8-30-2007

Reducing the Effects of Moral Hazard: Institutional Designs Within International Alliances

Brian Lai
University of Iowa

Jonathan Day
University of Iowa

Reducing the Effects of Moral Hazard: Institutional Designs Within International Alliances

Brian Lai and Jonathan Day
University of Iowa
Department of Political Science
341 Schaeffer Hall
Iowa City, IA 52242
Brian-lai@uiowa.edu

Abstract:

What explains the level of commitment within an international military alliance? Specifically, when do alliances choose to adopt active military support for offensive uses of force versus lower levels of commitment? Drawing on the rational design of international institutions literature, this paper argues that the choice of commitment is a conscious effort to address two competing problems. The first is the potential for entrapment. Allies worry that commitments may lead other member states to act in a risky fashion, creating unnecessary conflict. The other problem is the need to demonstrate commitment in order to maximize the bargaining power of the member states. The former problem leads allies to choose lower levels of commitment like defense pacts in order to signal to alliance members what types of behaviors are acceptable. Conversely, the latter problem encourages states to make broader obligations about when they will use force. Empirically, concern for moral hazard should be more likely when there are power disparities amongst members within an alliance. Greater levels of threat facing alliance members should lead states to favor maximizing their commitments. These two arguments are tested empirically on all alliances from 1816-1992 with results supporting both conjectures.

What factors explain the institutional variation within international alliances? Specifically, why do some alliances allow for a broader range of commitments by member states than others? There are several important reasons to empirically examine this question.. First, this question bridges the current literature on institutional design and the well-studied topic of alliances within the field of international relations. The integration of these literatures allows for empirical analysis over a common set of cases, and will help to address broader questions and theories put forward in the larger field of international institutions. Second, this question moves beyond most existing analyses of why states form alliances with each other, examining why certain types of alliances emerge. Finally, identifying the factors that influence the type of alliance commitments that ultimately evolve can help policy makers to understand what kinds of concerns foreign leaders may have about their alliance partners based upon the institutional design of those alliances. It may also lead to a better understanding of what types of policies are likely to emerge out of member states.

To address these questions about the design of alliances, this paper examines the terms of an alliance, particularly obligations assumed by states that enter into alliances. When do alliance partners pursue more limited obligations such as neutrality or committing only to defensive action, and when do they undertake broader obligations, such as supporting offensive uses of force? Drawing on the rational design literature, this paper focuses on the tradeoff states face when designing alliance obligations between reducing fears of entrapment and allowing for the alliance to signal support for an ally. As discussed in other research, allies are likely to worry about the potential moral hazard effects of an alliance, and thus are likely to seek institutional arrangements that limit risky behavior (Snyder 1997). Uncertainty about an ally's future behavior may lead partners to adopt arrangements designed to promote restraint, preventing

unwanted risky behavior. However, this desire to prevent unwanted conflict may be in tension with the broader goal of forming the alliance, frustrating the ability to convey a more powerful front to opponents. Too little restraint enmeshes a state in a potentially risky relationship. Too much restraint may reduce the effectiveness of the alliance in dealing with external threats. Thus, states are likely to adopt institutional features that attempt to maximally balance these dual needs, leading to the observed variation in types of commitments guaranteed under military alliances.

Drawing on this framework, this paper argues that allies are likely to avoid committing to active military support for offensive uses of force when the likelihood of entrapment is high. One factor that may lead states to think the possibility of moral hazard is high is if there is disparity in power amongst alliance partners. Both strong and weak powers are likely to worry about the future behavior of the other, leading them to adopt restrictive commitments. Conversely, states are likely to want to convey a united front and offer member states a maximum level of commitment when the possibility of conflict is high. When an alliance is formed and the level of threat to members is already high, there is likely to be shared interests amongst alliance members in regards to this threat (Walt 1987; Lai and Reiter 2000), leading to an acceptance of the possibility of conflict and a desire to demonstrate commitment to deter potential rivals. These two empirical arguments are tested on a set of all alliances from 1816-1992. Empirical results provide support for both arguments

I. Alliance Formation and Institutionalization

A great deal of research has investigated factors affecting the formation of international alliances, including common security threats, learning from past behavior, common regime type, domestic political concerns, and shared identities (Walt 1987; Reiter 1996; Lai and Reiter 2000;

2

Siverson and Emmons 1991; Deutsch et al 1957; Barnett 1996). Another strand of alliance

research focuses on the effects of institutional variation on state behavior (Leeds 2003a; Leeds

2003b; Leeds and Anac 2005). Research has suggested that some institutional characteristics

have significant effects. For example, studies demonstrate that offensive alliances were more

likely to lead to conflict while defensive alliances were more likely to prevent them (Leeds

2003b; Powers 2006). Other sources of institutional variation did not seem to produce expected

differences in state behavior. Leeds and Anac (2005) found that greater institutionalization of an

alliance did not increase the likelihood that an ally would fulfill its alliance obligations. In

addition to looking at the external effects of alliance institutions, researchers have examined

whether membership requirements have influenced the regime type and domestic institutions of

member states and potential members, with a specific focus on NATO (Wallander 2002;Reiter

2001;Barany 2004).

Finally and most importantly to this study, others have studied factors that explain

institutional variation of alliances. Lake (1996) provides a useful framework for thinking about

variation in patterns of cooperation more broadly. He presents a typology that represents the

degree of hierarchy that is present between states within an alliance structure. This can range

from alliances characterized by high levels of hierarchy (such as empires) to more decentralized

alliances where member states have control over their own forces and decisions. While Lake's

typology goes beyond the scope of traditional military alliances to include different levels of

organization, his focus on hierarchy is applicable to analyzing institutionalization within an

alliance. He argues that the degree of hierarchy is likely to vary based on the level of potential

opportunism and the cost of governing an alliance. As the costs of opportunism rise, states will

pursue more hierarchical alliances. Conversely, they will pursue decentralization when

governance costs are high (Lake 1996). Most important for this research question is Lake's

discussion of opportunism in decentralized organizations like military alliances where states

maintain "residual rights", allowing them to pursue their own foreign policies.

Similar to Lake, other scholars have focused on the potential for opportunism within an

alliance, specifically focusing on the potential problem of entrapment or moral hazard (Snyder

1997; Miller 2003; Cha 2003; Press-Banathan 2006). The logic behind this argument is similar to

the standard moral hazard argument presented in economics (Pauly 1968; Zeckhauser 1970)[1].

Alliance guarantees like insurance could potentially lead states to pursue riskier behaviors than

they normally would because they have potentially greater capabilities. This creates a fear

amongst allies that they will be dragged into an unnecessary conflict by emboldened allies

(Snyder 1997). Snyder (1997) argues that states balance the fear of entrapment with fear of the

opposing problem within alliances--abandonment. Actions taken to mitigate one problem are

likely to make the other worse. Snyder suggests that the fears of entrapment and abandonment

will vary based on the interests, dependence, and commitments of the allies. As shared interests

rise, fears of entrapment and abandonment should be reduced as both sides share a common foe.

Mutually dependent allies are likely to fear both entrapment and abandonment as their

dependence makes them vulnerable. In asymmetric alliances, the less dependent state worries

about entrapment, while the more dependent state fears the possibility of abandonment (Snyder

1997). For Snyder, reducing commitments can address entrapment, but at the cost of making

abandonment more likely. Thus, he suggests that alliance choices will depend on which problem

is more prevalent.

Other researchers have also focused on the potential causes of the moral hazard problem

within international alliances. Miller (2003) argues that anxiety over the twin problems of

[1] Dembe and Boden (2000) provide a critical analysis of the moral hazard literature in economics.

4

entrapment and abandonment are driven by the reputation of a potential partner. States with reputations of failing to uphold commitments or for being involved in frequent conflicts are likely to be viewed as potential abandoners and entrappers, respectively (Miller 2003). While most have focused on the moral hazard problem in terms of entrapment, others have argued that allies may not undertake domestic reforms or backslide on existing democratic structures, knowing that they already have the support of powerful allies, such as the US (Byman 2006; Wallander 2002).

Many possible institutional solutions to the problem of entrapment have been put forward. Miller (2003) suggests two possible institutional solutions to address the alliance security dilemma. First, the level of precision within the text of the alliance treaty can be manipulated to more clearly lay out the obligations of each member. Increasing precision is a way for states to guard against potentially unreliable allies, reducing their ability to act irresponsibly and still remain within the letter of their agreements. In addition to the level of commitment, the extent of military integration assumed under the alliance can vary. For example, states may prefer to avoid military integration with a state that is likely to be engaged in future conflict because of a bellicose past, as integration of military forces heightens the possibility of entrapment (Miller 2003). Other potential avenues for affecting alliance obgligations include showing a weaker commitment to the alliance (Cha 2000), using institutionalized channels to restrain states (Press-Barnathan 2006), demanding that foreign policy decisions be made in consultation with allies (Snyder 1997), demonstrating greater commitment to deter adversaries (Snyder 1997), and possibly even negotiating with an adversary or withdrawing from an alliance (Cha 2000).

An important counterpoint to this discussion of the possibility of entrapment is Snyder's (1997) discussion of abandonment and how institutional solutions, especially those that reduce commitments, are likely to exacerbate the fear of abandonment. This fear is likely to be particularly important given that concern for the state prompted the formation of an alliance in the first place. The effects of fear of abandonment are multiple. States in low commitment alliances may prefer not to risk the possibility of conflict with opposing states because of the likelihood that they will not receive support from allies. This reduces their ability to convey resolve to opposing states, leading to a worse settlement (Fearon 1995). This result may even have implications for that state's alliance partners as their security may be affected by bad settlements. For example, prior to World War I, Germany was concerned about getting drawn into conflicts due to its ally Austria-Hungary's interest in the Balkans. However, Germany preferred a strong Austria-Hungary in order to balance out the other states on the continent (particularly France and Russia), thus its own security was dependent on Austria being able to secure favorable settlements from states in the region (Snyder 1997).

This argument about striking a balance between taking beneficial and unnecessary risks is echoed in other literature on moral hazards. For example, Chang (2000) reanalyzes the moral hazard explanation for the Asian financial crisis, arguing that while economic institutions like limited liability may create moral hazard, they also generate positive outcomes. By allowing investors to engage in risky and innovative behavior, the economy as a whole may potentially gain from their acts (Chang 2000). Chang (2000) goes so far as to say, "Thus seen, it may be said that moral hazard has been an essential element in the development of capitalism". Thus, while states in an alliance may worry about creating conditions that lead their allies to act recklessly,

this is likely to be balanced with the initial reason for forming the alliance: providing security to an alliance partner.

II. Commitment and Balancing Priorities

As discussed in the previous section, when designing an alliance, states are likely to balance two competing priorities. On one hand, they want to demonstrate commitment to an ally in order to provide for the security of that state and to possibly allow that state to achieve better settlements with opponents. This security priority is matched against a desire to avoid entrapment. States want to restrain their allies from acting recklessly and initiating unwanted conflicts. While many solutions have been put forward to address the issue of moral hazard (Snyder 1997; Miller 2003; Cha 2000; Press-Barnathan 2006), this paper argues that one institutional approach that can be taken is to define the terms of the commitment. Similar to Miller's (2003) argument about precision, states may address the issue of moral hazard by specifically defining the terms under which they will defend the other alliance members. This argument draws on the growing literature on the rational design of international institutions, which focuses on explaining institutional variation based on purposive decisions by states to address current and future problems that may arise (Koremenos, Lipson, and Snidal 2001). Research in this vein of thought has focused on such institutional factors as escape clauses (Rosendorff and Milner 2001) and fixed renegotiation and renewal periods (Koremenos 2005) as institutional solutions to problems such as uncertainty about future distribution of goods or domestic political consequences (Koremenos 2005).

Thus, this paper argues that the decision about when to honor a commitment is likely to be based on allies' desires to balance the competing agendas of preventing entrapment but also facilitating a demonstration of joint resolve. Drawing on this approach, this paper develops a

theoretical argument about why some alliances agree to provide support when a state undertakes offensive military acts while others limit their support to purely defensive action. Similar to Lake (1996), a few assumptions are made that guide this theoretical argument. The first is that states behave rationally. In other words, they select the act that yields the highest expected utility. A second assumption is that the security threats upon which alliance decisions are made are external. While states may undertake alliance decisions to deal with internal problems--like many current US allies in the war on terrorism (Byman 2006)--this analysis focuses on the more traditional alliance function of dealing with external threats. A final assumption is that states are uncertain about the future behavior of their own allies and adversaries. Similar to Lake's (1996) argument about the limited control states possess over others in an alliance, alliance partners are uncertain about what their allies will do in the future, especially in crisis situations. Also, similar to models of crisis bargaining (Fearon 1995; Morrow 1989), states are likely to be uncertain about fundamental characteristics of potential opponents, including how willing they are to use force in that crisis.

Given these assumptions, choices over particular commitment strategies can be analyzed via the desires of states to address the dual problems of commitment and entrapment. First, the type of commitment created by a state can potentially influence the behavior of other alliance members. Limiting the conditions under which an obligation will be invoked is a potential way of hedging against the uncertainty of an allies' behavior, especially if they are likely to behave in a risky fashion. Insurance companies have a variety of approaches to dealing with moral hazard, including limiting when they will provide benefits. Examples of this include the voiding of life insurance policies where suicide is the cause of death or limiting coverage for certain types of damages in home insurance policies. These limitations are designed to influence the actions

taken by individuals. Within an alliance, specifying the conditions under which an alliance obligation will be met can influence the behavior of allies, possibly preventing reckless behavior. Defense pacts as opposed to offensive or open-ended alliances are likely to limit reckless behavior by absolving partners of the responsibility to fight if conflict is initiated by one of the allies. Unless the alliance members wish to fight on their own, they are likely to be more restrained in their interactions with an opposing state. In the event that an alliance member does initiate a conflict, its partners have a legal way out of their obligation. Empirical findings on the effects of offensive versus defensive commitments provides some initial evidence for this argument as conflict was more likely when states were members of offensive alliances and conflict was less likely when they were members of defensive alliances (Leeds 2003b; Powers 2006). Thus, a defensive pact potentially allows an alliance to deter aggression but prevent members from initiating uses of force.

While states may want to avoid being drawn into unnecessary conflicts, they have a competing incentive to demonstrate commitment to an ally. While a defensive alliance may demonstrate commitment, the conditional commitment may make it difficult for alliance members to use the power of the alliance as leverage in bargaining situations with opponents. One focus of crisis bargaining models is on the ability of states to send credible signals of resolve or a greater willingness to fight to opponents. Because all states have incentives to appear resolved, states must engage in costly signaling in order to demonstrate resolve (Fearon 1995; Morrow 1989). One goal of an alliance is to use the combined capabilities of all the member states as leverage against an opponent (Walt 1987; Waltz 1979). However, as discussed in the literature on extended deterrence (Fearon 1994; Huth and Russett 1988; Danilovic 2002), credibility plays an important role in whether opposing states believe that allies will actually

intervene in a conflict. While a commitment that obligates members to fight in the defense of a state may send a signal of credibility to opposing states, it also limits the types of threats that an ally member can make in a crisis. Specifically, members of a defensive alliance are limited in their ability to credibly signal that they would use preemptive force. The alliance commitment signals an unwillingness on the part of a state's allies to fight if they initiate conflict. Thus, while a defensive alliance can signal a credible commitment to defend an ally, it limits the ability of member states to threaten the use of force in crisis situations by signaling that they will have to fight alone. The effect of this limitation is to make it harder for member states to demonstrate a willingness to fight, unless they are able to go it alone. If opposing states believe a state lacks resolve, they are likely to view escalation as a bluff, forcing the alliance member to accept a worse settlement or leading a crisis to possibly escalate to war.

While there are probably many factors that influence whether states view potential moral hazard or greater bargaining power as the primary animus for the alliance, this paper focuses on two factors that might explain when each of these concerns is likely to prevail, thus leading allies to choose one institutional form over another. Similar to Snyder's (1997) argument, one factor that may lead states to be concerned about entrapment is the disparity of power within an alliance. Powerful states are likely to be concerned that weaker allies may view support from them as a reason to act aggressively towards other states, leading to unnecessary conflicts. Conversely, when member states in an alliance have equal levels of power, the burden of conflict is likely to be shared more equitably, leading alliance partners to believe that the others will act more responsibly. As Morrow (1991) discusses in his seminal paper on the security-autonomy tradeoff, in symmetric alliances, both states are allied for security purposes, while in asymmetric alliances, powerful states gain autonomy but pay for it through the cost of security. The effect of

bearing the cost of conflict and willingness to act aggressively is similar to the logic of requiring higher co-payments or deductibles in insurance policies. The more the individual has to pay, the more careful they are likely to be. Similarly, powerful states in asymmetric alliances may worry that since they are providing the bulk of the security, the perceived costs of the weaker party may not be high enough to restrain them from acting aggressively, while in symmetric alliances, member states may not worry because states bear similar conflict costs. Press-Barnathan (2006) makes the same argument but reverses the directionality, suggesting that weaker states will be concerned about being drawn into the conflicts of the more powerful state. Either way, this logic leads us to expect that as the variance of power amongst alliance members grows, allies will become more preoccupied with the problem of entrapment and thus more likely to favor limiting their obligations to purely defensive actions. This leads to the first hypothesis.

H1: As the variance of the power of alliance members grow, alliances are more likely to manifest themselves in purely defensive obligations.

The level of threat posed to alliance members may also influence the type of obligations assumed under an alliance. When states form an alliance with threatened states, they are selecting into situations where conflict is likely, and this threat of conflict is overt and visible. It is reasonable to expect states accepting such obligations to share common interests—perhaps a common rival. These common interests may cultivate stronger institutional arrangements between alliance partners. First, shared interests may lead them to be less concerned about the use of force by their allies, which may be viewed as a necessary conflict and thus acceptable to the allies (Snyder 1997). Second, providing alliance partners with greater bargaining leverage may allow them to gain better settlements and prevent the escalation of conflicts with rival states. As the level of threat faced by member states rises, alliances are likely to entail greater

11

obligations to insure that the maximum bargaining leverage is available to its members. Thus, alliances formed during times when members experience external threats are likely to entail offensive obligations in order to provide for maximum bargaining leverage. This leads to the second hypothesis.

H2: The greater the level of threat to alliance members, the more likely alliances will have offensive obligations.

III. Research Design

To test these two hypotheses, this paper analyzes all alliances from 1816-1992. The unity of analysis is the alliance itself. Data for this paper comes from the Alliance Treaty Obligations and Provisions (ATOP) data (Leeds, Long and Mitchell 2000). Based on the recommendations of others who have analyzed this data, non-aggression pacts are excluded from the analysis (Leeds 2003a). These treaties are likely to be qualitatively different than those that stipulate support against a third state. These treaties often are solely about non-aggression between the two states as opposed to committing some type of support against a third party. Also, it is not clear what an offensive versus defensive commitment would be in the context of a non-aggression pact.

The dependent variable for this analysis is whether a state pledges to provide active military support for a state that engages in offensive military actions (1) and all other types of commitments, defensive pacts, neutrality pacts, and consultations only (0). This variables captures the theoretical argument about the type of commitment an alliance is likely to form in order to address the twin problems of moral hazard and commitment. While there is a clear distinction between treaties that require active military support depending on whether the use of force is offensive or defensive, the other two types of treaties, neutrality pact and consultation, are less clear in terms of the theoretical argument. Neither of these requires active military

action, so they may be viewed as slightly different than those treaties that do offer active military support. Neutrality pacts require a state to not assist an ally's adversary, while consultation pacts call for coordinated action between the states. One way to interpret these two types of treaties is as signals of a lower level of commitment. Because neither commits a state to active military aid, these may be similar to defensive pacts in that they allow states to avoid having to get involved in certain types of military engagements by member states. Agreeing to remain neutral or coordinating with another state is a much lower level of commitment than having to deploy military forces when a conflict occurs. Thus, these two obligations may be similar to the use of defense pacts to try and limit the possibility of entrapment into a conflict. This is how the dependent variable treats these two measures. Another approach to interpreting these treaties relative to defense and offense pacts is that these are simply different commitments that can also be conditioned on whether the use of force is offensive or defensive. Figure 1 illustrates the difference between these two interpretations. For the second interpretation, neutrality and coordination pacts are a lower level of commitment but those that form them may still attach offensive or defensive conditions. States may limit when they will be neutral to only defensive conflicts. To examine this alternative view, this paper examines only the set of cases that require active military support.[2]

The first hypothesis about the variation in power is measured using the coefficient of variation for each alliance based on the combined CINC score for each member state. The Correlates of War (COW) project provides data on active and latent military capabilities across six categories (military spending, military personnel, iron and steel production, energy

_____

[2] A few treaties undergo revisions that change it from its original form. The ATOP data calls these alliance phases. Only the original treaty is included in the data unless the defensive or offensive commitment is changed, then more than one phase is included. This type of change is fairly rare in the data. Only about 7% of alliances have a change in offensive or defensive commitments.

consumption, total population, urban population) and creates a composite index of national

capabilities (CINC) which represents what proportion of the total world's capabilities an

individual state possesses. If a state's CINC score is .5, it possesses half the world's capabilities.

Using data for each state's CINC score for the year that the alliance was formed, the coefficient

of variation is computed for each alliance. The coefficient of variation is a relative measure of

dispersion that is the standard deviation divided by the mean. So in this case, it is the standard

deviation of the CINC score for members in a particular alliance divided by the mean of the

CINC score for those states in the alliance. The coefficient of variation is used instead of the

standard deviation in order to standardize the measure across different mean sizes. For example,

if one group has a mean of 100 and a standard deviation of 2, while another group has a mean of

2 and a standard deviation of 2, the latter is likely to have individual values that are more

dispersed than the former. A measure of dispersion is used because this hypothesis is about the

variation in power within an alliance. The greater the dispersion, the more varied the types of

powers you have in an alliance and thus the more they are likely to worry about entrapment,

while low levels of dispersion indicate states with similar levels of power.

The second hypothesis, the level of threat, is examined using the total number of rivalries

for each member within an alliance. Using the Diehl and Goertz's (2000) rivalry data which runs

from 1816-1992[3], the number of rivals for each state for the year the alliance was formed is

generated and summed across each alliance to produce a measure of the total number of rivals

for each member of an alliance. The rivalry data is used because states in rivalries are more

likely to experience violent conflict than other pairs of states (Diehl and Goertz 2000). Thus, the

greater the number of rivals that members in an alliance might face, the greater the level of threat

---

[3] While Goertz and Diehl have an updated version that extends the data to 2000, this data was not easily convertible into a format useful for the analysis. A future version of the paper hopes to use the updated data. Also, future work hopes to incorporate Thompon's (2001) measure or rivalry.

that member faces. Thus, across an alliance, the level of threat is likely to be higher the more

rivalries that are represented within that alliance. The Diehl and Goertz (2000) measure is

particularly useful because it is based on the actual use of force, which is perhaps more

observable to alliance partners than perceived rivalries.

In addition to the number of total rivalries, whether an alliance was signed during

wartime is used to measure hypothesis 2. Because a war is already taking place, states forming

this alliance are already likely to perceive a very high level of threat, thus they want to provide

their alliance members with a strong signal of commitment to help influence the beliefs of

opposing states. War time treaties are more likely to have offensive commitments as the states

involved are already at war, so the need to restrain the use of force is not as relevant. The ATOP

data has a variable indicating whether the alliance was signed during war or peace time.

In addition to these three variables, a few control variables are included that may

influence the decision to adopt an offensive versus defensive pact. The first is whether the

alliance is bilateral or multilateral. States in a bilateral alliance may potentially have less reason

to worry about risky behavior than states in a multilateral alliance simply because they have

fewer allies to consider. As the number of allies increases, the likelihood that any one of them

will act risky should increase. The other control variable is based on the regime type of the

member states. There are two possible reasons why alliances composed primarily of democratic

states should be less likely to have offensive alliances. First, the normative democratic peace

theory suggests that democracies may be less likely to condone offensive military behavior. The

externalization of norms of conflict resolution and peaceful settlement may lead democratic

states to shun striking first, as this essentially terminates peaceful bargaining. From an

institutional point of view of the democratic peace, democracies may be particularly concerned

about committing to supporting offensive acts. As Gartzke and Gleditsch (2004) point out, democratic leaders are still likely to be concerned about generating support for military action even if they are committed through an alliance obligation. One way to forestall this problem is to only guarantee support for defensive actions, which may be more popular among domestic publics (Jentleson 1992; Lai and Reiter 2005). To examine this argument, a variable is used which is the average of the combined Polity score for each state in an alliance at the time of the forming of the alliance. The combined Polity score ranges from -10 to 10 and sums one score which is a composite measure of institutional democratic features with another that is a composite score of institutional autocratic features. Because the dependent variable is dichotomous, a probit model with robust standard errors is used to estimate the data.

IV. Empirical Results

Table 1 presents the empirical results. Looking at model 1, hypothesis 1 is supported. The coefficient for the coefficient of variation of the CINC score (CVCINC) variable is negative and significant, indicating that as the level of dispersion in power amongst states within an alliance grows, it is less likely to contain provisions for active military support for offensive uses of force. This empirical result supports the theoretical argument that states may use the observed level of power amongst alliance members as a proxy for cost sharing and that disparities in power may lead more powerful states to be concerned about the potential moral hazard of less powerful states. However, as Press-Barnathan (2006) suggests, the less powerful states are likely to agree to restraints because they may fear the expansionist aims of a more powerful ally, an interest that may drag them into unwanted conflicts. As power disparity within an alliance grows, both groups of states have an incentive to institutionally limit their level of commitment to address the potential problem of entrapment. Model 2 tests this same hypothesis using a slightly

different measure. It uses a dichotomous variable which is 0 if all the states in an alliance are major powers or all the states are minor powers, as defined by the Correlates of War project. It is coded 1 if an alliance contains both major and minor powers. This is a less refined measure but addresses the potential realist criticism that variations in power may only matter between major and minor powers (Waltz 1979) as opposed to along a continuum of power. Model 2 presents these results. The coefficient is still negative though the level of statistical significance is not as strong as the more continuous measure. Mixed major and minor power alliances are less likely to have offensive provisions within their alliance though this finding is not as strong as the continuous measure of capability variation.

Hypothesis 2 also receives empirical support. In model 1, the total number of rivals' variable is positive and statistically significant, suggesting that as the number of total rivals faced by an alliance increases, the likelihood of that alliance adopting offensive obligations rises. This provides empirical support for the idea that alliances that face threatening situations are more likely to try and maximize the bargaining power of their allies in order to secure better settlements from the rivals. Also, member states should be less worried about entrapment because they are able to observe prior to forming the alliance the real possibility of conflict between their members and rival states. Thus, their selection into the alliance suggests they have some shared security interests with the states facing rivals. An alternative way to measure the threat posed to states within an alliance is to look at their past number of militarized disputes. States can easily observe how many conflicts a potential ally has had in the past and use this to gauge how threatened an alliance member is. This alternative measurement is examined by looking at the total number of militarized interstate disputes (MIDs), as identified by the

Correlates of War project, that the members of an alliance have been a part of over the past ten years prior to the starting year of the alliance. This variable is tested in model 3 of table 1.

While this variable is positive, it is not statistically significant. One potential problem with this measure is that states may have sporadic disputes with some states but this may not demonstrate a real potential for future conflict. Unlike the rivalry measure which demonstrates a history of conflict, this measure conflates real potential for conflict with isolated incidents of conflict. However, this does demonstrate that the theoretical argument about threat may not necessarily be robust to all measures of potential threat.

The wartime alliance variable is significant and positive, demonstrating that alliances formed in war time are more likely to have offensive provisions. This fits with the theoretical framework as concerns about entrapment are likely to be minimal given that at least one state is already at war and a desire to provide maximum bargaining leverage is likely to be at a premium, again because states are already at war.

One of the two control variables is statistically significant. The bilateral variable, which measures whether a treaty is just between two states (1) or more than two states (0) is not statistically significant. Alternative measures of this variable including the number of members in the alliance were also not significant. Finally, the average of the members' regime scores is negative and significant. The higher the average level of democracy of the alliance, the less likely that alliance will possess offensive military support provisions. As previously discussed, this fits with both the normative and institutional arguments about democratic desires to prevent conflict either because of ideational concerns about aborting a settlement or domestic political concerns about rallying support for a war.

Model 4 presents model 1 but only on the set of cases where states pledge active military support, thus it excludes treaties that are purely neutrality or consultation pacts. All three of the hypothesized variables are essentially unchanged, though the rivalry variable's level of statistical significance is a little weaker. Also, in this model, the effect of regime type disappears, perhaps suggesting that democracies may further limit their obligations to neutrality and consultation pacts.

Table 2 presents changes in the predicted probability of conflict based on estimates from model 1 (using the full sample of treaties). Of the three hypothesized variables, changes in the wartime alliance has the largest effect as alliances signed in wartime have a 24.3% greater chance of requiring active support for offensive uses of force than peacetime alliances. CVCINC variable has the next largest effect as going from two standard deviations below the mean (.009), which is the minimum value of the variable, to two standard deviations above the mean (roughly 2), leads to about a 13.6% decrease in the likelihood that an alliance will have offensive military support provisions. Using that same two standard deviation range for the number of rivals variable yields an increase of about 8.4% in the likelihood that an alliance will have offensive support provisions, though this variable has the smallest effect. The average regime score variable has the second smallest effect as that same two standard deviation range (which actually is -10 to 10) yields a 10.6% reduction in the probability of an offensive alliance.

V. Conclusions and Implications

When do states choose offensive military commitments versus more restrictive defensive commitments? Drawing on the rational design literature, this paper argues that two factors that may influence the choice of commitment type are concerns about entrapment and a desire to bolster the strength of the state in the face of existing threats. Limiting support to defensive acts

19

can help reduce the incentives of allies to act recklessly and initiate conflict, however, it may also reduce the effectiveness of an ally in crisis situations by clearly restricting its ability to credibly threaten to use force. Thus, the institutional choice of when to pledge active military support can strongly influence these twin concerns. One way states may determine whether there exists the possibility of entrapment is through the relative levels of power amongst alliance members and how that influences their decision making about when to risk using force. Allies may view threatening situations as those that require signals of maximum commitment in order to deter and compel rival states.

Examining all alliances from 1816-1992, empirical support was found for both of these explanations of why states choose offensive versus less open ended alliance commitments. As the variance in the capabilities of alliance members increased, alliances were less likely to have offensive military commitments. The more threatening the situation facing an alliance as measured by whether the allies are currently at war or whether they face multiple rivals, the greater the likelihood of offensive commitments. These results suggest that similar to the work on other types of international institutions, institutional features of international military alliances are likely to be also driven by purposive decisions to address potential current and future problems the alliance might face. Second, while Lake (1996) considers hierarchy across different forms of cooperation, it might be useful to think about hierarchy within each type. While states ultimately retain control over their own foreign policies, institutional features of alliances lead some to be more hierarchal than others in terms of their commitments and level of member state interaction. Also, these results suggest that the nature of commitments may be driven by the same processes that ultimately lead states and allies into conflict. States that perhaps want to preserve the status quo and are concerned with their members initiating conflict are likely to

adopt defensive alliances to restrain allies. The use of this particular institution may allow states to reinforce their preferences in a way they may not be able to do without the alliance and its institutional configuration. States are able to deter aggression and potentially limit the threat posed by the alliance, something that may be difficult to do through other foreign policy means like arms transfers. Finally, these results provide a framework for policy-makers to interpret what states are most concerned about based on the commitments within their alliances, potentially allowing them to overcome the classic security dilemma problem. Alliances formed with defensive commitments suggest that member states want to deter aggression but want to prevent their own members from initiating conflict. This could be a signal that the intention of the alliance is status quo seeking as opposed to revisionist. Conversely, alliances with open ended military support commitments might mean that those allies are looking to bolster their ability to challenge and receive better settlements from other states. This might potentially indicate that these alliances are potentially hostile and willing to use their combined strength for revisionist aims. The implication is that states may be able to better infer the intentions and level of threat of an alliance based on its institutional configuration, as these might be a window into the real concerns of the alliance members.

Figure 1: Two Different Approaches to Viewing the Relationship Between

Active Military Support, Neutrality, and Consultation Pacts

Approach 1: One Continuous Scale of Level of Commitment

Offensive Pact

Defense Pact

Neutrality/Consultation Pact
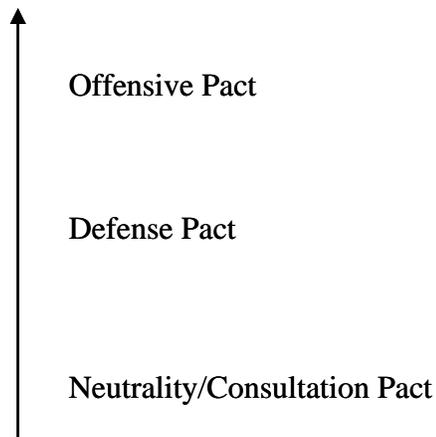
Approach 2: Two dimensions based on type of commitment and conditions

	Conditions for Commitment	
	None/Offensive	Defensive Only
Active military Support	Offensive Pact	Defensive Pact
Neutrality	Neutrality Pact	Defensive Neutrality
Consultation	Consultation Pact	Defensive Consultation

Type of Commitment

Table 1: Probit Results on the type of Alliance Commitment (1=Offensive, 0=Defensive, Neutrality, and Consultation only), 1816-1992

	Model 1	Model 2	Model 3	Model 4
				Defense/Offense
	All Alliances	All Alliances	All Alliances	Pacts Only
Coef. Variation-Capability	-.356* (.147)	--	-.304* (.144)	-.607*** (.185)
Major-Minor Mix	--	-.278+ (.159)	--	--
Total Rivals	.0157* (.008)	.014+ (.008)	--	.022+ (.013)
Total #MID Ten Yr	--	--	.003 (.003)	--
Avg Polity	-.046*** (.014)	-.045*** (.013)	-.050*** (.014)	-.024 (.018)
War Alliance	.840*** (.210)	.842*** (.202)	.953*** (.197)	.818*** (.243)
Bilateral	-.142 (.191)	-.068 (.190)	-.203 (.187)	-.006 (.216)
Constant	-.903*** (.234)	-1.20*** (.197)	-.868*** (.235)	-.391 (.294)
	N=422 LL=-171.97 Chi2=41.58***	N=434 LL=-181.94 Chi2=41.56***	N=422 LL=-173.7 Chi2=40.97***	N=245 LL=-132.9 Chi2=28.3***

*p<.05, *** p<.001, +p<.1 All significance tests are two-tailed. Robust standard errors reported in parentheses below coefficients.

Table 2: Substantive Significance of Statistically Significant Variables from Model 1

	Value 1	Value 2	Change in Predicted Probability
Coef Variation-Cap	0.009	0.5	-0.046
	0.5	1	-0.038
	1	1.5	-0.029
	1.5	2	-0.023
	0.009	2	-0.136
Total Rivals	0	6	0.017
	6	12	0.02
	12	18	0.022
	18	24	0.025
	0	24	0.084
Avg Polity	-10	-4	-0.07
	-4	0	-0.037
	0	4	-0.029
	4	10	0.03
	-10	10	-0.106
War Time Alliance	0	1	0.243

References

Barany, Zoltan. 2004. "NATO's Peaceful Advance." *Journal of Democracy* 15(1): 63-76.

Barnett, Michael. 1996. "Identity and Alliances in the Middle East." In Peter Katzenstein, ed., *Culture of National Security: Norms and Identity in World Politics* New York: Columbia University Press.

Byman, Daniel 2006. "Friends Like These: Counterinsurgency and the War on Terrorism," *International* Security. 31(2): 79-115.

Cha, Victor. 2000. "Abandonment, Entrapment, and Neoclassical Realism in Asia." International *Studies Quarterly* 44: 261-291.

Chang, Ha-Joon. 2000. "The Hazard of Moral Hazard: Untangling the Asian Crisis." *World Development* 28(4)

Danilovic, Vesna. 2002. *When the stakes are high: Deterrence and conflict among major powers*. Ann Arbor: University of Michigan Press.

Dembe, Allard E. and Boden, Leslie I. 2000. "Moral Hazard: A Question of Morality?" *New Solutions* 10(3): 257-279.

Deutsch, Karl W. et al. 1957. *Political communily and the North Atlantic area*. Princeton, NJ: Princeton University Press.

Diehl, Paul F. & Gary Goertz, 2000. *War and Peace in International Rivalry*. Ann Arbor: University of Michigan Press

Fearon, James. 1995. "Rationalist Explanations for War." *International Organization* 49:379-414.

Gartzke, Erik and Kristian Gleditsch. 2004. "Why Democracies May Actually Be Less Reliable Allies" 48(4): 775–795.

Huth, Paul K. 1988. *Extended Deterrence and the Prevention of War*. New Haven: Yale University Press.

Jentleson, Bruce. 1992. "The Pretty Prudent Public: Post Post-Vietnam American Opinion on the Use of Military Force." *International Studies Quarterly* 36(1): 49-73.

Koremenos, Barbara. 2005. "Contracting around International Uncertainty" *American Political Science Review* 99(4): 549-565.

Koremenos, Barbara; Charles Lipson; and Duncan Snidal, 2001 "The Rational Design of International Institutions" *International Organization* 55(4): 761-800.

Lai, Brian and Dan Reiter. 2000. "Democracy, Political Similarity, and International Alliances, 1816-1992." *Journal of Conflict Resolution*. 44(2): 203-228.

Lai, Brian and Dan Reiter. 2005. "Rally 'Round the Union Jack? Public Opinion and the Use of Force in the United Kingdom, 1948–2001." *International Studies Quarterly*. 49: 255-72.

Lake, David. 1996. "Anarchy, hierarchy, and the variety of international relations." *International Organization*. 50(1): 1-33.

Leeds, Brett Ashley. 2003a. "Alliance Reliability in Times of War: Explaining State Decisions to Violate Treaties." *International Organization* 57: 801-827.

Leeds, Brett Ashley. 2003b. "Do Alliances Deter Aggression? The Influence of Military Alliances on the Initiation of Militarized Interstate Disputes." *American Journal of Political Science* 47: 427-439.

Leeds, Brett Ashley and Sezi Anac. 2005. "Alliance Institutionalization and Alliance Performance." *International Interactions* 31: 183-202.

Leeds, Brett Ashley, Andrew G. Long, and Sara McLaughlin Mitchell. 2000. "Reevaluating Alliance Reliability: Specific Threats, Specific Promises." *Journal of Conflict Resolution* 44: 686-699.

Miller, Gregory. 2003. "Hypotheses on Reputation: Alliance Choices and the Shadow of the Past, Security Studies" *Security Studies.* 40-78

Morrow, James. 1989. "Capabilities, Uncertainty, and Resolve." *American Journal of Political Science* 33:941-72.

Morrow, James. 1991. "Alliances and Asymmetry: An Alternative to the Capability Aggregation Model of Alliances." *American Journal of Political Science* 35(4): 904-933.

Pauly, Mark. 1968. "The Economics of Moral Hazard: Comment" *The American Economic Review*. 58(3): 531-537.

Powers, Kathy. 2006. "Dispute Initiation and Alliance Obligations in Regional Economic Institutions." *Journal of Peace Research.* 43(4): 453-471.

Press-Barnathan, Galis. 2006. "Managing the hegemon: NATO under unipolarity." *Security Studies.* 15(2): 271-309.

Reiter, Dan. 1996. *Crucible of beliefs: Learning, alliances, and world wars*. Ithaca, NY: Cornell University Press.

Reiter, Dan. 2001. "Why NATO Enlargement Does Not Spread Democracy." *International Security*. 25(4): 41-67.

Rosendorff, Peter, and HelenMilner. 2001. "The Optimal Design of International Trade Institutions: The Sources and Impact of Escape Clauses." *International Organization*. 55:829–57.

Siverson, Randolph and Juliann Emmons. 1991. "Birds of a feather: Democratic political systems and alliance choices in the twentieth century." *Journal of Conflict Resolution* 35: 285-306.

Snyder, Glenn. 1997. *Alliance Politics*. Ithaca: Cornell University Press.

Wallander, Celeste. 2002. "NATO's Price." *Foreign Affairs*. 81(6): 2-8.

Walt, Stephen. 1987. *Origins of Alliances.* Ithaca: Cornell University Press.

Waltz, Kenneth N. 1979. *Theory of International Politics*. Reading, MA: Addison-Wesley.

Zeckhauser, R. 1970. "Medical Insurance: A Case Study of the Tradeoff between Risk Spreading and Appropriate Incentives." *Journal of Economic Theory* 2(1): 10-26.