Regime Data (Geddes, Wright, and Frantz 2014a)—covers only the years 1946-2010.[25]

[25] Additionally, Weeks (2012) relies on Geddes' raw yes/no question data rather than the aggregated content of the Autocratic Regime Data to generate her measure of personalism. This raw data is not publicly available.

Military Institutionalization as a Commitment Device

Across alliances over time, variation in whether and to what extent military obligations such as integrated command, foreign deployments, and technology transfers are codified exists. So, what primary purpose do these provisions serve? Several older grand theory arguments[26] can be found within the international relations literature that address alliance formation and at least implicitly reference this form of capability aggregation. Potentially interpretable as comments on the capacity of military capability aggregation to address balance of power[27] concerns are arguments made by Gulick (1955), Organski (1968), Morgenthau (1967), and Liska (1962). Coalition theory proposes the opposite goal from balance of power arguments on alliance formation—states ally in order to become the dominant force in the international system—although Riker (1962, 66-71, 226) notes the tendency for victorious alignments in total war contexts to fragment into minimum winning size coalitions soon after hostilities cease and the potential undesirability of some capabilities transfers given the reordering of post-imperial international relations. Holsti, Hopmann, and Sullivan (1973, 13) illustrate how arguments about relative capabilities offer contradictory expectations on alliance formation, though Morgenthau (1957) and Waltz (1967) imply that capability aggregation via alliance can mitigate a state's weakness or economic decline.

More recently, two main arguments have coalesced concerning how capability aggregation via alliance enhances states' security. Lake (1996, 1999) and Conybeare (1992) emphasize that capability aggregation represents the creation of a joint production

[26] See Holsti, Hopmann, and Sullivan (1973) and Friedman, Bladen, and Rosen (1970) for reviews of general theories of alliance.

[27] Succinctly, states "join forces in order to aggregate sufficient capabilities to […] prevent any nation or combination of countries from achieving a dominant position" in the international system (Holsti, Hopmann, and Sullivan 1973, 4).

economy wherein states can realize greater security returns by allying together than by operating alone. Lake (1996, 1999) indicates, however, that states are less likely to cooperate or specialize their military economies if the cost and probability of their potential partner's opportunism (either abandonment or entrapment) are too high. In contrast, Morrow (1994, 2000), Smith (1998), and Fearon (1997) indicate that capability aggregation is a means by which states signal their commitment to the alliance to both their partners and potential adversaries, thereby enabling the deterrent capacity of the alliance as a whole. Because the provision of materiel, personnel, or funds and the specialization of the military economy is costly upfront or in some circumstances should the state abandon the alliance, the state's willingness to undertake these costs demonstrates the credibility of its commitment to the overall terms of the alliance. Additionally, the anticipated direct effect of capability aggregation—an increased probability that the alliance coalition would be successful in a future conflict—incentivizes members' maintenance of the alliance relationship.

Interestingly, when Fearon (1997) models the efficacy of a defender's invocation of two forms of costly signals—tying hands[28] versus sunk costs[29]—in inducing a potential challenger to stand down from pursuing a foreign policy interest, he finds that a defender's expected payoff is strictly better when he ties hands rather than sinks costs despite an increased war risk. But given the conditions under which his model applies, his findings are consistent with the expectations of the current analysis of alliance obligations. Fearon's (1997, 82) model incorporates "the assumption that leaders are able

[28] Typically, the chief executive's making a public declaration of intent to defend that engages the national honor. See Fearon (1994; 1997, 70) and the earlier discussion on accountability and audience costs.
[29] Typically, acquiring more weaponry or deploying military personnel near the area under contention (Fearon 1997, 70).

to generate arbitrarily large audience costs," a situation that is mechanically similar to a leader who is maximally constrained. The characteristics of these leaders' regimes increase the credibility of the leaders' commitments, reducing the need to incur an upfront cost as a commitment device. Absent the assumption, the use of sunk costs as commitment devices should be empirically more common. Fearon (1997, 83) predicts as much, though his phrasing indicates that authoritarian leaders rather than less constrained leaders are the class requiring the recourse of sunk costs in negotiations.

Several analyses specifically indicate that the types of military obligations for which there is demonstrated variance across alliance treaty texts should function as commitment devices in line with Morrow's (1994, 2000), Smith's (1998), and Fearon's (1997) arguments. Leeds and Anac (2005, 188) make the most explicit connection in their creation of a military institutionalization index and hypothesis that "alliances that involve higher levels of peacetime military coordination are more likely to be honored when invoked by war." For the index, several types of military obligations indicate high or medium levels of peacetime military coordination: integrated military command, creation of a common defense policy, basing rights, official contact between military officials for planning purposes, creation of a formal military organization, provision or transfer of training or technology, specification of military contribution levels,[30] and subordination of one military under another.[3132] Wallander (2000, 710-1) notes that the security dilemma existing between members of an alliance can be mitigated by integrated

[30] The narrative indicates that contribution levels apply in the event of conflict, which is inconsistent with the logic of sunk costs, but the actual coding of the variable appears to incorporate peacetime contribution levels as well.

[31] This component is inconsistent with the logic of sunk costs because subordination is invoked only in the event of conflict.

[32] For examples of analyses that reference Leeds and Anac's (2005) military institutionalization index in order to assess an expectation concerning commitment, see Kim and Dabbs Sciubba (2015), Leeds, Mattes, and Vogel (2009), Leeds and Savun (2007), Mattes (2012), Owsiak and Frazier (2014), and Savun (2008).

military command, which limits unilateral military action, or transparency measures (perhaps analogous to official meetings or interactions within formal organizations), which lessen uncertainty over intent.

Even analyses predating Morrow's (1994, 2000), Smith's (1998), and Fearon's (1997) arguments link these types of alliance military obligations to the concept of commitment. Gates and Terasawa (1992, 104-5) argue that alliance members demonstrate increasing commitment to the alliance by transferring control over a military resource to the alliance: as examples, the stationing of U.S. troops in NATO areas both demonstrates U.S. commitment and confers public benefits linked with the NATO alliance, whereas the stationing of U.S. troops flagged as NATO reinforcements in Japan demonstrates a lesser level of U.S. commitment and confers some public benefit to NATO and some private benefit to the United States. Referencing the basics of the audience costs accountability argument, Martin (1977) argues that an index of military commitment level can be created incorporating variables such as military aid transactions, arms transfers, and foreign troop deployments.

Directionality of Commitment Devices

The most significant contribution of the current analysis of the institutional design of military alliances is testing the proposition that the necessity for the provision of commitment devices may not be equal across members of the alliance. Because of their characteristics, some members of an alliance may be expected to "ante up" more than others for the alliance to be successfully concluded. This logic has at least implicitly appeared in several analyses but does not appear to have been tested statistically in the context of alliance design.

Kydd (2000) develops a game-theoretic model of reassurance wherein the sending of an adequately costly signal (some unilaterally cooperative gesture) distinguishes a trustworthy actor from a non-trustworthy actor, enabling future cooperation because the potential partner's beliefs over the signaling actor's intentions are changed.[33] He then maps the general functioning of his model to late Cold War interactions between the Soviet Union and the United States: to distinguish the intentions of his regime from those of Brezhnev, Mikhail Gorbachev made a series of reassuring gestures (negotiation of the 1987 Intermediate-Range Nuclear Forces Treaty, the 1988 withdrawal from Afghanistan, conventional forces reductions, and non-interference in the 1989 Eastern European revolutions) to build trust with the Reagan administration. For present purposes, the model is interesting because the provision of what is similar to a commitment device need not be symmetric across actors (though this is somewhat a function of the game featuring sequential rather than simultaneous moves). Walsh (2007) extends Kydd's (2000) model by examining the conditions under which policy change actually occurs if

[33] Tang (2010) builds on this model in his discussion of reassurance as a foundation for cooperation under defensive realism.

the unitary actor assumption is relaxed and domestic policymakers holding veto power start with different preferences and beliefs over the opposing actors' intentions. This introduction of domestic politics helps explain why reassurance is often an iterated process empirically and why reassurance provisions are not necessarily symmetric even when reciprocation is required for further cooperative progress.

Regarding alliance design specifically, Miller (2003) and Mattes (2012) indicate that states with a reputation for being unreliable are likely to provide sunk costs or costly signals to demonstrate their commitment to the alliance. Miller (2003, 64) explicitly hypothesizes that "in an alliance, unreliable states will have higher levels of obligation than reliable states," with obligations being defined as upfront costs such as technology transfers or the granting of basing privileges.[34] He tests this hypothesis by tracing the United Kingdom's alliance decision-making process following suspension of its isolationist stance at the beginning of the twentieth century. Unfortunately, for the case in which the United Kingdom perceived its potential partner (Germany) as unreliable, alliance negotiations did not progress sufficiently for each state to register preferences on their own and the other's obligations (Miller 2003, 71).[35] Mattes footnotes an expectation concerning how partners' obligations in alliance may vary:

> The reliable member may refuse to conclude an alliance that does not adequately deal with its concerns, and the member with a reputation for unreliability may

[34] The granting of basing privileges as a commitment device is contrary to Schelling's (1966, 47) expectation, however. Schelling argues that a state's forward deployment of troops in harm's way commits that state to acting on behalf of the host country in any conflict that should occur. If the provision of basing privileges were the committing action, that suggests that the host country's costly signal is the surrender of sovereignty to the forward deploying state. The alliance's status as a cooperative agreement would need to be reassessed if the text were assumed to institutionalize vulnerability and possible predation among alliance members.

[35] Miller (2003, 71) does note that the United Kingdom demanded higher precision or unambiguity of terms before negotiations broke down, but this is a characteristic of the alliance design as a whole.

> choose to signal its commitment by assenting to these more costly terms given that it expects that the alliance will increase its ability to achieve its security goals. (Mattes 2012, 689, fn 38)

But her statistical analysis characterizes commitment devices as features of the bilateral alliance as a whole rather than as a provision agreed to by one, the other, or both states. The present analysis remedies this situation so that we may assess whether individual states behave as expected in terms of commitment provision in alliance design.

As discussed earlier, reputation is an important but potentially incomplete or misleading source of information on whether a state can be expected to abide by the overall terms of an alliance in the future. The extent to which the decision-making capability of a state's chief executive is constrained should be an important complementary indicator for what level of commitment-inducing military obligations the state may be required to agree to in order to successfully conclude the alliance. The expectation is not simple, however: the pressure on unconstrained leaders to provide sunk costs in alliance design as a signal of commitment is not absolute. The extent to which the regime of the partner state is constrained matters as well.

Hypothesis: A state with a less constrained leader is expected to agree to provide higher levels of military institutionalization when entering into an alliance with a state with a more constrained leader.

The reason the unconstrained regime is expected to agree thusly is analogous to that footnoted by Mattes (2012, 689, fn 38): the ease with which an unconstrained leader can

deviate in the future from the new status quo that the alliance treaty represents increases the likelihood that he must accede to commitment-inducing provisions in the present for the treaty to be successfully concluded. The constrained leader is not under the same pressure to provide sunk costs because deviating from the overall terms of the alliance in the future is inherently difficult.

Because the forms of military institutionalization under study potentially serve a dual purpose as commitment devices and as joint defense enhancers, other expectations for the typology of regime types are not formalized. If two states with constrained leaders enter into alliance, neither is expected to agree to provide higher levels of military institutionalization for commitment-inducing purposes. For both regimes, providing a sunk cost would be an unnecessary expense as reneging on the overall terms of the alliance in the future should be difficult. If two states with unconstrained leaders enter into alliance, neither is expected to agree to provide higher levels of military institutionalization for commitment-inducing purposes. The ease with which both leaders can renege on the overall terms of the alliance in the future and adapt their own defense policies to compensate for the loss of a partner increases the riskiness of providing a sunk cost for commitment purposes. Any of the regimes in both of these scenarios may still provide higher levels of military institutionalization, however, if the anticipated joint defense benefits are believed to outweigh any potential risks or losses to incurring the sunk cost. Only in the initial scenario for the formalized hypothesis is the effect of executive constraint on level of military institutionalization more likely to be distinguishable from noise.

Research Design

Because of theoretical reasons and data limitations, the scope of this analysis largely accords with that of Mattes (2012). The need for commitment-enhancing design elements should be more pressing in some alliance contexts than in others. In a bilateral alliance, if one's partner defects, the alliance itself and all its attendant benefits cease to exist. In a multilateral alliance,[36] the defection of one or even a few partners may not necessarily impact the alliance's sustainability or capacity to function as a credible deterrent against outside parties. Hence, concerns over the reliability of one's alliance partners should prompt the inclusion of commitment devices in the design of the agreement more often in a bilateral context than in a multilateral context.

The collapse of some types of alliances is more detrimental to a state's national security interests than the collapse of other types of alliances. A state whose partner reneges on an alliance with defense or neutrality obligations is both more likely to be attacked by opponents that the alliance had been deterring and more likely to be defeated in such an attack because the state has lost access to anticipated benefits of joint military coordination or faces a challenger that may even be receiving aid from the state's former alliance partner. A state whose partner reneges on an alliance with offense obligations is less likely to be able to coerce opponents with threats of military force and is less likely to win should the confrontation escalate. Hence, concerns over the reliability of one's alliance partner should make the inclusion of commitment devices in the design of the

[36] See Poast (2010) for a discussion on methodological concerns regarding the statistical analysis of multilateral alliances. Analyzing multilateral or k-adic events by analyzing all of the dyads that compose each k-adic event introduces bias via violations of the independence assumption. Instead, datasets for k-adic events should be constructed by choice-based sampling on the dependent variable, with samples drawn for negative observations stratified by k-ad (see King and Zeng 2001a, 2001b). My analysis is directional, however. As seen in Lupu and Poast (2014), for a directional k-adic analysis, the central actor in the k-adic event must be identifiable, an assumption I cannot make for my set of military alliances.

agreement more appealing when the alliance serves defense, neutrality, or offense purposes.

In contrast, the inclusion of commitment devices may not be appealing for pure consultation or pure nonaggression alliances when reliability concerns over one's partner exist. An opponent's likelihood of attacking a state or winning in such a confrontation does not seem directly impacted by whether or not the state's partner merely communicates about *potential* joint response (Mattes 2012, 691). Thus, the inclusion of commitment devices purely as such may be too costly compared to the benefit of the alliance remaining intact.

Going further, the inclusion of the type of commitment devices under study here is likely undesirable in a pure nonaggression alliance if reliability concerns exist over one's partner. The primary purpose of a nonaggression pact is to maintain peace between all members of the alliance. The types of commitment devices under study here generally involve a transfer of military capacity from one state to another. Thus, if reliability concerns exist over one's partner, the state is unlikely to agree to transfer the tools of its own demise to a potential challenger.

For these reasons, the data includes only bilateral alliances with defense, offense, or neutrality obligations for one or both members. The unit of analysis is directed-dyad-alliance.[37] Alliances and design details are extracted from the Alliance Treaty Obligations and Provisions datasets and codesheets (Leeds, Ritter, McLaughlin Mitchell, and Long

[37] Technically, directed-dyad-initial alliance phase. Observations from non-initial phases of multi-phase alliances have been omitted. The purpose of this study is to assess what factors drive alliance design in a context of limited information. Design changes resulting from a renegotiation of an existing treaty are likely linked to different factors than those influencing the design of new agreements.

2002; Leeds 2005a). For the present study, there are 232 alliances existing between 1919 and 2001 included in the data, making 464 total observations.[38]

Given the information provided by the ATOP Project alliance codesheets, several military institutionalization variables are checked and corrected for directionality. Variables of interest include provisions for contact between armed services (*milcon*), military aid (*milaid*), integrated command (*intcom*), the creation of bureaucratic organizations (and their primary purpose) (*organ1/orgpurp1* and *organ2/orgpurp2*), and the basing of military personnel (*base*) (Leeds 2005b). Logically, the provisions for contact between armed services, integrated command, and the creation of bureaucratic organizations are symmetric for both states in the alliance dyad and thus reflect the data from the ATOP datasets.[39] The provisions for military aid and basing rights indicate a small amount of asymmetry: 31 alliances (13.4%) featured provisions for military aid that varied by member and 34 alliances (14.7%) featured specifications for basing that varied by member.

In line with Schelling's argument about the true utility of many troop deployments, the coding for *base* has been modified to reflect the logic of commitment devices rather than which state is agreeing to host troops. Schelling (1966, 47) invokes the notion of a "trip wire" deterrent: what purpose does a modest forward deployment serve?—"Bluntly, they can die." Deployments abroad are not necessarily preparation to directly counter an invasion of an ally's territory. Instead, a leader can demonstrate his state's commitment to following through with its alliance obligations by stationing a

[38] Because this analysis of military institutionalization of alliances is largely limited by the availability of reputation data, the temporal scope accords with that of Mattes (2012) and Leeds, Mattes, and Vogel (2009).

[39] Theoretically, the primary purpose of a bureaucratic organization may vary for each alliance member, but the codesheets provide no conclusive evidence of this possibility.

quantity of troops abroad whose defeat would be too politically costly to ignore. By not responding to such a defeat, a leader directly increases his state's vulnerability internationally and directly and/or indirectly imperils his tenure. Revisionist states would be more confident in their ability to coerce the nonresponding state or to achieve early gains in a military confrontation with the nonresponding state. Domestic audiences to which the leader is accountable should protest the lack of regard for loss of life and/or recognize and protest the state's diminished security in the international system. These dynamics should be recognized by any potential challengers to the alliance, who would thus refrain from invading the area hosting the deployed troops.

Rather than retain the four-part categorical coding of *base* (Leeds 2005b, 28), the variable has been renamed to *deploy* and converted into a binary coding. A positive observation indicates that a state is providing troops to be stationed at an overseas or joint base or has been given permission to do so. Thus, an ATOP *base* coding of 1 indicating that states have agreed to jointly place troops on neutral territory is coded as a positive *deploy* observation for one, the other, or both states, dependent on exact treaty text. An ATOP *base* coding of 2 indicating that all treaty members are allowed reciprocal use of military facilities and basing privileges is coded as a positive *deploy* observation for both states. And an ATOP *base* coding of 3 indicating that at least one member's troops may be stationed in at least one other member's territory with this privilege not being reciprocal is coded as a positive *deploy* observation for one or the other state, dependent on exact treaty text.

Because each of the military institutionalization measures rarely bears a positive observation in isolation,[40] the measures are combined into a military institutionalization index similar to that developed by Leeds and Anac (2005) and used by Wallace (2008) and Mattes (2012).

The military institutionalization index is an ordinal dependent variable with a *milinst* coding of 0 indicating a low level of institutionalization, a *milinst* coding of 1 indicating a moderate level of institutionalization, and a *milinst* coding of 2 indicating a high level of institutionalization. The primary differences between Leeds and Anac's (2005) coding of this index and my own involve my assigning a coding to each state in the alliance dyad rather than to the alliance as a whole, a trivial change in the treatment of *base*, and my omission of the ATOP variables *subord* and *contrib*.

A state is assigned a high level of military institutionalization if it agrees to conducting a common defense policy (doctrine, training, and procurement are coordinated) (*milcon*=3) OR if it agrees to both a peacetime and wartime integrated command (*intcom*=1) OR if it agrees to deploy troops at an overseas or joint base or has been given permission to do so (*deploy*=1).[41]

A state is assigned a moderate level of military institutionalization if it does not qualify for a high level of institutionalization AND if the state is required to maintain official peacetime military contact between its armed services and its partner's (*milcon*=2) OR if the state provides its partner with military training or technology or training/technology coupled with grants (*milaid*=3 or *milaid*=4) OR if the state creates an

[40] For example, the most common form of military institutionalization, the formation of regular meetings or an organization (*organ1/organ2*) is present in 69 alliances (29.7%).

[41] Leeds and Anac (2005, 189) require *base* to be greater than zero; requiring *deploy*=1 is functionally indistinct.

organization with a primary military coordination function (*-1/orgpurp2*=1 or *orgpurp1/orgpurp2*=4). All states that are not assigned a high or moderate level of military institutionalization and have complete data on all relevant component variables are assigned a low level of military institutionalization.

Two ATOP variables are dropped from the classification criteria of a moderate level of military institutionalization: *subord* and *contrib*. The *subord* variable indicates whether the military forces of any state will be under the command of those of a partner during wartime (Leeds 2005b, 27). As the purpose of this study is to assess whether states that should be under some pressure to demonstrate their commitment do accede to commitment-facilitating devices in the design of their military alliances, the subordination measure is somewhat problematic. Unlike the other measures included in the military institutionalization index, subordination is not a sunk cost implemented relatively proximate to the treaty signing date. Acceding to subordination is a promise of future action in the event that the overarching purpose of the alliance is invoked. The logic of audience costs indicates that not every regime can credibly use this type of device to signal commitment. Hence, *subord* is dropped from the classification criteria of a moderate level of military institutionalization so that the index is composed of measures that are similar to each other in terms of signaling strength regardless of the characteristics of the enacting party.

The *contrib* variable is a binary variable indicating whether any state is providing troops, supplies, or funds or whether the states have agreed to cost-sharing provisions (Leeds 2005b, 28-9). The variable poses practical and theoretical concerns with respect to recoding for directionality, however. The codesheets sometimes reference alliance treaty

annexes not included in the ATOP Project data for details on the included provisions, preventing a judgment for coding directionality. The content yielding positive observations is highly varied and sometimes contradictory in intent. For example, the Anglo-Egyptian Treaty of 1936 specifies that "the number of British forces to be maintained in the vicinity of the Suez Canal shall not exceed, of the land forces, 10,000, and of the air forces, 400 pilots" (Leeds, Ritter, McLaughlin Mitchell, and Long 2000, ATOP2385). This limitation on troop contribution levels is a sharp contrast to the minimum troop contribution levels specified in the Greek-Serbian Alliance of 1913:

> Serbia provides all her land forces and Greece all her land and sea forces (Convention, Art. 1). When hostilities begin, Greece shall have an army of ninety thousand fighting men concentrated in the region […], and Serbia an army of one hundred and fifty thousand fighting men [….] (Leeds, Ritter, McLaughlin Mitchell, and Long 2000, ATOP1490)

The latter example also indicates a similar concern as discussed for *subord*. The *contrib* variable appears to sometimes code for promises of future action upon invocation of the alliance rather than for sunk costs provided shortly following signing. For these reasons, *contrib* is dropped from the classification criteria of a moderate level of military institutionalization.

In the sample, 58 states (12.5%) have agreed to high levels of military institutionalization and 55 states (11.9%) have agreed to moderate levels of military institutionalization.

Given the nature of the hypothesis, the key explanatory variable is the interaction between the level of executive constraint for the state whose military institutionalization

is being assessed and the level of executive constraint of its partner.[42] As discussed earlier, the *xconst* variable from the Polity Project datasets currently provides the most robust and comprehensive measure of executive constraint given the needs of the present study. For interpretative tractability in later statistical models and because the *xconst* variable's seven-point scale contains several unelaborated upon intermediate categories, the *xconst* codings are collapsed into a three-point scale as follows: values 1 and 2 are coded as low constraint (new value of 1); values 3, 4, and 5 are coded as medium constraint (new value of 2); and values 6 and 7 are coded as high constraint (new value of 3). In the data, 112 regimes (24.1%) are low constraint, 176 regimes (37.9%) are medium constraint, and 134 regimes (28.9%) are high constraint.

The model controls for a variety of factors that indicate a state's propensity for remaining committed to the alliance and that may otherwise influence a state's decision to accede to higher levels of military institutionalization. As discussed earlier, a reputation for violating the terms of previous military alliances is likely an important though imperfect indicator of a leader's likelihood of violating subsequent alliances. Unreliable leaders should be cognizant of how others are likely to perceive their past actions and should be more likely to agree to providing commitment devices in the form of higher levels of military institutionalization in order to finalize the signing of a military alliance.

The control for alliance violation history is a binary variable created by the procedure outlined in Mattes (2012) using data from Leeds, Mattes, and Vogel (2009); Goemans, Gleditsch, and Chiozza's (2009a, 2009b) Archigos dataset; and the ATOP Project. A reputation for unreliability is considered to be an attribute of the chief

[42] Constituent terms for the interaction are included for all models. See Tsai and Gill (2013).

executive rather than of the state. While some scholars such as Crescenzi et al. (2012, 263-4) argue for a state-specific treatment of reputation because of the demonstrated longevity of many alliance treaties across the tenures of ideologically different leaders, the peculiarity of equating newly elected or installed leaders with a foreign policy tabula rasa, and the variation in foreign policy decision-making capability across different regimes, such an approach is not without its flaws. At what point, if ever,[43] do past instances of alliance violation cease to be salient to the generation of reputation? As a robustness check, Gibler (2008) replaces his leader-specific reputation explanatory variables with a ten-year cumulative state-specific lag, whereas Crescenzi et al. (2012) use an exponential decay function[44] for a state's alliance history that informs its reputation with other states in the system. Neither approach is strictly wrong, but the observed tenor of foreign policy responses to undesirable events or leadership turnover suggests that the assumption of leader-specific reputations is more tenable.

Across a series of works, McGillivray and Smith (2000; 2006; 2008) present game-theoretic models of the benefit of leader-specific punishment and provide experimental and statistical support: when international sanctions against conflictual or non-cooperative foreign policy are linked to the continued tenure of the problematic leader, a state wherein the domestic audience is better able to remove said leader will more quickly resume cooperative international relations (alternatively, leaders of such

[43] Mercer (1996) argues that treating reputation as an end motivating foreign policy actions is not prudent because under the assumptions of realism and insights of social psychology, perceived reputations are unlikely to change. Because "desirable out-group behavior elicits situational explanations, and undesirable out-group behavior elicits dispositional explanations," allies tend to able to generate reputations only for irresolution and adversaries only for resolve (Mercer 1996, 46). Under realist concerns over abandonment by one's allies and suspicions over the motives of one's adversaries, an ally's behaving supportively and an adversary's backing down cannot inform the formation of reputation because both actions are dismissed as occurring under situational coercion.

[44] Within a dyad, the informative value of past upholding/violating events declines more rapidly as more time passes absent new events but declines less rapidly as the accumulated number of events increases.

states are disincentivized from behaving aggressively or non-cooperatively from the start).[45] Leadership transitions are frequently considered opportunities to establish or reestablish more cooperative relations between states than had been possible under previous administrations. A recent example involves the United States' attempt to rebuild relations with Russia in 2009. Soon after President Obama assumed office, Secretary of State Hillary Clinton presented Russian Foreign Minister Sergey Lavrov with a literal "reset" button,[46] and for the next couple of years, both states concluded mutually amenable negotiations, typically in the realm of arms control.[47]

Leeds, Mattes, and Vogel (2009) assess bilateral military alliances formed between 1919 and 1989 that still existed between 1919 and 2001 for instances of treaty obligation violations by one or both states.[48] An alliance is coded as having been violated if:

> (1) a major provision is violated and the governments do not indicate their intention to continue to recognize the alliance in spite of the violation or (2) one or more of the allied governments specifically declares that it will no longer recognize or be bound by the alliance agreement despite the fact that the alliance has not reached its scheduled termination date. (Leeds and Savun 2007, 1124)

Combining Leeds, Mattes, and Vogel's (2009) data and data on leadership tenures from Goemans, Gleditsch, and Chiozza's (2009a, 2009b) Archigos dataset, I construct a pair of

[45] Experimental findings indicate that even absent outside sanctions, leader turnover does wipe the reputational slate clean to some extent: in a series of prisoner's dilemma games, if the opposing team had defected in the previous round but experienced a leader change in the current round, they were less likely to be defected against than if no leader change had occurred (McGillivray and Smith 2008, 89-108).
[46] Unfortunately, the button was emblazoned with *перегузка* (peregruzka) meaning "overload" or "overcharged" rather than with *перезагузка* (perezagruzka) for "reset" or "reboot" (Dougherty 2009).
[47] See U.S. White House Office of the Press Secretary (2010) and *The Economist* (2011).
[48] Their sample includes 234 alliances from the ATOP Project with all pure non-aggression pacts having been excluded.

binary variables for violation history (one for each state in the bilateral alliance) coded 1 if the chief executive has previously violated one or more alliances.[49] At the signing of forty-nine (21.1%) of the sample's alliances, one leader has a reputation for unreliability. At the signing of 2 alliances (0.9%), both leaders have a reputation for unreliability.

Again, the expectation for subsequent statistical models is that leaders with a history of violating past alliances will be more likely to obligate their states to higher levels of military institutionalization in the present alliance.

A state's power status in the international system, especially relative to that of its alliance partner, may affect what level of military institutionalization it will agree to as a reflection of expectations of its future reliability, negotiating leverage, and capacity for contributing toward joint defense. Building on Morrow (1991), Leeds and Savun (2007) argue and find support that asymmetric alliances (those between a major power and a minor power) are less likely to end in violation of their terms because these types of alliances are more likely to yield gains beyond security derived from the pooling of defensive resources.[50] By extension, asymmetric alliances should be less likely to require higher levels of military institutionalization as a commitment device (although whether there should be any difference in the terms agreed to by each state is unclear). Bennett (1997), however, finds that the estimated duration of alliances is dependent on the operationalization of power status for alliance members, indicating weaker support for Morrow's (1991) hypothesis.[51]

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[49] Alliances drafted entirely in secret or with any secret provisions are excluded and not considered to contribute toward the generation of a reputation for unreliability because of uncertainty concerning what information outside parties were privy to at the time of the alliance's dissolution.

[50] Whereas the minor power primarily gains security (an "umbrella" provided by the major power), the major power gains some unspecified nonmilitary benefit.

[51] He uses two variables in his models: one derived from Morrow's (1991) three-part classification of superpowers, major powers, and minor powers and the other derived from Singer, Bremer, and Stuckey's

Mattes (2012) discards the assumption that future reliability is motivated by implicit issue linkage in favor of measuring past unreliability directly and interacting this variable with the power status of the alliance dyad. Also building on Morrow (1991, 2000), she hypothesizes that symmetric alliances (major-major or minor-minor pairings) with at least one unreliable member are more likely to incorporate commitment devices than symmetric alliances with no unreliable members because worries about possible defection are more pressing when the alliance more purely concerns capability aggregation. Since neither state holds a negotiating advantage due to power status, commitment devices will be included if necessary in order for the alliance to be concluded at all. In contrast, she hypothesizes that asymmetric alliances with at least one unreliable member are no more likely to incorporate commitment devices than asymmetric alliances with no unreliable members because the power imbalance actively impedes each member's ability or desire to incorporate commitment devices. A minor power has little negotiating leverage to compel a major power to agree to commitment devices whereas a major power is not sufficiently concerned about an unreliable minor power's steadfastness to bother insisting upon commitment devices.[52] Again, whether there should be any difference in the terms agreed to by each state based on its power status is unclear because Mattes' narrative examples tend to link directionality of obligations to unreliability status rather than to power status.[53]

(1972) capability concentration index measuring the military capabilities of each state relative to those of the other states in the alliance.

[52] A major power is confidant either in its ability to counter adversaries alone or in the minor power's incentive to exercise self-restraint given its security loss or whatever additional punishments it may suffer should it defect.

[53] See Mattes (2012, 689, fn 38).

Interestingly, because Morrow (1991) centers his argument about alliance longevity and power balance on the tradeoff between security and autonomy rather than on a theory concerning unreliability and commitment devices, he provides a narrative example that potentially conflicts with the logical extension to Leeds and Savun's (2007) analysis mentioned earlier:

> Alternatively, [the major power] could form an alliance with a minor power that reduces its security but raises its autonomy through concessions made by the minor power to secure the alliance. These concessions could include military bases that provide strategic location for the projection of power or agreements that allow the major power to intervene in the minor power's domestic politics in the future. (Morrow 1991, 914)

This example both illustrates the multifaceted character of military institutionalization obligations—they can function as the means to aggregation of alliance members' capabilities, as potential commitment devices, and as the tools of informal imperialism—as well as the theoretical difficulty in attributing an obligation's directionality in terms of commitment provision. Whereas Morrow (1991, 914) proposes that a minor power's hosting a base binds it to the alliance, Schelling (1966, 47) indicates that (an ostensibly major power) state's providing troops abroad binds it.

Olson and Zeckhauser (1966) suggest an alternative mechanism to reassurance in their argument about burden sharing and public goods provision in alliance that may explain why major powers should be expected to agree to provide higher levels of military institutionalization. In a highly stylized scenario ignoring income effects, "the

defense expenditures of the two nations are such that the "larger"[54] nation—the one that places the higher absolute value on the alliance good—will bear a *disproportionately* large share of the common burden" (Olson and Zeckhauser 1966, 269). In isolation, each state would purchase defense at the level where their valuation curves sit parallel to the cost curve; but in alliance, the collective purchase of defense would not be additive because a marginal unit of defense is valued less than its marginal cost. Both under-provision of the public good and severe freeriding would occur: the larger state would purchase defense as if in isolation and the smaller state would purchase no defense at all. Even when assumptions concerning no income effects, constant and equal defense costs, and no private benefits of alliance expenditures are relaxed, disproportionality in alliance burden-sharing remains.[55]

If the motives for the inclusion of military institutionalization obligations in alliances with respect to power status remain theoretically contentious, then it is possible that the likelihood of inclusion cannot be determined ex ante. So, I include variables for alliance members' relative power status in subsequent statistical models, but I do not take a position as to whether any particular status or status combination makes alliance text more likely to feature higher levels of military institutionalization.

I construct two sets of measures to indicate the relative power status of the states within the alliance: a pair of binary variables for major power status (one for each state in the bilateral alliance) coded 1 if the state is a major power and a continuous variable for

[54] Size is discussed primarily in terms of economic capacity. But because cited measures such as population and GNP are also discussed in classifications of power status, the implications of the model may still apply in present context (Olson and Zeckhauser 1966, 270).

[55] Only if defense is considered a superior good—a good for which the increase in proportional consumption exceeds any proportional income increase—does disproportionality in burden-sharing disappear (Olson and Zeckhauser 1966, 270).

the logged ratio of the state of interest's Composite Index of National Capability (CINC) score to the partner state's CINC score. Data on major power status is derived from the Correlates of War Project dataset on major powers (Correlates of War Project 2011), and data on CINC scores[56] is derived from the Correlates of War Project dataset on National Military Capabilities, v4.0 (Singer, Bremer, and Stuckey 1972; Singer 1987; and Correlates of War Project 2010). The two binary major power variables are interacted with constituent components included in subsequent statistical models, and the continuous CINC score ratio serves as a robustness check substitute. As per the COW major power definitions, the majority of alliances are between two minor powers (119 alliances or 51.3%). Alliances between two major powers are rare (10 alliances or 4.3% with the remaining 103 alliances or 44.4% being asymmetric alliances). Logging the ratio of the states' CINC scores produces a scale such that a value of zero indicates absolute parity between the state of interest and its partner. The CINC ratio ranges from -9.01 to 9.01 with a standard deviation of 2.86.

A state's status as a democracy may capture dynamics separate from level of executive constraint that influence the state's likelihood of agreeing to higher levels of military institutionalization. Recall the arguments of Gaubatz (1996), Doyle (1983), and Oneal and Russett (1999) referenced earlier. Normative features of liberal democracy such as free speech protections, social welfare provisions, and political process participation and representation rights may discourage interventionism and encourage

[56] The Composite Index of National Capability "is generally computed by summing all observations on each of the 6 capability components for a given year, converting each state's absolute component to a share of the international system, and then averaging across the 6 components" (http://www.correlatesofwar.org/data-sets/national-material-capabilities). The six capability components are total population, urban population, military personnel, military expenditures, primary energy consumption, and iron and steel production.

adherence to international agreements via public investment in and influence over governance. By extension, a democracy should be less likely to agree to provide higher levels of military institutionalization because these provisions are costly and unnecessary as commitment devices. When an emphasis on the features of the concept of democratic regime type is important, conventional practice in the international relations literature involves constructing a binary variable for democracy from the aggregate *polity* score. Any state that scores at least a 5 or a 6 (occasionally a 7, especially if the intent is to capture the concept of liberal democracy) for the aggregate *polity* score is classified as a democracy.

This conventional practice is problematic both theoretically and statistically in my study, however. As discussed earlier, the aggregate *polity* score is calculated using five of the six component variables that the Polity Project codes for—*xrcomp, xropen*, *xconst*, *parcomp*, and *parreg* (Marshall, Gurr, and Jaggers 2014b). Most of these component variables capture institutional regime features rather than the normative characteristics that Doyle (1983) indicates are critical for assessing whether a regime is a liberal democracy. Of the commonly used democracy measures within the discipline,[57] the Freedom House Political Rights and Civil Liberties ratings are likely the best sources of information on the socioeconomic and participatory norms associated with liberal democracy. Freedom House's Civil Liberties rating in particular appears useful as a data source on regime features related to freedom of expression and belief, associational and organizational rights, rule of law, and personal autonomy and individual rights (Freedom

[57] See Pemstein, Meserve, and Melton (2010) for a review of past datasets and their measurement strategies as well as for an introduction to Pemstein, Meserve, and Melton's own Unified Democracy Scores dataset, built using a Bayesian latent variable approach. See also Boix, Miller, and Rosato (2013) for a new dichotomous measure.

House, 2016). Freedom House Political Rights and Civil Liberties ratings are available only for years 1972-2016, however, severely limiting this data source's usefulness for a study of military alliances.

The aggregate *polity* score is likely relied on so often in the literature because of its attractive scope properties. And even although the aggregate *polity* score is primarily a measure of institutional regime features, some of its component data do reference the participatory norms that Doyle (1983) identifies as important to the classification of liberal democracy. The *parcomp* and *parreg* variables code for "the extent to which alternative preferences for policy and leadership can be pursued in the political arena" and "the extent that there are binding rules on when, whether, and how political preferences are expressed," respectively (Marshall, Gurr, and Jaggers 2014b, 25-6). However, because there is a significant difference between the possible combinations of component codings that comprise any given aggregate *polity* score and the actual combinations present, use of the aggregate *polity* score as a control for democracy is statistically problematic given that my explanatory variable for my models of military institutionalization is *xconst*. In an analysis of the composition of the aggregate *polity* score in the Polity III dataset, Gleditsch and Ward (1997, 380) find that "although the degree of executive constraints accounts for only 4 of the possible 10 democracy scale points, […] this variable virtually determines the democracy and autocracy scale values." They find through tree-based modeling how the path to high values on the democracy scale is highly constrained and overly determined by high values of the *xconst* variable and that of all the component variables contributing to the aggregate *polity* score, the *xconst* variable is the most substantially correlated to all Polity scales—the democracy

scale, the autocracy scale, and the aggregate *polity* score (the democracy minus autocracy scale). Consequently, if I were to include a variant of the aggregate *polity* score as a control for democracy alongside my explanatory *xconst* variable, my models would likely suffer from multicollinearity problems.[58] Even if some of the limitations of Gleditsch and Ward's (1997) methods are statistically corrected, the *xconst* variable still dictates the aggregate *polity* score to a substantial degree. Jones (2013) finds that the *xconst* variable accounts for about thirty to forty percent of the conditional permutation importance of the three Polity IV scales using a conditional inference random forest analysis.

For these statistical reasons and the circumstance that the aggregate *polity* score does not cleanly proxy for the phenomena that Gaubatz (1996) and Doyle (1983) identify as important explanations for democracies' commitment, I use Vanhanen's Polyarchy Index of Democracy, v2.0 as a data source to construct a binary variable coded 1 if the state qualifies as a democracy by Vanhanen's recommended thresholds. This dataset both has attractive scope properties for an analysis of military alliances (the years 1810-2000 are covered) and more explicitly addresses both Dahlian democratic dimensions—contestation and participation—than other existing regime type datasets.[59] Vanhanen's (n.d., "Introduction," 9-10) *comp* variable measures "the smaller parties' share of the votes cast in parliamentary or presidential elections, or both" ("calculated by subtracting the percentage of votes won by the largest party from 100") and his *part* variable

[58] Overfitting is one concern associated with multicollinearity. If the sample is sufficiently small relative to the number of parameters in the model, the introduction of redundant independent variables may lead the model to describe random noise within the data rather than predict the phenomenon of interest. Otherwise, even if the phenomenon of interest is reasonably predicted by the model as a whole, multicollinearity hinders the ability to make inferences on which of the redundant parameters is exerting an effect on the dependent variable. And because multicollinearity inflates the standard errors of the affected variables, the affected variables may appear to exert no effect on the dependent variable when one, several, or all actually do. See Agresti and Finlay (2009, 334, 456-8) and Wooldridge (2006, 101-4)

[59] See Munck and Verkuilen's (2002) critique that most existing regime type datasets omit any reference to participation, whether in the form of suffrage rights or voter turnout.

measures "the percentage of the population which actually voted in the same elections" ("calculated from the total population, not from the adult or enfranchized [sic] population"). He assumes that these dimensions should carry equal weight and constructs an Index of Democratization (*ID*) variable by multiplying *comp* and *part* together and dividing the result by 100 (Vanhanen n.d., "Introduction", 17). While he cautions that choosing any threshold above which a regime is labeled democratic and below which it is labeled non-democratic is largely arbitrary, he suggests that the following thresholds are reasonable approximations:

> The countries that have reached all three minimum threshold values (30 percent for Competition, 10 percent for Participation, and 5.0 index points for ID) can be regarded as democracies. (Vanhanen n.d., "Introduction," 21-2)

One hundred sixty-four regimes (35.3%) are democratic by this definition, and 121 alliances (52.2%) include at least one democratic regime.

Again, the expectation is that a state with these characteristics should embrace a set of normative democratic values that lower the likelihood that it would renege on a military alliance, thus lowering the likelihood that it would agree to correspondingly unnecessary commitment devices (in the form of higher levels of military institutionalization).

The presence of ongoing alliances is also a relevant control for this analysis: a state should be less likely to agree to provide higher levels of military institutionalization if it has one or several ongoing alliances with the current partner because the very continuation of these previous alliances demonstrates the state's reliability and lack of need for offering a commitment device. The more ongoing alliances that exist between a

state and its current partner, the more robust the conclusion about the state's general reliability can be assumed to be.

I construct two count variables reflecting the number of existing military alliances including the state of interest and its current partner using data from the ATOP Project. The first count variable follows the procedure outlined in Mattes (2012, 696): pure nonaggression alliances are omitted from the count because neither state's to-present unwillingness to attack the other provides much information on how either would react to provisions requiring active cooperation.[60] However, some of the alliances remaining under this procedure also require no upfront active cooperation. For example, France and Czechoslovakia signed the Treaty of Alliance and Friendship on January 25, 1924, a treaty with only symmetric consultation obligations (League of Nations Treaty Series [LNTS] 1924). This was the only alliance tie possibly informing the adoption of the Treaty of Mutual Guarantee between France and Czechoslovakia, a mutual defense pact signed at Locarno on October 16, 1925 (LNTS 1926).[61]

So, I also construct a second count variable for all existing military alliances between the state and its current partner as a robustness substitute. As per the procedure outlined by Mattes (2012), dyads signing an alliance share between 0 and 3 preexisting bilateral or multilateral alliance ties. One hundred sixty-seven alliances (72.0%) are signed by dyads sharing no ongoing alliance ties, 46 alliances (19.8%) are signed by dyads sharing one ongoing alliance tie, 16 alliances (6.9%) are signed by dyads sharing two ongoing alliance ties, and 3 alliances (1.3%) are signed by dyads sharing three

[60] This logic also informs the data concerning past instances of alliance violation from Leeds, Mattes, and Vogel (2009, 469, fn 1).

[61] Whether any consultation under the 1924 treaty's specified terms or the general staff coordination anticipated by the states' foreign ministers in subsequent secret correspondence actually occurred is unclear (Lukes 1996, 34).

ongoing alliance ties. If pure nonaggression pacts are not excluded, the range of preexisting alliance ties remains the same. One hundred twenty-eight alliances (55.2%) are signed by dyads sharing no ongoing alliance ties, 80 alliances (34.5%) are signed by dyads sharing one ongoing alliance tie, 17 alliances (7.3%) are signed by dyads sharing two ongoing alliance ties, and 7 alliances (3.0%) are signed by dyads sharing three ongoing alliance ties.

As the number of ongoing alliances between the state and its partner increases, the state should be less likely to agree to provide higher levels of military institutionalization both because an earlier alliance may have already codified a set of commitment devices, making any new devices redundant and costly, and because the experience of each additional alliance adds to the collection of evidence concerning the state's assumed reliability.

Finally, the international environment is a relevant control for this analysis: the more threatening the international environment appears to the state, the more likely the state is to agree to provide higher levels of military institutionalization because these provisions further the alliance's collective defense and deterrence capabilities. I construct measures for the amount of threat perceived by the state by generally following the procedure outlined in Leeds and Savun (2007), using data from the ATOP Project, COW Direct Contiguity v3.1 dataset (Correlates of War Project 2007; and Stinnett, Tir, Schafer, Diehl, and Gochman 2002), the COW Colonial/Dependency Contiguity v3.0 dataset (Correlates of War Project 2003), the COW major powers dataset (Correlates of War Project 2011), the COW National Material Capabilities v4.0 dataset (Correlates of War Project 2010; and Singer, Bremer, and Stuckey 1972), Häge's (2011a; 2011b) Measures

of Foreign Policy Similarity v1.0, and Maoz (1996). In short, the threat environment variable sums the military-relevant capabilities of the state's likely potential adversaries.

First, the state's politically relevant international environment (PRIE) for the year in which it is signing an alliance must be identified. The global landscape of states is restricted to those that are most likely to have substantial interactions with the state in question. Maoz (1996, 139) indicates that a state's PRIE "includes all states that are directly or indirectly[62] contiguous to it, all regional powers of its own geographic region, and all major powers with global reach capacity." I combine Maoz's (1996) codings of regional and global powers and the Correlates of War Project's codings of major powers as follows in Table 1.

[62] I use a more expansive definition of colonial contiguity than Maoz appears to. He defines indirect contiguity as "a case where either [state] *B* is contiguous to a colony, principality, or mandated territory controlled by [state] *A* or vice versa" (Maoz 1996, 168). I include instances as indirectly contiguous where state B's holding is contiguous to state A's holding, whereas Maoz appears to omit these instances. The series of conflicts comprising the French and Indian Wars between 1688 and 1763 are a prominent example of conflict between two colonial holdings exacerbated by and feeding back into interstate conflict between the holdings' imperial sovereigns.

Table 1: World and Regional Powers, 1816-2011

Country Code	State	Beginning Date	End Date	Region
2	United States of America	1823-01-01	1898-08-12	Americas
2	United States of America	1898-08-13	2011-12-31	World
200	United Kingdom	1816-01-01	2011-12-31	World
220	France	1816-01-01	1940-06-22	World
220	France	1945-08-15	2011-12-31	World
255	Germany	1816-01-01	1866-12-31	Europe
255	Germany	1867-01-01	1918-11-11	World
255	Germany	1925-01-01	1945-05-07	World
255	Germany	1991-12-11	2011-12-31	World
300	Austria-Hungary	1816-01-01	1918-11-03	Europe
325	Italy	1860-01-01	1943-09-02	Europe
325	Italy	1860-01-01	1943-09-02	Africa
365	Russia	1816-01-01	1917-12-05	Europe
365	Russia	1816-01-01	1917-12-05	Asia
365	Russia	1922-01-01	1991-12-31	World
365	Russia	1992-01-01	2008-08-07	Europe
365	Russia	1992-01-01	2008-08-07	Asia
365	Russia	2008-08-08	2011-12-31	World
710	China	1950-01-01	1999-12-31	Asia
710	China	2000-01-01	2011-12-31	World
740	Japan	1895-04-01	1945-08-14	Asia
740	Japan	1991-12-11	2011-12-31	World

Sources: Maoz (1996, 139); and Correlates of War Project (2011). Personal discretion is exercised for the most recent codings of Russia and China.

Next, states that are less likely to be potential adversaries are dropped from the state's PRIE. States with which the state of interest has an ongoing alliance are excluded from the list of likely potential adversaries as are states with which the state of interest shares a substantively similar foreign policy portfolio. More recent literature within international relations tends to use Signorino and Ritter's (1999) S-score as a measure for the similarity of foreign policy positions between states. Typically, alliance membership data serves as the basis for calculating S-scores because of its attractive scope properties for many international relations applications, but any foreign policy data with rankable properties (e.g., UN voting records, trade data, or a combination thereof) can be used.

Different types of alliances are assumed to be ranked in terms of intensity of obligations and level of cooperative behavioral expectations. Having no alliance is obviously the least demanding relationship, whereas an entente[63], then a neutrality[64] or nonaggression[65] treaty, and finally a defense[66] treaty are increasingly more demanding (Bueno de Mesquita 1975, 195; Signorino and Ritter 1999, 117). Whereas a previous measure of association, Kendall's tau-b as implemented by Bueno de Mesquita (1975) compared two states' rankings of alliance commitments,[67] Signorino and Ritter's S-score better measures the similarity of two state's alliance portfolios by leveraging the distance between the policy choices in the input data. The S-score is a continuous variable ranging from -1 to 1, where increasing values indicate that the states of interest have increasingly similar alliance relationships with the rest of the states in the system. Deviating slightly from Leeds and Savun (2007, 1127, fn 20),[68] I find the median global unweighted S-score[69] for each year to use as a threshold for distinguishing likely benign states from likely potential adversaries. Any state with an S-score greater than or equal to the median global S-score during the year in which the state of interest is signing an alliance is

[63] An alliance with "signed terms that included an understanding that the state would consult with one or more states in the alliance if a crisis occurred" (Gibler 2013, 3).
[64] An alliance with "signed terms that included neutrality toward one or more states in the alliance" (Gibler 2013, 3).
[65] An alliance with "signed terms that included a promise of non-aggression toward one or more states in the alliance" (Gibler 2013, 3). Note that the Correlates of War Project Formal Alliances dataset that these definitions are referencing did not code neutrality pacts and non-aggression pacts separately until version 4.1.
[66] An alliance with "signed terms that included defense of one or more states in the alliance" (Gibler 2013, 3).
[67] Signorino and Ritter (1999, 121-3) identify three main problems with interpreting Kendall's tau-b as a measure of foreign policy similarity: a mathematically perfectly negative association does not mean that every alliance commitment that each state of interest has with another state is different; some identical sets of alliance portfolios produce mathematically undefined scores; and scores may change even when the same cluster of dyads is moved from one type of alliance to another.
[68] Leeds and Savun (2007) calculate the median global S-score over the entire 1816-2000 period under their analysis. As it is not computationally difficult to do, I calculate on a yearly basis for greater precision.
[69] I use Häge's (2011b) *srsvas* variable for S-score as it represents the unweighted S-score using squared distances and ranked alliance data.

dropped from the state of interest's PRIE. In order to create a robustness substitute threat variable, I use the same procedure outlined thus far but substitute Cohen's (1960) kappa[70] for S-score as the foreign policy similarity measure.

Häge (2011a) provides a compelling argument for why Scott's (1955) pi and Cohen's kappa may function better empirically than S-score as a measure for foreign policy similarity. The three measures mentioned so far can use military alliance membership as a behavioral manifestation of a state's foreign policy outlook. But military alliances are costly to negotiate and maintain. Their existence reflects to a great extent a state's capabilities rather than simply its preferences on which states with whom to associate cooperatively. Empirically, military alliances are rare events, and the S-score computation and scale does not, for instance, register two states' sharing similar dense networks of alliances as being as impressive as it actually is. As measures that correct for chance in the proportion of dissimilarity within the dyad, Cohen's kappa adjusts for prevalence[71] and bias,[72] whereas Scott's pi adjusts for prevalence only. I substitute Cohen's kappa in for S-score as a robustness check because it functions better for data representing costly actions such as negotiating and concluding alliances than Scott's pi does.

The states remaining in the state of interest's PRIE are assumed to be the most likely potential adversaries of the state of interest in the international system for the year in which the state of interest signed an alliance. The threat environment variables are

[70] I use Häge's (2011b) *kappava* variable for Cohen's kappa as it represents Cohen's kappa using squared distances and ranked alliance data.
[71] Prevalence indicates symmetrically unbalanced marginal distributions (e.g., the proportion of no alliance relationships exceeds the proportion of alliance relationships). See Häge (2011a) and Byrt, Bishop, and Carlin (1993).
[72] Bias indicates asymmetrically unbalanced marginal distributions (e.g., individual states have varying likelihood of entering into alliances). See Häge (2011a) and Byrt, Bishop, and Carlin (1993).

continuous variables summing the CINC scores for all states in the state of interest's PRIE. Using the CINC scores as an indicator of threat is advantageous because the state of interest may be justifiably wary of another state even absent a recent or ongoing militarized interstate dispute with that state and because a simple count of likely potential adversaries says little about their capacity for following through on any revisionist intentions (Mattes 2012, 696). The threat environment variable built using S-scores ranges from near-zero[73] to 0.83 with a mean of 0.28 and a standard deviation of 0.21. The threat environment variable built using Cohen's kappa ranges from near-zero to 0.83 with a mean of 0.24 and a standard deviation of 0.18.

Again, the expectation is that as the value of the threat environment variable increases, the state of interest is more likely to agree to provide higher levels of military institutionalization as a means of assuring the alliance's collective defense and deterrence capabilities.

[73] As every country has a non-zero total population, the CINC score can never be true zero. In the data, states' CINC scores range from near-zero to 0.35 with a mean of 0.04 and a standard deviation of 0.06.

Findings

Although the main dependent variable, the military institutionalization of the state of interest, is a three-category ordinal variable, a series of linear regressions are performed as an initial query into whether the interaction between both states' executive constraint exerted the expected effect on the dependent variable. Model 1a assesses the effect of only the interaction of both states' executive constraint—the interaction's constituent terms are also included as per Brambor, Clark, and Golder (2006). Model 2a adds controls for the state of interest's leader's history of violating past alliances, both states' major power status and these variables' interaction, the state of interest's democracy status, the number of ongoing alliances involving both states (restricted as per Mattes (2012)), and the state of interest's threat environment (using S-score). Model 3a substitutes in several robustness control variables: the CINC ratio for major power status, the unrestricted number of ongoing alliances for the restricted set, and the state of interest's threat environment using kappa for that using S-score. Model 4a applies the base regression of Model 2a but for a set of alliances excluding those formed after 1989 by former Soviet states and European members of the Eastern Bloc.[74] And Model 5a applies the base regression of Model 2a but for a set of alliances excluding those formed during wartime.[75] All models employ state fixed effects (in Table 2, coefficients for state dummies are not shown and standard errors are marked in brackets).

[74] As several of these states had to form new independent governments or otherwise experienced significant regime change, it is possible that any alliances formed by these states after the end of the Cold War were for non-military purposes such as ideological realignment.

[75] This analysis's hypothesis and informal expectations should be most strongly in evidence in this set of alliances if theoretical arguments about military institutionalization's potential as a commitment device have merit.

Table 2: Linear Analysis of the Effect of the Interaction between Both States' Executive Constraint on State A's Military Institutionalization (Alliances, 1919-2001)

	Model 1a		*Model 2a*		*Model 3a*	
	Estimate Std. Err.	*P-value*	*Estimate Std. Err.*	*P-value*	*Estimate Std. Err.*	*P-value*
State A's executive constraint	-0.339	0.028	-0.503	0.001	-0.499	0.002
	[0.154]		[0.153]		[0.156]	
State B's executive constraint	-0.402	0.006	-0.359	0.010	-0.360	0.012
	[0.146]		[0.139]		[0.143]	
State A's executive constraint × *State B's executive constraint*	0.145	0.024	0.129	0.033	0.125	0.046
	[0.064]		[0.060]		[0.062]	
Violation history			-0.054	0.645	-0.143	0.236
			[0.116]		[0.120]	
State A's major power status			0.286	0.441		
			[0.370]			
State B's major power status			0.084	0.366		
			[0.093]			
State A's major power status × *State B's major power status*			-0.581	0.001		
			[0.167]			
CINC ratio					0.055	0.002
					[0.018]	
Democracy			0.450	0.000	0.343	0.005
			[0.118]		[0.122]	
Ongoing alliances			0.231	0.000		
			[0.058]			
Ongoing alliances (unrestricted)					0.119	0.026
					[0.053]	
Threat environment (S-score)			-0.240	0.161		
			[0.171]			
Threat environment (kappa)					-0.268	0.251
					[0.233]	
N	370		367		364	
Adjusted R-squared	0.518		0.591		0.518	

Table 2, continued: Linear Analysis of the Effect of the Interaction between Both States' Executive Constraint on State A's Military Institutionalization (Alliances, 1919-2001)

	Model 4a		*Model 5a*	
	Estimate Std. Err.	*P-value*	*Estimate Std. Err.*	*P-value*
State A's executive constraint	-0.604	0.001	-0.515	0.001
	[0.187]		[0.160]	
State B's executive constraint	-0.267	0.087	-0.396	0.007
	[0.155]		[0.145]	
State A's executive constraint × *State B's executive constraint*	0.117	0.097	0.138	0.030
	[0.070]		[0.064]	
Violation history	0.085	0.577	-0.061	0.610
	[0.151]		[0.119]	
State A's major power status	-0.047	0.943	0.502	0.252
	[0.655]		[0.437]	
State B's major power status	-0.004	0.969	0.089	0.336
	[0.113]		[0.092]	
State A's major power status × *State B's major power status*	-0.445	0.017	-0.557	0.003
	[0.184]		[0.182]	
CINC ratio				
Democracy	0.624	0.001	0.426	0.000
	[0.177]		[0.116]	
Ongoing alliances	0.178	0.009	0.216	0.000
	[0.068]		[0.057]	
Ongoing alliances (unrestricted)				
Threat environment (S-score)	-0.164	0.494	-0.315	0.076
	[0.239]		[0.177]	
Threat environment (kappa)				
N	271		339	
Adjusted R-squared	0.610		0.602	

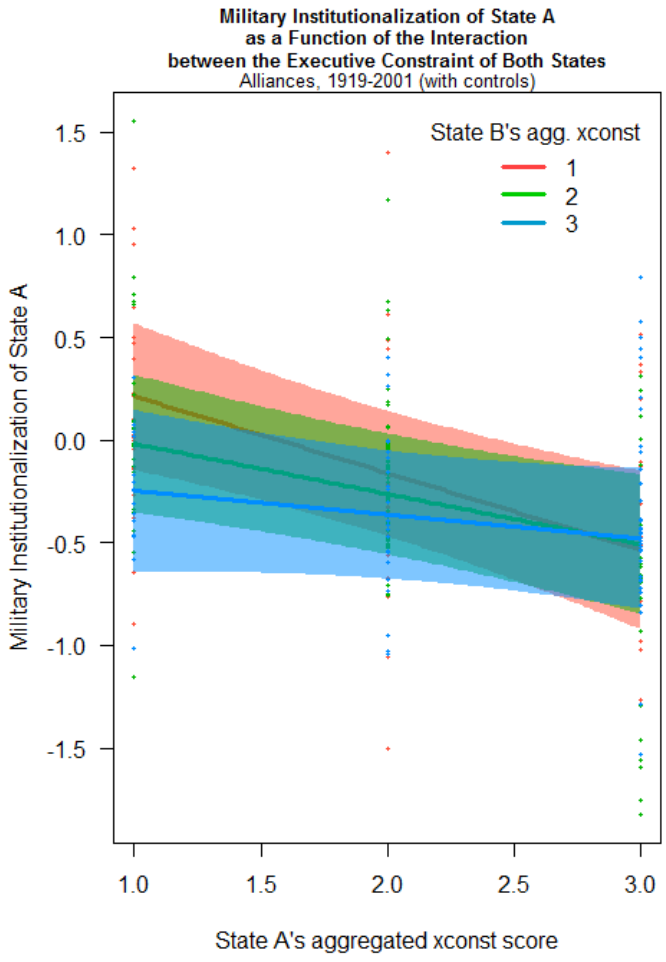
Swapping in robustness-substitute controls and restricting the dataset in various ways do not appear to substantially alter the regression results. Overall, the regression results do not appear to strongly support the hypothesis and informal expectations, nor do all of the controls behave as expected. If the state of interest's regime is minimally constrained and that of its partner is maximally constrained, the state of interest is not more likely to agree to provide higher levels of military institutionalization versus other regime combination scenarios in a statistically differentiable manner. Additionally, the state of interest's being a democracy and both states' sharing a greater number of preexisting alliance ties are factors associated with the state of interest agreeing to provide higher levels of military institutionalization rather than lower levels as expected per commitment arguments previously discussed. The control for the state of interest's leader's history of violating alliances is inconsistent across models and statistically insignificant. A more threatening environment for the state of interest is associated with the state of interest agreeing to lower levels of military institutionalization, but this effect is not statistically significant.

Graph 1, generated from Model 2a, illustrates that the hypothesis and informal expectations are barely, if at all, supported by the linear regression results. Assuming a "stereotypical"[76] state led by a chief executive with a history of alliance violation, a downward trend in level of military institutionalization agreed to by the state of interest is discernable as the state of interest's level of executive constraint increases and its partner

[76] Aside from violation history (which is set to 1), controls are held constant at their medians. Neither state is a major power, the state of interest is not a democracy, both states have no preexisting alliance ties, and the state of interest's threat environment equals 0.289. The state dummy is assigned as Poland, the second most frequently bilaterally allied state. There is perhaps less idiosyncratic about this state than the first most frequently bilaterally allied state—Russia—which is a major power that signed twice as many bilateral alliances in the time period under study as Poland.

is maximally constrained. But all trend lines overlap, and the higher intercepts and steeper negative slopes of the others are not consistent with the informal expectations of this analysis. The inappropriateness of a linear regression for this type of data is indicated by impossible negative levels of military institutionalization being expected at most combinations of regime types.

Graph 1



Note: 95% confidence intervals shown.

Because the military institutionalization index is ordinal, a series of ordered logistic regressions are performed. The models are thematically similar to those

performed for the linear regression series. Model 1b assesses only the interactions of both states' executive constraint. Model 2b adds the standard controls, whereas Model 3b includes the robustness-substitute controls. And the framework of Model 2b is employed for Models 4b and 5b, which exclude post-Soviet alliances and wartime alliances, respectively. All models employ robust standard errors clustered on the state given the possibility of non-independence between alliances signed by any particular state (in Table 3, cuts are not shown, robust standard errors are marked in brackets, and Williams' (2010) oglm is used for estimation in Stata 12).

Table 3: Ordered Logit Analysis of the Effect of the Interaction between Both States' Executive Constraint on State A's Military Institutionalization (Alliances, 1919-2001)

	Model 1b		*Model 2b*		*Model 3b*	
	Estimate Std. Err.	*P-value*	*Estimate Std. Err.*	*P-value*	*Estimate Std. Err.*	*P-value*
State A's executive constraint	-0.331	0.553	-1.014	0.046	-0.576	0.321
	[0.559]		[0.508]		[0.580]	
State B's executive constraint	-0.670	0.129	-0.737	0.142	-0.209	0.708
	[0.441]		[0.502]		[0.557]	
State A's executive constraint × *State B's executive constraint*	0.125	0.540	0.239	0.241	-0.067	0.775
	[0.204]		[0.204]		[0.235]	
Violation history			0.171	0.671	0.127	0.768
			[0.402]		[0.429]	
State A's major power status			1.624	0.003		
			[0.543]			
State B's major power status			0.865	0.003		
			[0.291]			
State A's major power status × *State B's major power status*			-3.276	0.000		
			[0.736]			
CINC ratio					0.113	0.153
					[0.079]	
Democracy			1.710	0.000	1.683	0.001
			[0.488]		[0.528]	
Ongoing alliances			1.308	0.000		
			[0.276]			
Ongoing alliances (unrestricted)					0.741	0.000
					[0.204]	
Threat environment (S-score)			0.509	0.398		
			[0.602]			
Threat environment (kappa)					2.459	0.074
					[1.375]	
N	370		367		364	
Log pseudolikelihood	-272.734		-227.403		-241.740	

Table 3, continued: Ordered Logit Analysis of the Effect of the Interaction between Both States' Executive Constraint on State A's Military Institutionalization (Alliances, 1919-2001)

	Model 4b		*Model 5b*	
	Estimate Std. Err.	*P-value*	*Estimate Std. Err.*	*P-value*
State A's executive constraint	-1.300	0.038	-1.341	0.005
	[0.628]		[0.476]	
State B's executive constraint	-0.683	0.214	-1.117	0.030
	[0.550]		[0.514]	
State A's executive constraint × *State B's executive constraint*	0.332	0.147	0.413	0.058
	[0.228]		[0.218]	
Violation history	0.986	0.023	0.228	0.580
	[0.435]		[0.413]	
State A's major power status	0.935	0.121	1.641	0.006
	[0.603]		[0.594]	
State B's major power status	0.271	0.500	0.851	0.005
	[0.402]		[0.303]	
State A's major power status × *State B's major power status*	-2.562	0.000	-3.038	0.000
	[0.733]		[0.708]	
CINC ratio				
Democracy	2.856	0.000	1.505	0.004
	[0.763]		[0.530]	
Ongoing alliances	1.260	0.000	1.285	0.000
	[0.310]		[0.276]	
Ongoing alliances (unrestricted)				
Threat environment (S-score)	-0.333	0.696	0.235	0.792
	[0.853]		[0.890]	
Threat environment (kappa)				
N	271		339	
Log pseudolikelihood	-166.196		-204.638	

Again, swapping in robustness-substitute controls and restricting the dataset do not appear to substantially alter the findings from the base Model 2b. Some of the same anomalous control results are seen as in the linear models. The state of interest's being a democracy and a greater number of preexisting alliance ties between both states increase the likelihood of the state of interest agreeing to higher levels of military institutionalization rather than decrease the likelihood. Here, a positive alliance violation history for the leader of the state of interest is associated with the state of interest agreeing to higher levels of military institutionalization, but the control is still statistically insignificant. Because the magnitude, sign, and significance of the interaction terms are not straightforwardly interpretable in ordered logit regression, I generate tables of predicted probabilities with confidence intervals based on the results of Model 2b.

A predicted probabilities table generated from ordered logit regression results serves roughly the same purpose as Graph 1 generated from the linear regression results. For clarity, Table 4 summarizes the expected probabilities of high (and perhaps medium) levels of military institutionalization agreed to by the state of interest as per the hypothesis and informal expectations.

Table 4: Predicted Probability Values Expected for State A Agreeing to Provide High Levels of Military Institutionalization

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	Relatively Low		Relatively High
	2			
	3	Relatively Low		Relatively Low

Assuming a "stereotypical"[77] state led by a chief executive with a history of alliance violation, Table 5 shows the predicted probabilities that the state of interest will agree to high levels of military institutionalization, and Table 6 shows the predicted probabilities for agreement to medium levels of military institutionalization.

Table 5: Predicted Probabilities that Military Institutionalization Agreed to by State A will be High (Alliances, 1919-2001, Model 2b)

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.056 [-0.013, 0.125]	0.035 [-0.001, 0.071]	0.022 [-0.003, 0.046]
	2	0.027 [-0.006, 0.060]	0.021 [-0.001, 0.043]	0.016 [0.000, 0.033]
	3	0.013 [-0.008, 0.033]	0.012 [-0.006, 0.031]	0.012 [-0.006, 0.030]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

Table 6: Predicted Probabilities that Military Institutionalization Agreed to by State A will be Medium (Alliances, 1919-2001, Model 2b)

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.093 [0.003, 0.182]	0.061 [0.003, 0.119]	0.039 [-0.008, 0.086]
	2	0.048 [-0.004, 0.100]	0.038 [-0.001, 0.077]	0.030 [-0.003, 0.062]
	3	0.023 [-0.013, 0.059]	0.023 [-0.011, 0.057]	0.022 [-0.012, 0.057]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

[77] Controls are set such that neither state is a major power, the state of interest is not a democracy, both states have no preexisting alliance ties, and the state of interest faces a threat environment equal to the mean (0.279).

Both Tables 5 and 6 indicate no statistically significant support for the hypothesis and the informal expectations.[78] The confidence intervals for all predicted probabilities overlap and several even cross zero. If the predicted probabilities are taken at face value, the expected pattern is tenuously in evidence. The scenario in which a minimally constrained state of interest signs an alliance with a maximally constrained partner usually features high or medium levels of military institutionalization being proffered by the state of interest with a higher likelihood than in other regime combinations. But most unexpectedly in terms of commitment theory and past literature, the scenario in which high or medium levels of military institutionalization are most often expected to appear as obligations for the state of interest occurs when a minimally constrained state of interest allies with another minimally constrained state.

Because the military institutionalization index includes several components that by definition cannot be asymmetrically applied across alliance members, a final round of regressions are performed for a potentially asymmetric obligation.

Setting the state of interest's deployment obligation as the (binary) dependent variable, a series of logistic regressions are performed in a fashion similar to both previous series. For brevity, the model without controls is omitted. Model 1c features the base model controls, whereas Model 2c uses the robustness-substitute controls. Because Model 1c produced some anomalous coefficients, Model 2c was used as the basis for Models 3c and 4c, which excluded post-Soviet alliances and wartime alliances, respectively. All models employ a rare events correction as per King and Zeng (2001a,

[78] The predicted probabilities tables generated from the other models yield similar results. See Appendix Tables 1-6.

2001b) (in Table 7, the intercept is not shown, standard errors are marked in brackets, and *zelig* is used for estimation in R).

Table 7: Logit Analysis of the Effect of the Interaction between Both States' Executive Constraint on State A's Agreement to Deploy (Alliances, 1919-2001)

	Model 1c		*Model 2c*	
	Estimate *Std. Err.*	*P-value*	*Estimate* *Std. Err.*	*P-value*
State A's executive constraint	-0.378	0.674	-0.122	0.890
	[0.898]		[0.883]	
State B's executive constraint	-0.619	0.557	-0.386	0.710
	[1.053]		[1.037]	
State A's executive constraint × *State B's executive constraint*	-0.008	0.985	-0.114	0.784
	[0.417]		[0.416]	
Violation history	0.274	0.698	0.154	0.818
	[0.706]		[0.669]	
State A's major power status	2.170	0.000		
	[0.527]			
State B's major power status	-0.205	0.813		
	[0.866]			
State A's major power status × *State B's major power status*	2490000	< 2e-16		
	[1354]			
CINC ratio			0.472	0.000
			[0.104]	
Democracy	2.359	0.001	2.121	0.006
	[0.729]		[0.774]	
Ongoing alliances	0.617	0.048		
	[0.312]			
Ongoing alliances (unrestricted)			0.323	0.245
			[0.278]	
Threat environment (S-score)	1.118	0.294		
	[1.065]			
Threat environment (kappa)			2.098	0.128
			[1.379]	
N	359		356	
AIC	165.7		161.42	

Table 7, continued: Logit Analysis of the Effect of the Interaction between Both States' Executive Constraint on State A's Agreement to Deploy (Alliances, 1919-2001)

	Model 3c		*Model 4c*	
	Estimate *Std. Err.*	*P-value*	*Estimate* *Std. Err.*	*P-value*
State A's executive constraint	-0.969	0.370	-0.246	0.798
	[1.082]		[0.958]	
State B's executive constraint	-0.291	0.815	-0.380	0.720
	[1.243]		[1.060]	
State A's executive constraint × *State B's executive constraint*	0.036	0.940	-0.092	0.838
	[0.473]		[0.446]	
Violation history	0.653	0.446	0.156	0.820
	[0.857]		[0.682]	
State A's major power status				
State B's major power status				
State A's major power status × *State B's major power status*				
CINC ratio	0.558	0.000	0.493	0.000
	[0.149]		[0.116]	
Democracy	4.245	0.001	1.886	0.023
	[1.313]		[0.827]	
Ongoing alliances				
Ongoing alliances (unrestricted)	0.982	0.013	0.366	0.207
	[0.397]		[0.290]	
Threat environment (S-score)				
Threat environment (kappa)	0.857	0.636	1.709	0.291
	[1.811]		[1.620]	
N	260		328	
AIC	109.970		139.82	

Here, the only statistically significant anomaly as per commitment theory is that the state of interest's being a democracy inclines it to agree to provide higher rather than lower levels of military institutionalization. Again, because the results for the interaction terms are not readily interpretable, I generate a table of predicted probabilities based on the results of Model 2c.

Similar to before, assuming a "stereotypical"[79] state led by a chief executive with a history of alliance violation, Table 8 shows the predicted probabilities that the state of interest will agree to deploy its troops abroad.

Table 8: Predicted Probabilities that State A Will Agree to Deploy its Troops Abroad (Alliances, 1919-2001, Model 2c)

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.059 [0.008, 0.201]	0.036 [0.005, 0.124]	0.029 [0.002, 0.129]
	2	0.045 [0.007, 0.150]	0.026 [0.004, 0.082]	0.014 [0.002, 0.049]
	3	0.042 [0.004, 0.169]	0.022 [0.002, 0.094]	0.011 [0.001, 0.043]

Note: 95% confidence intervals in brackets; predicted probabilities generated by *zelig* in R.

Again, Table 8 indicates no statistically significant support for the hypothesis and the informal expectations.[80] Though the confidence intervals do not cross zero here, these predicted probabilities at face value are less supportive of the hypothesis and informal expectations than those using military institutionalization as the dependent variable. And again, the state of interest with the greatest likelihood of agreeing to deploy its troops is a

[79] Controls are set such that the state of interest is not a democracy, both states have no preexisting alliance ties, the state of interest faces a threat environment equal to the mean (0.276) and the CINC ratio is equal to the mean (0.014).

[80] The predicted probabilities tables generated from the other models yield similar results. See Appendix Tables 7-8.

minimally constrained state paired with a minimally constrained partner rather than one paired with a maximally constrained partner.

Discussion and Conclusion

Several possibilities exist to explain the null result in this analysis of military institutionalization as a commitment device codified into alliance treaties. First, data limitations may prevent the gathering of accurate and statistically significant results. Next, military institutionalization may be acknowledged as a valid commitment device but some unaccounted for factor prevents its implementation in the expected scenarios. Lastly, the states forming alliances may not view military institutionalization as a form of commitment device at all.

The dataset is very small, and the very feature of this analysis that is most innovative relative to other works on commitment—treating the commitment device under study as potentially directional rather than an attribute of the agreeing dyad—exacerbates small sample size problems in the statistical analyses. For instance, Peduzzi, Concato, Kemper, Holford, and Feinstein (1996) find that if a rule of ten events per independent variable is not followed, logistic regression results are biased in positive and negative directions and estimates lose efficiency. Not accounting for observations that may fall out of various models due to missing data, the overall alliance dataset codes 42 states out of 464 observations as agreeing to deploy troops abroad. The largest statistical model identifies ten independent variables as potentially important influences on codification of the treaties. The rule of ten is not generally met in this analysis. Long (1997, 53-4) suggests a sample size of at least five hundred for maximum likelihood estimation but notes several conditions that may necessitate larger sizes: the inclusion of more independent variables, correlation between independent variables (here, the correlation between the state of interest's executive constraint and democracy status is

0.698), and little variation in the dependent variable. Ordinal logistic regression models appear even more vulnerable to small sample size problems.

The arguments developed in this analysis primarily focus on when states should be most concerned about abandonment in alliance and how alliance treaties may be crafted to mitigate this concern. The counterpart to abandonment as a "bad" in the security dilemma that exists in alliance politics is entrapment, however (Snyder 1984). The very written obligations that should bind a state to maintaining its overall alliance commitments can compel the state to aid partners involved in or pursuing conflicts that are not in the initial state's interest. The state may decide that the expected net benefit of entering into an undesired conflict dominates the potential losses of shirking the overall alliance commitment (this net benefit may still be a loss, just relatively less so). This possibility seems especially relevant to this analysis considering that military institutionalization is literally a sunk cost, generally unrecoverable should the state agreeing to provide the obligation end up standing alone in the future. It may be that minimally constrained states allying with maximally constrained partners have reasons to believe that these partners are systematically more given to predation (the dynamic that introduces the risk of entrapment can increase said risk if the partner feels sufficiently secure in the integrity of the alliance such that he adopts more reckless or aggressive foreign policy). But the scenario in which two minimally constrained states ally should be characterized by a mirrored high degree of policy flexibility: higher levels of military institutionalization should be considered unnecessary and overly risky costs in face of both abandonment and entrapment concerns. So, it remains odd that a minimally constrained state of interest is most likely to agree to provide higher levels of military

institutionalization when allying with a minimally constrained partner if the predicted probabilities are taken at face value.

Finally, military institutionalization may not be viewed as an appropriate commitment device at all (or its function in enabling deterrence and joint defense completely washes out patterns resulting from commitment motivations). Agreements for higher levels of military institutionalization may be expected more often in alliances between two minimally constrained states because this combination of regimes is systematically under greater outside threat than other combinations. The data provides some support for this logic: the mean threat environment score for a minimally constrained state of interest in an alliance with a minimally constrained partner is higher (0.351) than for states of interest in the other extreme regime combinations (range of 0.199 to 0.288). Another possibility for the patterns revealed in the predicted probabilities taken at face value involves the possibility that in some regime combinations, there is a systematic tendency for the state of interest to be "buying" its way into the partner's territory as a means of power projection or for other strategic purposes. Wallace (2008, 229) argues a similar point that more institutionalized alliances privilege the most powerful members, causing allies to adopt national military strategies in accord with the interests of their powerful partners. The data provides some support for this logic as well. In alliances between a maximally constrained state of interest and a minimally constrained partner, the state of interest agrees to either low levels of military institutionalization (15 observations) or high levels of military institutionalization including a foreign deployment commitment (9 observations). In the latter instances, the state of interest is usually the United Kingdom or the United States, and the partner is a

minor power near an active or former military front or a strategically important land feature (e.g., Portugal during World War II, South Korea following the Korean War, and Panama).

The previous example highlights the necessity of focusing on the role of states' power status in analyses of the institutionalization of international agreements. Given the debate within the literature, I had remained agnostic as to whether a state's being a major power should make it more or less likely to agree to provide higher levels of military institutionalization and whether this tendency would be affected by the power status of its partner. But splitting the data by whether the alliance is asymmetric (major power-minor power) or symmetric (major power-major power or minor power-minor power) and generating predicted probabilities of high levels of military institutionalization for each power status pairing with respectively varying levels of executive constraint reveals interesting (though statistically insignificant) patterns.

Table 9: Predicted Probabilities that Military Institutionalization Agreed to by Major Power State A will be High (Asymmetric Alliances, 1919-2001, Model 2b)[81]

		State B's executive constraint (minor power)		
		1	*2*	*3*
State A's executive constraint (major power)	*1*	0.109 [-0.105, 0.323]	0.084 [-0.007, 0.176]	0.065 [0.014, 0.116]
	2	0.069 [-0.038, 0.177]	0.067 [-0.007, 0.141]	0.065 [0.009, 0.121]
	3	0.043 [-0.027, 0.114]	0.053 [-0.026, 0.132]	0.065 [-0.033, 0.162]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

[81] For Tables 9-10, the controls are set such that the state of interest has a leader with a positive violation history, is not a democracy, faces a threat environment equal to the mean (0.293), and has no preexisting alliance ties with its current partner.

Table 10: Predicted Probabilities that Military Institutionalization Agreed to by Minor Power State A will be High (Asymmetric Alliances, 1919-2001, Model 2b)

		State B's executive constraint (major power)		
		1	*2*	*3*
State A's executive constraint (minor power)	*1*	0.048 [-0.091, 0.188]	0.037 [-0.035, 0.109]	0.028 [-0.009, 0.065]
	2	0.030 [-0.042, 0.102]	0.029 [-0.027, 0.085]	0.028 [-0.016, 0.072]
	3	0.019 [-0.023, 0.060]	0.023 [-0.026, 0.072]	0.028 [-0.033, 0.089]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

Table 11: Predicted Probabilities that Military Institutionalization Agreed to by Major Power State A will be High (Symmetric Alliances, 1919-2001, Model 2b)[82]

		State B's executive constraint (major power)		
		1	*2*	*3*
State A's executive constraint (major power)	*1*	0.008 [-0.006, 0.022]	0.006 [-0.005, 0.016]	0.004 [-0.007, 0.014]
	2	0.003 [-0.003, 0.008]	0.001 [-0.001, 0.004]	0.001 [-0.001, 0.002]
	3	0.001 [-0.002, 0.004]	0.000 [-0.001, 0.001]	0.000 [0.000, 0.001]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

Table 12: Predicted Probabilities that Military Institutionalization Agreed to by Minor Power State A will be High (Symmetric Alliances, 1919-2001, Model 2b)

		State B's executive constraint (minor power)		
		1	*2*	*3*
State A's executive constraint (minor power)	*1*	0.042 [-0.028, 0.112]	0.029 [-0.028, 0.085]	0.020 [-0.037, 0.076]
	2	0.014 [-0.017, 0.044]	0.008 [-0.007, 0.022]	0.004 [-0.004, 0.012]
	3	0.005 [-0.010, 0.019]	0.002 [-0.003, 0.007]	0.001 [-0.001, 0.003]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

[82] For Tables 11-12, the controls are set such that the state of interest has a leader with a positive violation history, is not a democracy, faces a threat environment equal to the mean (0.267), and has no preexisting alliance ties with its current partner.

If the predicted probabilities are taken at face value, Tables 9-12 show the same type of tenuous support for my hypothesis and informal expectations as did Table 5. But varying power status appears to yield greater substantive changes in the likelihood of agreeing to provide high levels of military institutionalization. The power status of the partner of a low constraint minor power does not appear to greatly affect the likelihood that the minor power will agree to provide high levels of military institutionalization. But a major power is drastically less likely to agree to provide high levels of military institutionalization if it partners with another major power than if it partners with a minor power. And a major power in alliance with a minor power is more likely to agree to provide high levels of military institutionalization than any minor power. These patterns hint that commitment considerations perhaps play less of a role in alliance institutionalization than the mechanisms underlying Olson and Zeckhauser's (1966) argument and balance of power forms of realist theory (e.g. given uncertainty over other states' intentions, a major power may be hesitant to disturb parity and furnish another major power with tools that could be turned against it).

Despite the statistically insignificant results, this analysis does indicate the importance of considering international agreement obligations in a directional context rather than simply as a feature of the agreement overall. The correlation of the military institutionalization of the state of interest and the military institutionalization of its partner is 0.680, which could be deemed low considering that most of the components of the military institutionalization index are inherently non-directional. And as seen previously, the behavior of major powers and minor powers in asymmetric alliances is plausibly differentiable.

Although the hypothesis and informal expectations about the potential for military institutionalization to serve as a commitment device in alliances between states with varying levels of executive constraint are inconclusively supported by this analysis, hopefully the findings and subsequent discussion have indicated which mechanisms deserve greater attention in subsequent analyses of commitment and the institutionalization of international agreements.

Appendix

Appendix Table 1: Predicted Probabilities that Military Institutionalization Agreed to by State A will be High (Alliances, 1919-2001, Model 3b)[83]

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.107 [0.012, 0.202]	0.083 [0.028, 0.138]	0.064 [0.006, 0.123]
	2	0.059 [-0.004, 0.122]	0.043 [0.004, 0.082]	0.031 [0.004, 0.057]
	3	0.032 [-0.021, 0.085]	0.021 [-0.011, 0.054]	0.014 [-0.006, 0.035]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

Appendix Table 2: Predicted Probabilities that Military Institutionalization Agreed to by State A will be Medium (Alliances, 1919-2001, Model 3b)

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.134 [0.051, 0.216]	0.111 [0.040, 0.182]	0.090 [0.003, 0.177]
	2	0.084 [0.014, 0.153]	0.063 [0.011, 0.115]	0.047 [0.005, 0.088]
	3	0.048 [-0.022, 0.119]	0.033 [-0.012, 0.079]	0.023 [-0.008, 0.054]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

[83] Controls for Appendix Tables 1 and 2 are set such that the CINC ratio is equal to the mean (0.014), the leader of the state of interest has a history of violation, the state of interest is not a democracy, both states have no preexisting alliance ties, and the state of interest faces a threat environment equal to the mean (0.233).

Appendix Table 3: Predicted Probabilities that Military Institutionalization Agreed to by State A will be High (Alliances excluding Post-Soviet, 1919-2001, Model 4b)[84]

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.110	0.080	0.057
		[-0.018, 0.237]	[-0.002, 0.162]	[-0.014, 0.129]
	2	0.045	0.044	0.043
		[-0.009, 0.099]	[-0.003, 0.091]	[-0.004, 0.090]
	3	0.017	0.024	0.032
		[-0.015, 0.050]	[-0.017, 0.065]	[-0.025, 0.089]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

Appendix Table 4: Predicted Probabilities that Military Institutionalization Agreed to by State A will be Medium (Alliances excluding Post-Soviet, 1919-2001, Model 4b)

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.148	0.116	0.089
		[0.035, 0.261]	[0.019, 0.214]	[-0.015, 0.194]
	2	0.072	0.071	0.069
		[-0.002, 0.146]	[-0.002, 0.143]	[-0.011, 0.149]
	3	0.030	0.040	0.053
		[-0.024, 0.084]	[-0.029, 0.109]	[-0.042, 0.148]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

[84] Controls for Appendix Tables 3 and 4 are set such that neither state is a major power, the leader of the state of interest has a history of violation, the state of interest is not a democracy, both states have no preexisting alliance ties, and the state of interest faces a threat environment equal to the mean (0.365).

Appendix Table 5: Predicted Probabilities that Military Institutionalization Agreed to by State A will be High (Alliances excluding Wartime, 1919-2001, Model 5b)[85]

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.069	0.035	0.018
		[-0.021, 0.158]	[-0.005, 0.075]	[-0.005, 0.040]
	2	0.028	0.021	0.016
		[-0.007, 0.064]	[-0.001, 0.044]	[-0.001, 0.033]
	3	0.011	0.013	0.014
		[-0.006, 0.029]	[-0.006, 0.032]	[-0.009, 0.038]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

Appendix Table 6: Predicted Probabilities that Military Institutionalization Agreed to by State A will be Medium (Alliances excluding Wartime, 1919-2001, Model 5b)

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.108	0.061	0.032
		[0.000, 0.217]	[-0.005, 0.127]	[-0.012, 0.076]
	2	0.050	0.038	0.029
		[-0.007, 0.107]	[-0.003, 0.080]	[-0.005, 0.064]
	3	0.021	0.024	0.027
		[-0.012, 0.054]	[-0.013, 0.060]	[-0.018, 0.072]

Note: 95% confidence intervals shown in brackets; predicted probabilities generated by *margins* in Stata12.

[85] Controls for Appendix Tables 5 and 6 are set such that neither state is a major power, the leader of the state of interest has a history of violation, the state of interest is not a democracy, both states have no preexisting alliance ties, and the state of interest faces a threat environment equal to the mean (0.269).

Appendix Table 7: Predicted Probabilities that State A Will Agree to Deploy its Troops Abroad (Alliances excluding Post-Soviet, 1919-2001, Model 3c)[86]

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.043 [0.003, 0.190]	0.032 [0.003, 0.121]	0.038 [0.001, 0.220]
	2	0.022 [0.001, 0.102]	0.016 [0.001, 0.075]	0.015 [0.001, 0.078]
	3	0.017 [0.000, 0.115]	0.011 [0.000, 0.079]	0.011 [0.000, 0.077]

Note: 95% confidence intervals in brackets; predicted probabilities generated by *zelig* in R.

Appendix Table 8: Predicted Probabilities that State A Will Agree to Deploy its Troops Abroad (Alliances excluding Wartime, 1919-2001, Model 4c)[87]

		State B's executive constraint		
		1	*2*	*3*
State A's executive constraint	*1*	0.061 [0.007, 0.219]	0.036 [0.006, 0.128]	0.032 [0.002, 0.167]
	2	0.043 [0.005, 0.154]	0.024 [0.004, 0.087]	0.016 [0.002, 0.061]
	3	0.042 [0.002, 0.201]	0.020 [0.002, 0.096]	0.012 [0.001, 0.060]

Note: 95% confidence intervals in brackets; predicted probabilities generated by *zelig* in R.

[86] Controls for Appendix Table 7 are set such that the CINC ratio is equal to the mean (0.019), the leader of the state of interest has a history of violation, the state of interest is not a democracy, both states have no preexisting alliance ties, and the state of interest faces a threat environment equal to the mean (0.365).

[87] Controls for Appendix Table 8 are set such that the CINC ratio is equal to the mean (0.015), the leader of the state of interest has a history of violation, the state of interest is not a democracy, both states have no preexisting alliance ties, and the state of interest faces a threat environment equal to the mean (0.266).

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