

ALLIANCES, ARMS TRANSFERS AND MILITARY AID: MAJOR POWER  
SECURITY COOPERATION WITH APPLICATIONS AND  
EXTENSIONS TO THE UNITED STATES

By

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Dissertation

Submitted to the Faculty of the  
Graduate School of Vanderbilt University  
in partial fulfillment of the requirements  
for the degree of

DOCTOR OF PHILOSOPHY

in

POLITICAL SCIENCE

May, 2013

Nashville, Tennessee

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## **DEDICATION**

To my wife, Kristi, for making me a better man, husband and father

## ACKNOWLEDGMENTS

This project is the result of six years of graduate school, and I cannot thank enough all of those who supported me during these years.

Professor James Lee Ray deserves a great deal of thanks for the many lunches discussing drafts of my dissertation. His always swift comments on these drafts shaped many of my arguments and analyses. Moreover, I appreciate his including me as a co-author on two papers, an opportunity that all graduate students should get.

The inspiration for this work came from my many semesters as research assistant to and co-author with Brett Benson. Many hours of discussion and his valuable input on drafts of my dissertation made this project better. Thorough comments from Michaela Mattes also contributed greatly to the final product.

I would be remiss if I didn't thank Steve Shellman for setting me on this path as my undergraduate advisor and surprising me with a job offer in my 4th year of graduate school. His encouragement to attend graduate school prepared me for life as a researcher and scholar, and the job offer allowed me to support my family while I pursued this goal. Additionally, I gave me a post-graduate school career path that many students don't have the opportunity to pursue.

My parents, Earnest and Barbara Bentley, are owed a great deal of credit for their diligent effort at forming me into the man that I have become and for their love and support throughout my entire life. They have taught almost all of the really important things I know about life, and I would not be who I am today without them. I know my disparate interests have always kept them on their toes, but I would not have been able to pursue those interests without their support.

My in-laws, John and Theresa Zimmerman, have shown me immense support throughout my marriage to their daughter, which is only a month longer than the amount of time I have spent in graduate school. For the many hours they have traveled back and forth

between Atlanta and Nashville to spend time with my wife and children while I worked, I sincerely appreciate it.

To my sons, Gabriel, Anthony and Adam, I appreciate them tolerating my absence while I worked on my 'project' and always having a smile on their faces as they raced to the door when I arrived home at night. They bring great joy to my life, and I love them dearly. Hopefully we will now have more time for dance parties, to wrestle, to have sword fights, and to play Power Rangers.

Finally, I want to thank and honor my wife, Kristi, for her unfailing love and support throughout this process. She deserves as much credit, if not more, for the completion of this project. Her strength and patience as my wife and the mother of our children carried me to the end. She is the love of my life, and I am eternally grateful to have her as my wife. She makes me a better man, husband and father, and it is for these reasons I have dedicated this project to her. I am eager to start the next era of our life together, not in school.

## PREFACE

This project brings together three substantive interests of mine: security cooperation, the effects of geography on international outcomes and United States foreign policy. To that end, the three chapters, though related by these topics, are distinct, stand-alone and in article format rather than book format. Each of the chapters incorporate elements of security cooperation and U.S. foreign policy, and the last chapter focuses on the role of geography in major power and U.S. alliance politics. My specific substantive goals for this project were to broaden our understanding of security cooperation. International relations scholarship has nearly exclusively focused on alliances as the primary means of security cooperation to the exclusion of any other type, but the volume of security cooperation short of an alliance between states is massive, especially in major power dyads. Second, the alliance literature has failed to incorporate measures of interdependence into them in any consider manner, so I wanted to enhance our understanding of the role that geographic proximity to rival states plays in alliance politics, thus incorporating features outside of the dyad to explain outcomes within the dyad.

From a scientific perspective, I have an interest in the application of broad, general arguments to more specific, nuanced cases. I think this venture is important for the scientific enterprise because it provides more evidence and credence that the general theories are not the statistical artifact of aggregating data into very large-N analyses. Furthermore, focusing on specific cases often allows the researcher to explore empirical implications of an argument because additional data are often available but for a limited spatial or temporal domain. Such analyses would otherwise not be possible for large, cross-sectional statistical models. Each chapter has an element that extends the analysis to the case of the United States where more data are available for analysis, and in the case of the second chapter, it exclusively focuses on the United States.

The first chapter has two goals: to introduce security cooperation as a broader concept

than alliances and to offer an explanation of how states choose which type of security cooperation to extend to another state. With respect to the former, I identify the need for security cooperation in terms of the benefits that it offer to the states involved and describe how different types of security cooperation can fulfill those needs. I then contend that states extend costly security cooperation to those states that present the lowest level of risk that they will misuse the security cooperation to the harm of the sending state. I operationalize risk using preference similarity, as measured by the similarity of U.N. roll call votes, and the number of rivalries that a state has in a given year, hypothesizing that sending states are less likely to give costly security cooperation to receiving states with dissimilar preferences or that are especially rivalrous. A series of statistical models provide evidence in support of this claim.

The second chapter looks at the role of U.S. security cooperation in forming the coalitions for the wars in Afghanistan and Iraq. I contend that the circumstances leading up to the two wars lead the U.S. to create a burden sharing coalition in the case of the former and a legitimacy-seeking coalition in the case of the latter. These divergent goals led the U.S. to include its allies and other states that could bear to costs of war in the Afghanistan coalition and to include states to which it had extended military aid but which were less powerful and offered far less to the war effort to serve as members of the coalition-of-the-willing in Iraq. Using data on U.S. security cooperation and involvement in these conflicts, I offer evidence for my claims with empirical models. I extend this analysis by showing that the effect of security cooperation was, in fact, not the result of endogeneity. Another way to interpret this result is that the U.S. did not bribe the members of these coalitions with military or economic aid to get them to participate.

Finally, the third chapter posits a relationship between the proximity of a minor power state to the rival of a major power and the likelihood that the minor power and major power will form an alliance. Major powers often form alliances with minor powers that offer little to no security to the major power in and of themselves. The predominant model of

alliance formation, capability-aggregation, cannot explain such alliances. I propose that major powers choose less powerful states that are located near to their rivals, the states with which they are likely to get into a conflict and that they most want to deter, so that they can use the territory of the minor power to reduce the loss-of-strength that occurs with power projection. A statistical model shows a statistically significant relationship providing evidence for this claim. I also show that this relationship is robust to various changes in the data and modeling technique.

The combination of these chapters offers a more nuanced understanding of the role of security cooperation for major powers and, specifically, for the United States. Much of the data I use have only rarely been used before in international relations scholarship, and I think the evidence from this project shows the needs for expanding our theoretical and empirical understanding of security cooperation.

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## CHAPTER I

### CHOOSING SECURITY COOPERATION

#### I.1 The Puzzle of Security Cooperation

On the morning of September 11, 2001, Australian President John Howard was in Washington, D.C. Upon hearing of the terrorist attacks, he invoked Article IV of the Australia, New Zealand, and United States (ANZUS) security treaty declaring that the attacks constituted an attack on Australia, and adding that invoking the treaty “demonstrates Australia’s steadfast commitment to work with the United States.”<sup>1</sup> Over the next several months, the Australian Defense Force contributed 1100 troops to the initial invasion of Afghanistan, and it has continued to be one of the most valuable partners to the United States in both Afghanistan and Iraq.<sup>2</sup> The United States’ other allies responded similarly and have contributed enormously to the war in Afghanistan. But, perhaps, such a response should be expected of allies.

President Bush also received dozens of phone calls from heads of state from countries to which the U.S. has no formal alliance. Understandably, they offered condolences in the wake of the tragedy, but, more importantly and perhaps curiously, they offered assistance in tracking down and bringing to justice those who were responsible for the violent attacks. Jordan’s King Abdullah II granted basing and overflight permission to U.S. and coalition forces, sent a mine-clearing unit to Kandahar and established a hospital in Mazar-e-Sharif. New Zealand, a member of the ANZUS treaty but not an ally to the U.S. due to its anti-nuclear stance, sent Special Air Service troops to fight alongside U.S. soldiers as well as providing logistical and humanitarian airlift support. Kyrgyzstan, which borders Afghanistan to the northwest, allowed the U.S. to use Manas Air Base in addition to

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<sup>1</sup>[http://www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/pubs/BN/2011-2012/AfghanistanFacts](http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BN/2011-2012/AfghanistanFacts)

<sup>2</sup><http://www.heritage.org/events/2010/09/john-howard;> [http://fpc.state.gov/documents/organization/6207.pdf.](http://fpc.state.gov/documents/organization/6207.pdf)

its airspace. These offers of assistance are just a few examples of the very many that the United States received.<sup>3</sup>

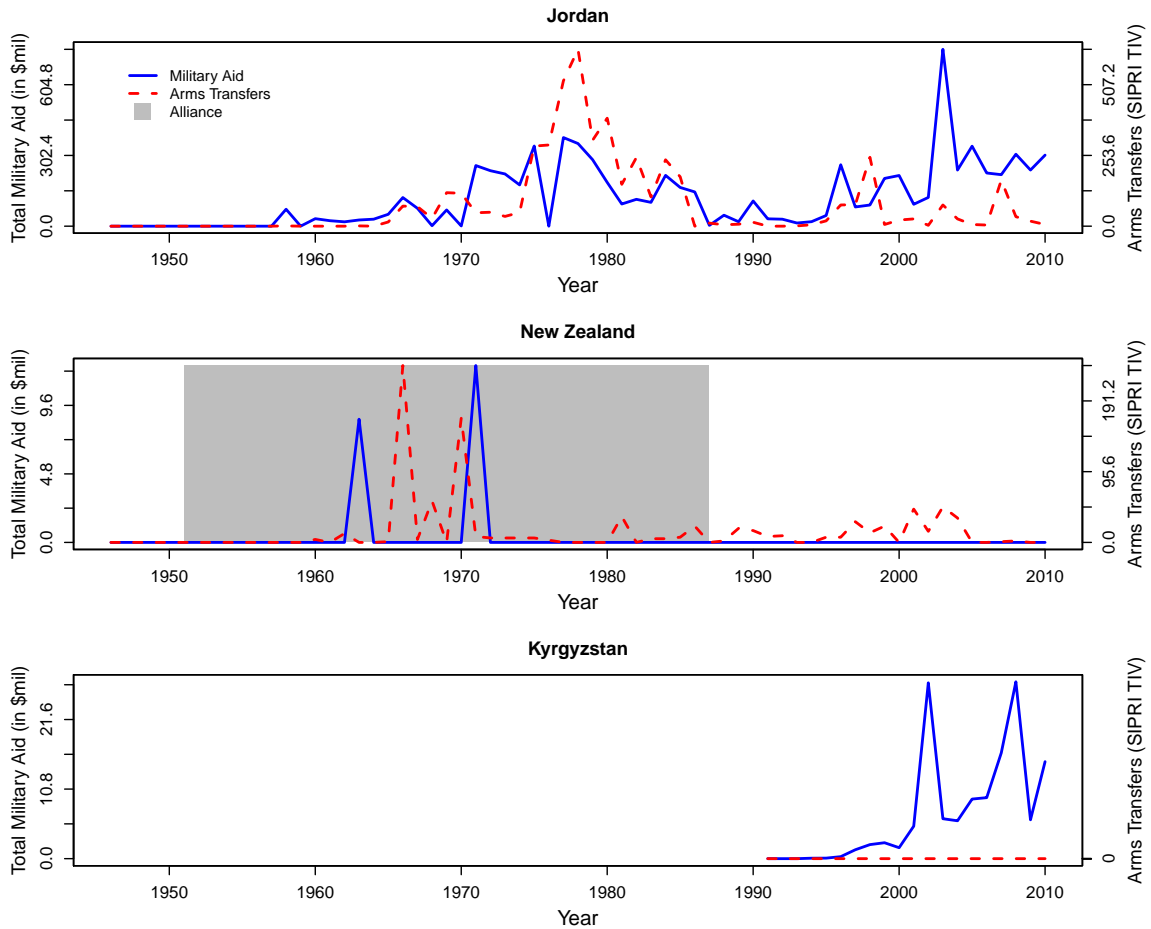


Figure I.1: United States Security Cooperation with 3 Countries

These offers of assistance came at a time of great tragedy for the U.S., so it is understandable that altruism might motivate some states to come to its aid. Altruism cannot be the whole story, though. While these states have no formal alliance with the U.S., I contend that the assistance these states offered the U.S. is largely a result of the security relationships the United States had cultivated with them over the past several decades. Figure I.1 shows that Jordan, New Zealand and Kyrgyzstan have each received U.S. military aid and/or arms transfers throughout this time. Jordan has benefited from a steady flow

<sup>3</sup>See <http://www.defense.gov/news/May2002/d20020523cu.pdf> and <http://fpc.state.gov/documents/organization/6207.pdf>.

of aid and arms since the late-1950s. New Zealand was once an ally of the United States and has continued to receive arms transfers even after that alliance relationship was terminated.<sup>4</sup> Kyrgyzstan, independent from the Soviet Union in 1991, began receiving military aid in the mid-1990s and saw a sharp increase in that aid in the early-2000's. Each of these countries has also participated in joint military exercises, another important form of security cooperation, with the U.S.<sup>5</sup>

The security network that the United States has developed is a product of its alliances, overseas military bases, joint military exercises, military assistance programs and arms transfers, and there is great variation in the types and amount of security cooperation that any given state receives. The United States is a member of both the North Atlantic Treaty Organization (NATO) and the Inter-American Treaty of Reciprocal Assistance (the Rio Pact), two large collective defense alliances, and, over the years it has also shared bilateral alliances with several states, among them Japan, South Korea and Australia. All total the U.S. has had an alliance for some period of time with 68 different countries since 1946. In this same period, more than 45 countries – allies and non-allies alike – have had over 1000 U.S. troops stationed on bases within their borders. The United States also disburses billions of dollars in military aid and transfers arms to other countries each year. Over 180 states have received military aid at some point since 1950, and 113 states have received military aid for at least twenty years. Some 140 states have received arms transfers at some point during this same time period.<sup>6</sup>

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<sup>4</sup>In June 2012, as Secretary of State, Hillary Clinton signed the Washington Declaration with New Zealand which pledged greater defense cooperation between the the two states, but it did not renew the ANZUS alliance relationship they once had. See Robert Ayson and David Capie, "Part of the Pivot? The Washington Declaration and US-NZ Relations," available at <http://www.eastwestcenter.org/sites/default/files/private/apb172.1.pdf>.

<sup>5</sup>See <http://jordantimes.com/%E2%80%98Eager+Lion%E2%80%99+activity+delayed+due+to+dusty+weather+-48288>, <http://www.country-data.com/cgi-bin/query/r-7483.html>, [http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=10798003](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10798003), <http://cns.miis.edu/archive/wtc01/uscamil.htm>, and <http://www.rferl.org/content/us-central-asia-states-start-military-drills/24617860.html>.

<sup>6</sup>Sources for these statistics are as follows: alliances, Alliance Treaty Obligations and Provisions (ATOP) Project (Leeds et al. 2002); basing, Peter King, Heritage Foundation, <http://www.heritage.org/Research/NationalSecurity/cda06-02.cfm>; arms transfers, Stockholm International Peace Research Institute, <http://www.sipri.org/databases/armstransfers>; and military aid, United States Agency for International Development's Overseas Loans and Grants (Greenbook), [urlhttp://gbk.eads.usaidallnet.gov/](http://gbk.eads.usaidallnet.gov/).

The United States is not the only country that engages in security cooperation on a large scale, though the United States almost certainly has a broader reach with its security cooperation network than any other country in the world. Many of the Latin American countries have had alliances with over 30 states in that time period. Both the United Kingdom and France have had alliances with over 40 different states since 1946, and the Soviet Union, now Russia, has shared an alliance with more than 20 states, but what really sets these three states apart is their arms transfers. Comparably to the United States, these states have transferred arms to about between 110 and 120 other states.

The above examples and the variation in these states' records of security cooperation raise an interesting and, as yet, under-explored question: how do states engage in security cooperation with other states? This paper will address two aspects of this question: What is security cooperation? and, How do states decide what cooperation they will extend to other states?

Security cooperation is a broadly defined term meaning those activities conducted with allies and friendly nations to build relationships that promote the interests of the cooperating states; build the capabilities of the cooperating states for self-defense and joint operations; and provide the cooperating states with peacetime and contingency access to each other's territory.<sup>7</sup> Examples include financial military assistance, joint military exercises, arms transfers, foreign basing and alliances. Of these different types of security cooperation, the military alliance is the one that has received the lion's share of attention from international relations scholars. They have addressed many aspects of alliances: formation, maintenance, duration, and termination as well as their effect on peace and conflict and their effect on trade. The other forms of security cooperation have received relatively little attention, so by broadening our understanding of security cooperation to include such activities, I intend to make a more nuanced evaluation of the security relationships that states share with one another.

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<sup>7</sup>This definition is an adaptation of the definition of security cooperation from the U.S. Defense Security Cooperation Agency, available at <http://www.dsca.mil/pressreleases/faq.htm>.

The remainder of this chapter proceeds as follows: in the next section I discuss what security cooperation is, and, in so doing, I elaborate on how different types of security cooperation serve the various goals of security cooperation in general. I proceed in the third section to identify security cooperation's place in the international relations literature. In the fourth section I outline my argument of how states decide what cooperation they will extend to other states, and I present some testable hypotheses derived from this argument. The next two sections present a research design and empirical analysis of major power security cooperation choices. I then narrow down the analysis focusing solely on the United States in an application of the argument to a case with a greater availability of data. I finish with some concluding remarks.

## **I.2 What is Security Cooperation?**

As defined above, security cooperation is a broad term that can include many different types of commitments, transactions and joint activities that two or more states engage in to increase their security in peacetime and prepare the states for the possibility of conflict. These interactions can take on many different forms, including alliances, intelligence sharing, permanent basing, arms trade, joint military exercises, training missions and military aid. No one type of security cooperation can be considered the best or worst in a general sense. They each serve the same general purpose of increasing security, but carry with them different types of costs, risks and specific benefits for the states involved. I start by outlining some specific goals of security cooperation, and then I will discuss how a few types of cooperation serve these goals.

The factors affecting a given state's security are many, and vary from state to state. For instance, some states may perceive a real or potential threat, so they will want to counter that threat by making it more difficult for that threat to become a reality with an alliance or by increasing its chances of victory by increasing its ability to fight back with arms transfers or military aid from another country. A powerful state may not perceive any real threat in



some moment but may want to increase its ability to project its power throughout the globe. To do so, it may agree to conduct joint training exercises with a smaller state in exchange for being allowed to station troops in that country. The way states choose to cooperate with each other is as varied as the number of pairs of states in the international system, but it is important to understand that the specific cooperative arrangement is designed to solve a specific problems. Five of the problems that states need to solve with cooperation are deterrence, burden sharing, interoperability, access, and influence. I will discuss each of these in turn.

At times, states must deter other states from attacking their territory or engaging in some other behavior that would be detrimental to the other state. For deterrence to work, the deterring state must be able to impose some cost on the state being deterred if it engages in whatever activity the deterring state does not desire, the deterring states ability to impose that cost must be credible, and the cost must be greater than the benefit to the other state for engaging in whatever activity is being deterred (Huth 1999; Zagare 2004). States are not always able to effectively deter threats on their own, so security cooperation can be helpful in such a situation because security cooperation can establish an alliance commitment between two states such that bringing the combined capabilities to bear on the threatening state would be more costly than just the capabilities of the deterring state (Huth 1988). Security cooperation can also directly increase the capabilities of a state so that it is better able to deter another state.

Burden sharing is a major concern of any cooperative relationship, and various forms of security cooperation allow for a more equitable distribution of the costs and responsibilities of cooperation. The literature on burden sharing in alliances is rich (e.g. Sandler and Hartley 2001). Although early studies on burden sharing reported the free-riding behavior of the Western European members of NATO on the United States (e.g. Olson and Zeckhauser 1966), other scholars revised the model from one of a pure public good to a joint product model (e.g. Sandler and Cauley 1975; Oneal 1990) and further to a model

of comparative advantage across various alliance goods (Boyer 1989). Different types of security cooperation can alleviate problems of burden sharing by increasing the capability of cooperative partners to actually carry more of the load. Boyer (1989) argues that states can trade in the area of security cooperation—diplomatic, economic or military—in which they have a comparative advantage.

Interoperability, the ability for two states to operate seamlessly alongside and in conjunction with each other in military operations, is critical for minimizing the costs and maximizing the effectiveness of cooperating states. Interoperability is critical in several areas, and I will highlight two. First, the interoperability of command and control teams of states fighting alongside each other in a conflict is necessary for the states to successfully fight in that conflict. It is critical that military commanders know the capabilities and strategies of the foreign services with which they work in order to best devise plans for accomplishing their objectives. Second, the interoperability of weapons systems will alleviate many potential problems on the battlefield such as the breakdown of major equipment or the shortage of supplies. If the militaries of each of the cooperating states are using compatible equipment, then they can share supplies with each other without endangering the objectives of the conflict. For example, NATO has standardized the caliber of ammunition used in the weapons of each of its member states.<sup>8</sup>

Access is a very important benefit of security cooperation for some states. The ability for one state to access the territory of another state enables the former to use that territory to prepare for conflict beforehand as well as in the midst of conflict as a place to stage troops. Furthermore, if a state has regular access to a state, it could facilitate certain forms of security cooperation between the states such joint military exercises. The ability of states to share conflict can also push the boundaries of a state beyond what they are without cooperation that provides some measure of access.

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<sup>8</sup>NATO Standardization Agreement (STANAG) 2310 was ratified in 1957 and standardized 7.62mm ammunition that would work in the primary weapons of NATO members. STANAG 4172 was ratified in 1981 and standardized the 5.56mm ammunition that is commonly used today. See <http://www.dtic.mil/ndia/2011smallarms/WednesdayInter12315Pellegrino.pdf> for more information.

Finally, security cooperation can enable the states to have influence over the other. Some of the alliance literature on asymmetric alliances discusses this aspect of security cooperation. Morrow (1991) discusses the tradeoff of security and autonomy that states make in asymmetric alliances; i.e. powerful states guarantee security in exchange for the weaker state giving up autonomy. Such a tradeoff may give the larger state the ability to dictate, for instance, when and how the smaller state uses force and engages in conflict. Of the reasons for security cooperation, this may be the least tangible, but it is arguably one of the most important. By having such influence, a state may be better able to maintain its own security as well as the security of its cooperative partner.

Not all types of security cooperation fulfill each of these goals; some are better at deterrence than they are at promoting interoperability, others are better at gaining access and influence than facilitating burden sharing, and so on. In the remainder of this section, I will discuss how four different types of security cooperation — alliances, joint military exercises, arms transfers and military aid — fulfill the security necessities of the states involved.

### **Alliances**

An alliance is a formal agreement that commits the states involved to come to each other assistance in the case of military conflict. The way alliances are written vary a great deal from one to the next and, as such, the conditions under which the alliance is activated, what is required of the allies upon activation, and the degree of institutionalization, among other characteristics, all influence how well the alliance can fulfill different security cooperation goals. The last decade has seen a considerable literature on alliances spring forth that is specifically focused on how the specific obligations, provisions and characteristics of alliances influence international behavior (e.g Leeds 2003; Benson 2011, 2012; Mattes 2012).

Some alliances are established in the midst of war, but others are established during

peacetime with the goal, at least to some degree, of preventing the outbreak of conflict through deterrence. Alliances have the ability to deter a state from attacking another because the former knows the latter has an expectation of assistance from an ally upon conflict initiation. Deterrence is not the only purpose of alliances, however. Depending on how institutionalized the alliance is, the allies may come together at periodic intervals to plan for potential conflicts. In such cases, the relationship that the allies have before the conflict breaks out allows them to establish roles and responsibilities that can be used after the conflict breaks out. Such preparation allows the coalition of allies to be a more effective fighting force. As part of this planning, the alliance may facilitate other forms of security cooperation that can help meet other goals, such as interoperability. Finally, an alliance has the ability, as a consequence of the long-term relationships between the states, to give all states involved a degree of influence over each other. While there may always be some form of hierarchy in an alliance, time may allow a less powerful state to have some influence over its more powerful ally.

### **Joint Military Training Exercises**

A joint military training exercise is an opportunity for the militaries of two (or often more) states to come together to train for a specific scenario. These exercises take on many different forms depending on the focus of the mission. Oftentimes the exercises are designed to facilitate interoperability between the forces training together where they can learn how each other fights, their strengths and their weaknesses, they can learn more technical matters such as how the other country communicates over the radio, and so on. The purpose from a tactical perspective is to expose the soldiers on the ground to the other state's forces so they can be better prepared should the time come when they have to fight with each other. From a strategic perspective, these exercises allow high level military commanders and policymakers to get to know each other so their relationships and past experience working together might translate to more effective cooperation in the midst of conflict.

Joint military exercises can take place in the context of an alliance, where the states involved already have a commitment to each other, or they can take place among states that do not have an alliance. In such cases, it may be possible for the exercises to have a deterrent effect. If allies conduct these activities to prepare to fight next to each other in conflict, then it could also be a signal that two non-allied states would be willing to cooperate in conflict as well. Another state, having knowledge of the exercises, may reconsider an attempt to launch an attack on one of these states.

### **Arms Transfers**

Arms transfers have the obvious effect of increasing the military capabilities of the receiving state. Such transfers, depending on the types and amount of weapons, could have a deterrent effect. In any case, the receiving state will be better equipped to fight in a conflict. If the transfer takes place in the context of an alliance, this increase in capabilities could facilitate a more equitable burden sharing arrangement in the case of a conflict. Even outside of conflict, the states of an alliance could specialize in making a specific type of weapon and trade with each other, which would also distribute the burden more evenly. Moreover, if conflict should occur, the weapons that the states use are more likely to be the same or similar allowing for greater interoperability.

### **Military Aid**

Military aid is generally a cash transfer to be used for some military purpose, which may be specified or not. In the case of the United States, much of its military aid is directed at training the military personnel of other countries, either en masse by sending troops to the country to conduct military education, or in a more specialized way by training individual military personnel at the military schools in the United States. In this case, military aid has the potential of creating more effective, capable foreign militaries.

Perhaps more importantly, military aid generates influence that the sending state can exert on the receiving state. Morgenthau (1962, 303) describes military aid as a traditional

way for states to “buttress” their alliances. In contrast, contemporary distribution of military aid is different, which he describes as thus: “The purpose [of military aid] is not so much military as political. It seeks political advantage in exchange for military aid. It obligates by implication, the recipient to the sender. The latter expects the former to abstain from a political course which might put in jeopardy the continuation of military aid. Military aid here is really in the nature of a bribe.” It is certainly possible that military aid could be a bribe, but if the political advantage that Morgenthau is talking about is the influence that the giving state gains, and the security of the giving state increases as a result, then I think the purpose can be construed as military.

Having defined security cooperation and described how its different types can achieve the goal of increasing the security of the states involved, I have begun to lay a foundation from which I can explain how states choose what types of security cooperation it extends to other states. In the next section, I discuss what we already know about security cooperation from the literature, which largely focuses on alliances. In so doing, I will show how broadening our conception of security cooperation and how states offer it is important if we really want to see the complete picture of how states interact in this realm.

### **I.3 Security Cooperation in the Literature**

States (or sovereign political entities more broadly) have engaged in security cooperation from the earliest days with alliances being an important foreign policy tool for their survival (see Thucydides 1998), and scholars of international relations have long recognized the importance of security cooperation, as evidenced by the body of literature that focuses on alliance relationships. The research on alliances has largely focused on two main questions: Why do states form alliances? and, What effect do alliances have on conflict? Our understanding of the answers to these two questions has evolved simultaneously, with insights garnered about one of the questions informing the trajectory of research on the other question. I will briefly discuss the development of this literature and establish that the next

important step for understanding the role of security cooperation in world politics is to broaden our understanding of this very concept to include forms of security cooperation short of alliances.

The evolution of the alliance literature is a story in changing levels of analysis and disaggregation. Early scholarly work in international relations painted alliances with broad strokes. Generally, alliances were thought of as a tool for aggregating the capabilities of several states for the purpose of balancing against potentially hegemonic, aggressive states, so alliances would form and dissolve as necessary to maintain a stable distribution of power. There was no clear consensus on whether the most stable international system occurred when power was distributed between two (Waltz 1979) or more states (Morgenthau 1948; Gulick 1955). Nevertheless they agreed that alliances were important for international stability. The research agenda of this time period that was exploring the relationship between alliances and conflict was also looking to the system level exploring, for example, how the distribution of power in the system and the distribution of power in alliances interacted to create conditions for war or to mitigate its occurrence (Buono De Mesquita 1978; Wayman 1984, e.g.). Largely, the results of these studies were inconclusive with little systemic evidence as to the relationship between alliance and conflict (Buono de Mesquita and Singer 1973; Ostrom Jr. and Hoole 1978; Levy 1981; Kegley and Raymond 1982; Siverson and Sullivan 1984; Wayman 1990; Wallace 1973).

Over time, scholars refined the understanding of the purpose of alliances. There was a growing consensus that capability aggregation could not explain why strong states were so wont to ally with weak states, because they did not have anything to offer in the way of military capabilities. Morrow (1994) proposed that alliances that were asymmetric in terms of the capabilities of the states involved also received asymmetric benefits. Namely, the weak state received security while the powerful state received autonomy. This autonomy could come in the form of freedom to act to change the status quo or the freedom to deny the weaker ally the ability to choose its own foreign policy in some areas. There was

also a growing literature about the deterrent value of alliances. While it had always been the understanding of IR community that alliances had deterrent value on account of the aggregated capabilities, Fearon (1997) established that a critical component of deterrence is the credibility of the alliance, and he identified that this is accomplished by tying hands or sinking costs. That is, state leaders can anticipate that if it does not follow through on its alliance commitment it will pay a cost to his domestic reputation or they can pay a cost up front, such as mobilizing troops or institutionalizing the alliance before conflict occur such that the state leader would incur a cost if the alliance fails.

By this time alliance research shifted into the dyadic level of analysis and scholars, rather than determining why states form alliances, were exploring who forms an alliance with whom (e.g Siverson and Emmons 1991; Simon and Gartzke 1996), and what effect does that alliance have on the likelihood of conflict. In an important theoretical argument, Smith (1995) established that different alliances types should have different effects on the likelihood of conflict in a pair of states. To this point, the only alliance data was the Correlates of War alliance data that did not differentiate alliances beyond them being defense pacts, neutrality and non-aggression pacts, and ententes (Small and Singer 1969).

Smith (1995) sparked the development of new alliance data in the form of the Alliance Treaty Obligations and Provisions data (Leeds et al. 2002). These data differentiated greatly between different types of alliance commitments and their characteristics. By differentiating between alliance types, theories of the relationships between alliance and conflict could be refined and tested against these new data (Leeds 2003; Benson 2011; Benson, Bentley, and Ray 2013). Additionally, further exploration into who forms alliances with whom (Gibler and Wolford 2006; Fordham 2010; Crescenzi et al. 2012) and the incorporation of alliance design into the rational design literature could take place (Benson 2012; Mattes 2012). These latest developments bring us to where we are presently.

The by-product of seeking to understand the why and who of alliances is that we also have a better understanding of, in the very least, the who of non-alliances. After years



of disaggregation of alliances, what has not been explored with any depth is the security cooperation that takes place in non-alliances. What little attention has been given to these forms of security cooperation short of alliances has primarily focused on their effects on political behavior. Scholars has published several articles on arms transfers but each has focused on some effect that arms transfers has on conflict (e.g. Kinsella 1995). There is a rich literature on the effect of foreign aid on human rights and democracy in other states, and some of this has touched on military aid, but the vast majority of it focuses on economic aid or does not disaggregate the two types (Lebovic and Voeten 2009, e.g.). Sullivan, Tessman, and Li (2011) and Bapat (2011) explore how U.S. military aid affects cooperative behavior from the recipient state and the effectiveness of the recipient state government at eradicating terrorism, respectively. There has not been any effort, to my knowledge, to develop a unified concept of security cooperation that includes cooperation short of alliances nor to explore the variation in security cooperation arrangements including types short of alliances. Just as the focus on alliances shifted from a focus on them in general into a disaggregated focus on types of alliances, it is important to disaggregate the non-alliance as well. When states do not share an alliance, it certainly does not mean they do not engage in security cooperation.

#### **I.4 How do States Choose Security Cooperation?**

The earlier section explaining security cooperation shows that different types of security cooperation serve different purposes. Given the distinct nature of the different forms of security cooperation, it is logical to conclude that states giving cooperation do not do so randomly but rather consider the shared interest they have with the state they may give it to in addition to characteristics of those states and match the appropriate type of security cooperation to that state. If this is the case, what influence do these shared interests and the characteristics of the states being offered the cooperation have on the form of security cooperation a state is willing to extend? I propose an answer to this question in this section.

Consider two states, a sending state and a receiving state. The sending state is considering what type of security cooperation, if any, to offer to the receiving state. Throughout this paper, I discuss security cooperation as a unilateral decision. In reality, two states would generally engage in some sort of bargaining over what type and how much security cooperation to exchange, but I contend that the state that is extending the security cooperation has a great deal more decision-making power in this situation than does the receiving state. It is also important to note that the conventional conception of cooperation in the international relations literature consists of states mutually changing their behavior to achieve some benefit that would otherwise not be unachievable without the cooperation (Leeds 1999). In this paper, I really only discuss the altered behavior of the sending state in terms of what it is giving to the receiving state. I assume that there is some cooperative exchange that takes place between the states that includes the alteration of the receiving state's behavior, but that is not the focus of this paper.

I conceive of the receiving state as being along a continuum of risk that it poses to the sending state; on one end of the continuum are states that pose little to no risk to the sending state and on the other end are states that are especially risky to the sending state. What does it mean for a state to be 'risky' to another state as a cooperative partner? The risk that a receiving state poses to a sending state is proportional to the likelihood that the receiving state will misuse the security cooperation in such a way that is costly to the sending state.<sup>9</sup> That said, a given receiving state does not necessarily pose the same level of risk to different sending states.

When judging the level of risk that a receiving state poses, a sending state must consider if the receiving state is likely to exploit the security cooperation. The receiving state can take advantage of the sending state in a variety of ways, and most notably in the alliance literature, through abandonment and entrapment (Snyder 1984, 1997). The receiving state could also use it against the sending state itself (as in, arms transfers, for example), against

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<sup>9</sup>Another way to say this is that the risk that a receiving state poses to a sending state is proportional to the uncertainty around how that receiving state will use the security cooperation.

other states or against its own people. If the receiving state uses the security cooperation against the sending state, it is obvious his this is costly for the sending state. It is less clear how a receiving state poses a risk to the sending state when it uses the security cooperation against other states or against its own people. In these cases, there are a couple ways this can be risky for the sending state, one direct and one indirect. The indirect way the receiving state poses a risk to the sending state is by harming the sending state's reputation. Other states might view the cooperation that the sending state engaged in with the receiving state and argue that the sending state instigated, promoted or supported whatever violence the receiving state dealt to another state or to its own people. In a more direct way, when two states engage in security cooperation, they offer a certain level of commitment to each other. In alliances, this commitment is spelled out very explicitly, but I would contend that other forms of security cooperation represent at least a tacit commitment to each other. If the receiving state uses the security cooperation in these ways, the sending state may feel compelled to support the action.<sup>10</sup>

The different types of security cooperation lay along a separate continuum ordered by how costly it would be to the sending state if the receiving state misuses the specific type of security cooperation it had been given. I will explain the continuum of states first followed by the continuum of security cooperation. The continuum on which security cooperation lies ranges from least costly to most costly to the sending state if it gets misused by the receiving state. The cost of misuse associated with different types of security cooperation is fairly straightforward. When states engage in security cooperation, they willingly make themselves vulnerable to each other by committing to each other in times of need and by sharing knowledge and resources, some of which may be secret. The level of cost of

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<sup>10</sup>In this discussion, I have made an implicit assumption that the sending state did not want the receiving state to use the security cooperation in an aggressive, violent manner against other states or its own people. This is an empirical question that, to my knowledge has not been addressed. While I think it generally is the case that states prefer that other states not behave aggressively, I acknowledge that there are certainly cases where the sending state desires just this outcome. If it is, however, the case that sending states engage in violent conflict by proxy by engaging in some form of security cooperation with receiving states, my hypotheses should not have empirical support.

misuse associated with any given form of security cooperation increases in those three characteristics: as the level of commitment, the amount of knowledge or the amount of resources increases, the costliness of security cooperation increases.

How do these two continua interact? Figure I.2 shows, very simply, that as a receiving state's risk level to a sending state increases, the sending state is less willing to extend costly forms of security cooperation to other states. The logic is as follows: the more risky a receiving state is, the more likely that state is to misuse the security cooperation it has received. When a sending state extends security cooperation to another state, it does not want to incur the costs of misuse that the sending state could impose on it, so the costliness of the types of security cooperation the sending state is willing to offer decrease as the risk that the receiving state poses increases.

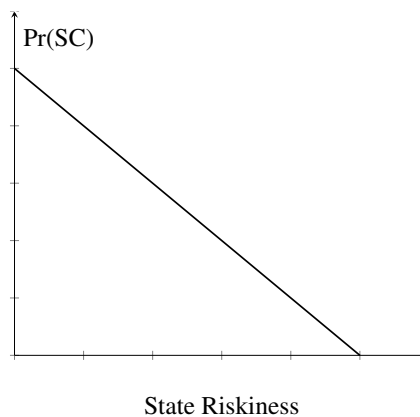


Figure I.2: Risky States and Costly Security Cooperation

Using this 'linear' language to talk about discrete security cooperation choices may not make sense, so it may be easier to understand from a likelihood perspective, an example of which is depicted visually in Figure I.3. Consider a scenario where there 3, and only 3, distinct types of security cooperation that increase in the cost for the sending state should the receiving state misuse the cooperation, and assume that the sending state must extend one of the types of security cooperation to the receiving state.<sup>11</sup> Consider also some generic

<sup>11</sup>The sending state can also not withhold security cooperation. It may be easier to conceive of this scenario if the lowest cost form of security cooperation is considered to be no security cooperation. Under this assumption, the likelihood that the receiving state receives either SC1, SC2 or SC3 is 1.

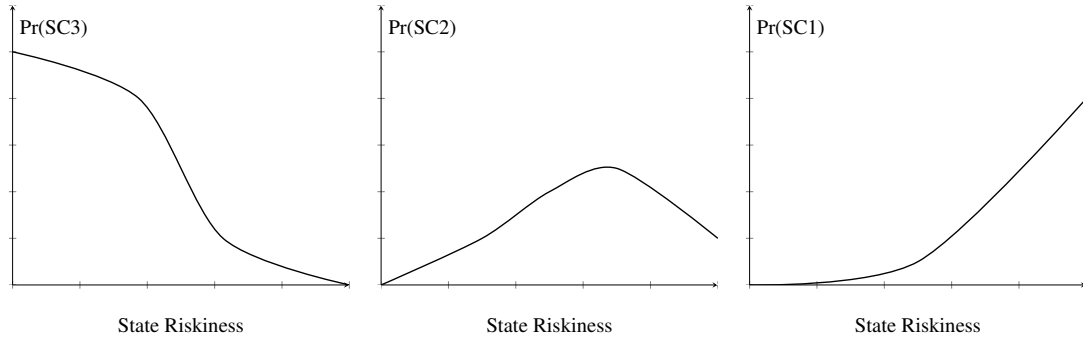


Figure I.3: Risky States and the Likelihood of Costly Security Cooperation

measure of state risk. Considering the most costly form of security cooperation, SC3, as risk of the receiving state increases, the likelihood that the sending state will offer that type of security cooperation decreases, like the linear hypothesis suggests. As the likelihood for SC3 decreases, the likelihood for one (or both) of the other options must increase because the likelihood that the receiving state gets one of the options must equal 1. In the example depicted in Figure I.3, the likelihood of the sending state giving both SC2 and SC1 increases as the receiving state becomes more risky. At a certain level of risk, the likelihood that the sending state will offer SC2 also begins to decrease. At the highest level of state risk, the likelihood of the sending state giving SC3 has decreased to zero and the less costly forms of security cooperation are more likely.

Figure I.3 is just one example of how state risk might affect the likelihood of security cooperation that would still be consistent with the linear hypothesis. In the section that follows, I make the concept of riskiness more concrete by discussing how actual characteristics of states make them more or less risky to other states, and I present hypotheses that relate these risk factors to costly security cooperation.

## I.5 Risky States and Costly Security Cooperation

The alliance literature discusses how states in alliances risk being abandoned by an ally in a time of need or being entrapped by an ally in a conflict that they did not desire (Snyder 1984, 1997). Whenever two states form an alliance, each state presents some risk that it

will abandon or entrap the other state, but the states weigh these risks and decide the risk is not high enough or they hedge against these risks in the way they write the agreement<sup>12</sup> In the case of either abandonment or entrapment, the receiving state uses the alliance in a way that the sending state had not intended, so giving the alliance to that state was extremely costly for the sending state. In the case of the former, it gets stuck fighting a war without the resources it expected to have, and in the case of the latter, it is fighting a war it had not anticipated having to fight. The sending state took a risk when it signed the alliance with the receiving state, and either the risk did not payoff or the sending state underestimated the risk that the receiving state actually posed.

Considering abandonment and entrapment, how do states evaluate the risk that a state will use an alliance in this way? First, in a scenario where two states have divergent preferences over foreign policy outcomes, the states may be more likely to abuse an alliance agreement. Preferences over foreign policy outcomes have only recently gained considerable theoretical traction as an explanatory variable (Bueno De Mesquita 1981; Bueno De Mesquita and Lalman 1992; Schweller 1996; Moravcsik 1997; Gartzke 2000), as they were largely dismissed by realist and neo-realist scholars. Schweller (1996) contends that, contrary to neo-realist assertions that states are driven by anarchy to seek survival over power, some states must exhibit revisionist preferences and behaviors in order for other states to balance against them. He further argues that it is uncertainty over the intentions that a state has that drives the security dilemma, not, as Waltz (1979) asserts, the structure of the international system. Moravcsik (1997), arguing from the other side of the aisle, reformulates liberal international relations theory such that states have preferences over the state of the world and the political leaders of a state act intentionally to realize those preferences, conditional on the interdependence of one state's preferences with another's.

With respect to security cooperation, several authors have argued, or at least assumed, that states ally with their friends, where friends are considered to be those states with which

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<sup>12</sup>Several recent studies on alliance agreements have shown that the agreement matters for explaining the behaviors of its signatories. See Kim (2011), Benson (2011), Benson, Bentley, and Ray (2013).

they have similar interests and preferences (Bueno De Mesquita 1981; Smith 1995; Cranmer, Desmarais, and Kirkland 2011). Moreover, including some measure of dyadic preference similarity has become common in studies on alliance formation (Fordham 2010; Crescenzi et al. 2012), and they find that preference similarity increases the likelihood of alliance formation. The measure these studies use, though, is generated from the similarity of alliance portfolios (Bueno De Mesquita 1981; Signorino and Ritter 1999), which has led others to avoid using them. Lai and Reiter (2000) reason that using a measure generated from alliances to predict alliance formation could be circular. A more recent measure generated from U.N. roll call votes (Gartzke 1998, 2000) has not been used to predict alliance formation primarily because of the shorter temporal period associated with these data. What is more, these data have been used as a control variable, and there has been little attempt at explaining the connection between preferences and alliance formation.

I contend that states use preference similarity to gauge the level of risk they are taking on by forming an alliance. That is, preference similarity does not lead to alliance formation, but if a state is forming an alliance, it will not form an alliance with a state that has greatly dissimilar preferences. If states share preferences over foreign policy outcomes, it is less likely that one will get into a conflict that will result in abandonment. It is also less likely that one of the states will behave in such a way as to embroil the other in an undesirable conflict. Conversely, should a state form an alliance with another state that does not share its preferences, it can expect to be abandoned or entrapped with greater probability.

Other forms of security cooperation do not carry with it the same commitment that an alliance does, so they likely do not carry with them the same level of risk of abandonment or entrapment. As explained above though, security cooperation short of alliances do carry with them costs if the receiving state misuses them. As such, sending states ought to consider the foreign policy preferences of potential receiving states when deciding whether to transfer arms in order to estimate the likelihood that they would use them in an undesired manner. Similar to the relationship between preferences and alliances posited in the previ-

ous paragraph, I anticipate that a receiving state is more likely to get arms if they share the policy preferences of the sending state.

Taken together, I contend that states that receive any form of costly security cooperation—  
alliances or arms—will have more similar preferences than states that receive nothing.  
From this, I derive the following hypothesis:

H1a: As the foreign policy preferences of a sending state and a receiving state become  
more similar, the sending state is more likely to extend to the receiving state costly  
security cooperation of any type than it is to give it no security cooperation.

Further, because of the costs associated with having an alliance, sending states want to  
insulate themselves from risk by avoiding those states with dissimilar preferences, perhaps  
even some that it would engage in a less costly form of security cooperation. As such, I  
expect there to be a positive relationship between preference similarity and alliance forma-  
tion as compared to getting anything else or, conditional on receiving some form of security  
cooperation, as compared to getting arms. Thus, the following two hypotheses.

H1b: As the foreign policy preferences of a sending state and a receiving state become  
more similar, the sending state is more likely to extend to the receiving state an  
alliance than it is to give it another form of security cooperation or no security coop-  
eration at all.

H1c: Conditional on the sending state giving the receiving state security cooperation, as  
the foreign policy preferences of a sending state and a receiving state become more  
similar, the sending state is more likely to offer an alliance to the receiving state than  
it is to give that state arms transfers.

Conflict-proneness is another characteristic of a state that makes it risky for a sending  
state to extend it costly security cooperation. If a state is especially prone to getting into  
conflicts with other states, any of the formers allies will necessarily be involved in that



conflict. A topic of relatively recent focus among scholars of international relations is rivalry. These scholars consider rivalry to be important because, depending on the definition of rivalry, rivals account for 50 to 75 percent of warfare in the past 200 years (Levy and Thompson 2010, 57). The recurrent pattern of warfare between specific pairs of states is an indication that some states present a greater threat than others. Empirical evidence on this topic show two important findings for states giving security cooperation to other states. First, that past conflict is an strong indicator of future conflict, and second, the more frequent the past conflict, the more likely conflict will escalate to war in the future (Hensel 1994; Colaresi and Thompson 2002). Since an alliance is often formulated in the terms ‘if you are attacked, I will defend you’, a sending state may take pause before giving a rivalrous sending state an alliance.

Sending states may not be as concerned about misuse of lesser forms of security cooperation, such as arms transfers, to rivalrous states, because the costs are not as great. In fact, even if the sending state supports a receiving state in its conflict, it may prefer to transfer it arms to avoid the costs associated with an alliance. Given the possible countervailing effects of rivalry on a sending states choice of security cooperation to extend to a receiving state, I have no expected effect between the likelihood of a state getting any security cooperation and no security cooperation. On the other hand, I anticipate that sending states would prefer to give anything else than to offer an alliance, which I claim in the following hypothesis:

H2a: As a receiving state becomes more rivalrous, the sending state is less likely to offer the receiving state an alliance than it is to give it another form of security cooperation or no security cooperation at all.

Similarly, among states that receive security cooperation from a sending states, I expect that the less rivalrous states will be more likely to get an alliance. I posit the following hypothesis.

H2b: Conditional on the sending state giving the receiving state security cooperation, as a receiving state becomes more rivalrous, the sending state is less likely to offer an alliance to the receiving state.

Having made the concept of risk more concrete by defining it through preferences and rivalrousness, I describe how I test the hypotheses I presented here in the next section.

## **I.6 Research Design**

I assess my hypotheses using a directed-dyadic design with security cooperation data for the period 1950–2001. My sample includes only dyads where a major power is the sending state. Given more than one option for what kind of security cooperation to extend to a receiving state, how do major powers decide which states get what? The design that I have chosen allows me to answer this question. While major and minor powers alike engage in security cooperation in a variety of different ways, major powers are able, by virtue of their power and wealth, to use alternative means more frequently and broadly. Even within the major powers, that concern could be a problem. For instance, even though Japan does have an arms industry from which it transfers weapons to other states, it does so at the rate of the other major powers and certainly not with the vigor of the United States or Russia. Nevertheless, using this design, I can explore how the risk that a state poses to the major power affects the likelihood that the major power will give that state any form of security cooperation.

As I discuss in more detail below, I generate an ordered, multilevel dependent variable that identifies when a major power sends one of two forms of security cooperation or none at all to a receiving state. In order to expand the common understanding of security cooperation, it would be desirable a move beyond the typical dichotomous ‘alliance-no alliance’ dependent variable and analyze a the multilevel variable using a model suitable for that. However, the restrictive assumption and myriad estimation problems make this all but impossible. Some scholars have used ordered logistic regressions for such analyses, but

one primary concern about doing this is the proportional-odds assumption this modeling technique makes of the data, which stipulates that relationship between the independent variables and the dependent variable are the same for different levels of the dependent variable. Not only do my data violate this assumption, but my hypotheses do as well. An alternative model would be to use multinomial logistic regression or multinomial probit regression, which, while losing the ordering of the variable would be an option to maintain the multilevel nature of the variable. The former option, however, has an assumption that requires that the introduction of another option not change relative odds between choosing the alternatives already present; most data on human (or state) choice do not meet this requirement. The latter option does not have this restrictive assumption but notoriously has estimation problems; my data are no different. Though not ideal, I manipulate my multilevel dependent variable into three different dichotomous variables, and I regress these on my independent variables, estimating my models using a probit regressions with robust standard error to correct of heteroscedasticity.

### **I.6.1 Dependent Variables: Security Cooperation**

I generate a dependent variable using data on alliances and arms transfers from 1950–2001 from the Alliance Treaty Obligations and Provisions (ATOP) (Leeds et al. 2002) and the Stockholm International Peace Research Institute (SIPRI) (Stockholm International Peace Research Institute 2011), respectively. The alliance data identify alliance agreements and include data on when the when the alliance was signed and by whom, and a variety of other information on the content of the alliance, such as the *casus foederis* and other obligations incurred by the parties to the alliance upon signing. I use only a subset of the alliances in these data. I include only those alliances with the ATOP project considers to be ‘active’. These alliances, upon the conditions for activation of the terms being met, require active military assistance from the parties to the alliance. Restricting the data in this way excludes agreements that are solely consultation agreements, neutrality agreements and/or

non-aggression pacts. I do not include these alliances for two primary reasons. First, the way I have operationalized alliances is consistent with the popular conception of an alliance. Most people do not typically think of some agreement that requires two states to simply consult with each other in the event of conflict to be an alliance, but rather, people typically think of a state offering some form of active assistance to another state involved in a conflict. Secondly, these agreements do not impose that same sort of costs on the sending state if they are misused in some way by the receiving state. If a sending state gets involved in a conflict, and a state with which it has a consultation agreement declines to honor its commitment to consult, the sending state does not incur much if any cost additional to fighting the conflict.

The arms transfers data come from the Stockholm International Peace Research Institute (SIPRI) (Stockholm International Peace Research Institute 2011). SIPRI generates annual dyadic arms transfer registers that log the sender and receiver of the transfer, the dates of the agreement, the quantity of arms agreed to, the quantity of arms actually transferred and type of weapons systems. These data come from publicly available sources, so they are certainly incomplete, but it is arguably the most complete repository of arms transfer data available. From these registers, SIPRI generates is the Trend Indicator Value (TIV), which “is based on the known unit production costs of a core set of weapons and is intended to represent the transfer of military resources rather than the financial value of the transfer.” The purpose of creating the TIV is to have a indicator for arms transfers that can be used to compare transfers over time and between all different countries that is consistent; it enables apples-to-apples comparison within its database. A directed dyadic and a monadic. The directed dyadic version of the TIV gives “the total trend-indicator value (TIV) of a country or rebel group’s arms imports or exports, broken down by supplier, recipient or type of weapon system.” SIPRI allows the user to partition the data in a variety of ways, outlined in the previous sentence.

My primary hypothesis focuses on a sending state’s choice to extend one type of secu-

rity cooperation versus another type to a receiving state, so I use these data to generate a single indicator for the type of security cooperation a state received from a sending state that is ordered by how costly the security cooperation is for the sending state. Table I.1 shows how I generate this dependent variable. I consider alliances to be more costly than

Table I.1: An Example of the Security Cooperation Variable for a Receiving State

Year	1	2	3	4	5	6
Arms Transfers (amount)	324	0	256	309	0	0
Arms Transfers (dummy)	1	0	1	1	0	0
Alliance	0	0	0	1	1	1
Security Cooperation	1	0	1	2	2	2

arms transfers, so the variable is coded 2 if the receiving state had an alliance with the sending state in that year, 1 if the receiving state got arms transfers in that year from the sending state and 0 otherwise. There were several observations where the receiving state had both an alliance and received arms transfers from the sending state, and in those cases, I coded the observation as having an alliance, the more costly of the two options. I could have coded observations where a state received both arms transfers and an alliance in a given year as a different category, but I didn't think a state in an alliance with the sending state could inflict many more costs on the sending state than it could with an alliance alone, and it certainly was not less costly. Moreover, these states were offered an alliance because the sending state judged them to pose a low enough risk to warrant an alliance.

From this variable, I generate three dichotomous variables that I use as the dependent variables in my analyses. The first dependent variable identifies when a state receives any form of security cooperation. To that end, I recode the original variable such that anything with a 0 value retains that value, and anything coded 1 or 2 gets recoded as a 1. The second dependent variable identifies when a state receives an alliance. To generate this variable, any observation in the original variable that was coded 0 or 1 is coded 0, and any observation that was coded 2 gets recoded as 1. Finally, for the third variable, I use only the subset of observations that received some form of security cooperation. Of those, any

observation that was coded 1 becomes a 0 and any that was a 2 is now a 1.

## **I.6.2 Primary Independent Variables**

### **Preference Similarity**

For preference similarity, I use Gartzke (1998)'s United Nations voting similarity score, which he generates using "S", as proposed by Signorino and Ritter (1999). In their original conception of the S-score, Signorino and Ritter (1999) measure similarity of alliance portfolios, a measure that is commonly used in the field. I chose not to use this measure because I am trying to explain security cooperation choices, including alliances, and I risk a circularity problem by using their measure. Moreover, as Gartzke and Jo (2006, 2) contend, "distortions will be least intense where the value in making choices is most modest," and U.N. voting is much less costly and extreme than is alliance choice resulting in a preference measure less subject to inconsistencies with reality. This variable, ranges from  $-1$ , indicating perfect dissimilarity, to  $1$ , indicating perfect similarity.

### **Rivalrousness**

I generate a variable for the extent to which a state is rivalrous by summing the total number of rivalries that the receiving state has in a given year. I measure rivalry with the Colaresi, Rasler, and Thompson (2008) strategic rivalry data. These data identify when a pair of states considers each other to be enemies and competitors. It is coded subjectively in an effort to account for the perceptions of state leaders. I sum the number of rivalries for a state in a given year, assuming that a state with more rivalries will be more likely to get into conflict with another state.

## **I.6.3 Control Variables**

The first model I estimate for each dependent variable is specified with only the primary independent variables, but I estimate another with several common control variables used in empirical international relations research. I do not know what relationship I could expect to

find for some of these variables, but several have been hypothesized to have a relationship between my primary independent variables and the dependent variable. Moreover, I want my hypotheses to face a more difficult test in the face of variables that could possibly highlight a spurious relationship.

### **Regime Type**

I operationalize regime type using the POLITY IV data (Marshall and Jaggers 2011). I include a variable that indicates the sending state's and the receiving state's POLITY score as well as an interaction term with which I can identify a complex relationship between the regime types in a pair of states. The POLITY score ranges from -10, absolute autocracy, to 10 absolute democracy, and the interaction, ranges from -100, perfectly dissimilar, to 100, perfectly similar. I include these variables because the relationship between preferences and regime type is unknown (Gartzke 1998; Oneal and Russett 1999), and regime type similarity or joint democracy could be a competing explanation for the relationship that I am exploring.

### **National Capabilities**

I include a variable that identifies the proportion of power that the receiving state has in the dyad. The data that I use to create the variable are the Composite Index of National Capabilities that comes from the Correlates of War (COW) project. This measure is frequently used in the field to measure capabilities. The CINC score can conceivably range from 0, meaning the state possesses no share of the world's capabilities, to 1, meaning the state possesses all of the world's capabilities. Obviously, neither of these occur in reality, though very many states are quite close to 0. The highest value for this variable that any state achieves is 0.364.

## **Shared Rivalry**

Using the same rivalry data I use to identify rivalrousness (Colaresi, Rasler, and Thompson 2008), I generate a variable that indicates whether the sending state and receiving state share a rival. I include this variable because it is possible that states that share a rival would be likely to engage in cooperation, regardless of foreign policy preferences. This variable serves as a test of the ‘the enemy of my enemy is my friend’ hypothesis (Maoz 2010).

## **Geographic Distance**

I use capital-to-capital distance data to identify the geographic distance between states. I extracted these data for every pair of states in the 1950–2000 temporal period from the CShapes package in the R statistical toolkit (Weidmann, Kuse, and Gleditsch 2010). I extracted the data on the first and last day of each year so I could be sure that every dyad-year observation would be represented. If a new state was added during the year, each of its dyads would only be represented one time during a given year while each dyad that was in the system for the entire year would be represented twice. I then removed duplicate dyad-year observations, keeping the observation from the last day of the year in case any changes in the system had occurred during the year that affected the distance between states. This produced a vector of distance values for every dyad-year observation in the data.

## **I.7 Empirical Analysis**

Table I.2 shows the results of the regression models. The table is divided in the three columns identified by the three dependent variables, which are the column headers. The first sub-column is the base model and the second sub-column is the model with controls.

The first set of hypotheses explores the effect of preferences on security cooperation choice. I posited that preference similarity between the sending and receiving state would result in the increased likelihood of the pair engaging in some form of security cooperation. In the first column, the coefficients for U.N. affinity are positive and statistically significant meaning I can reject the null hypothesis that preferences have no effect. Since two types of



security cooperation are embedded in this dependent variable, this finding does not account for the possibility that the relationship between preferences and alliance could be different than preferences and arms transfers. The second column isolates the effect of preference similarity on alliances. Again, the coefficients in both models are positive and statistically significant. In concert, these two findings make it clear that there is a positive relationship between preferences and both arms and alliances, but a final test can determine if the effect is stronger for alliances than for arms. The final column shows that, conditional on the receiving state receiving some form of security cooperation, the more similar the preferences of the two states (as measured by U.N. affinity), the more likely the two states are to have an alliances.

Table I.2: The Effect of State Risk on Major Power Security Cooperation, 1950–2001

	Security Cooperation	Alliance	Alliance Security Cooperation
U.N. Affinity	0.200*** (0.025)	0.357*** (0.034)	0.414*** (0.045)
No. of Rivalries (R)	0.122*** (0.007)	-0.074*** (0.008)	-0.278*** (0.012)
Shared Rival	0.500*** (0.090)	0.782*** (0.099)	0.685*** (0.128)
Capability Ratio	1.312*** (0.066)	0.515*** (0.060)	-0.632*** (0.096)
Distance	-0.0001*** (0.00000)	-0.0001*** (0.00000)	-0.0001*** (0.00000)
Polity (S)	0.051*** (0.001)	0.064*** (0.003)	0.060*** (0.004)
Polity (R)	-0.010*** (0.002)	0.002 (0.003)	0.017*** (0.004)
Polity (S) x Polity (R)	0.005*** (0.0002)	0.006*** (0.0003)	0.004*** (0.0005)
Constant	-0.760*** (0.019)	-1.242*** (0.025)	-0.052 (0.035)
N	30,770	30,770	9,019
Log likelihood	-18,439.990	-12,768.960	-5,916.155
AIC	36,885.990	25,543.920	11,838.310

\* p < .1; \*\* p < .05; \*\*\* p < .01  
(R) - Receiving State; (S) - Sending State

These findings offer clear evidence that the similarity of the preferences of a pair of states make those states more likely to engage each other in costly security cooperation, in a fairly linear fashion as predicted. That is, at low levels of similarity, they will have no security cooperation, at midlevel similarity they are likely to engage in arms transfers, and at high levels, they will likely share an alliance. The effect is quite straightforward, as anticipated. While previous literature has assumed such relationships exist (e.g. Fordham 2010; Crescenzi et al. 2012), no one has really tried to explain other than to say that states that have similar preferences are likely to be friends (e.g. Smith 1995). I think states use shared preferences (or, rather, unshared preferences) to identify those states with which it does not want to cooperate. In other words, it may cooperate with states with which it shares preferences, but it avoids states with dissimilar preferences more vigilantly.

The second set of hypotheses specifies relationships between the number of rivalries a receiving state has and that state's likelihood of receiving security cooperation. First, because I thought the relationship between rivalrousness and alliances and rivalrousness and arms transfers was likely to be different, I did not specify an hypothesis about the relationship between this variable and security cooperation when alliances and arms were embedded together. The coefficient for this variable in the first column is positive and statistically significant for both models. While this is contradictory to what I expect for alliances, I anticipate that sending states might be more likely to transfer arms to states when it wants to influence a conflict without actually joining the conflict through an alliance. Looking at the second column, states are in fact less likely to extend an alliance to a state as its number of rivals increases, as compared to getting either arms or no cooperation at all. The third column looks only at cases where the state received security cooperation, and the effect holds there too. These results are consistent with the hypotheses I proposed earlier.

As for the control variables, they are pretty consistent from model to model. When the sending state and receiving state share a rival, they are more likely to engage in security cooperation and more likely to share an alliance in general and when considered only

alongside states that received security cooperation. As for capability ratio and distance, there are no clear hypotheses relating these to security cooperation. The variable for distance has a negative and statistically significant sign for all models, which is consistent with the alliance formation literature (e.g. Lai and Reiter 2000; Crescenzi et al. 2012). As for polity, these results show that the more democratic a state, the more likely it is to offer costly security cooperation in all models. The recipient on the other hand, is less likely to receive security cooperation in general, but if it receives security cooperation, it is likely to receive an alliance.

Having found evidence that the level of risk that one state poses to another is negatively related to the level of costly security cooperation that state will get, I narrow the spatial domain to just security cooperation given by the United States and include military aid. I discuss how I apply my argument to this case in the next section.

## **I.8 Applications and Extensions: United States as Sender State**

In this section, I apply this general explanation of security cooperation choices to the United States. In doing so, I extend this explanation to a case with more data. In addition to alliances and arms transfers, I include military assistance as part of the dependent variable. The United States Agency for International Development makes these data available on an annual basis (United States Agency for International Development 2011).

Military assistance is cash transfers from the United States that can be used by the receiving state for a variety of purposes. One of the primary purposes of military assistance is for military education and training, provided through the International Military Education and Training (IMET) program (Bruneau, Peggar, and Wright 2009). Funds from this program can be used by the receiving state to send its military personnel to U.S. military schools that train officers to be professional leaders at the appropriate stage of their career, such as the Officer Basic Course or the Command and General Staff College, or to schools that have a primarily military purpose, such as the Basic Airborne Course that

trains soldiers to parachute into combat. These schools benefit the individual personnel that go through them with the hope that some of what they learn will ‘trickle-down’ to the other personnel in their units in their home country. The IMET funds can also be used to contract U.S. Special Forces personnel to train units of soldiers en masse in the home country. These are some examples of how receiving states use military assistance from the United States. The United State Agency for International Development (USAID) annually publishes its Greenbook, which “provides a complete historical record of all foreign assistance provided by the United States to the rest of the world.” These data include both military and economic aid in current U.S. dollars (United States Agency for International Development 2011).

Table I.3: An Example of the Security Cooperation Variable for a Receiving State

Year	1	2	3	4	5	6
Arms Transfers (amount)	324	0	256	309	0	0
Arms Transfers (dummy)	1	0	1	1	0	0
Military Aid (amount)	324	0	256	309	0	0
Military Aid (dummy)	1	0	1	1	0	0
Alliance	0	0	0	1	1	1
Security Cooperation	1	0	1	2	2	2

The models in this section have a dependent variable that is similar to that used in the models above. Table I.3 shows how I generated the dependent variable for the United States models. Observations where the receiving state has an alliance with the United States are coded 3, states that received arms transfers from the United States but do not also have an alliance are coded 2, observations where the receiving state was given military aid by but did not get arms transfers or have an alliance with the United States are coded 1, and those observations where the state received no form of security cooperation with the United States are coded 0. Similar to the dependent variable earlier in the paper, observations that had more than one type of security cooperation are coded the highest of the different types of cooperation, which would be the costliest type.

Again, I use a series of dichotomous dependent variables to assess my argument. The

first three are the same as the models above: security cooperation vs. no security cooperation; alliance vs. arms transfers, military aid, or no security cooperation; and, conditional on the state receiving security cooperation, alliance vs. military aid or arms transfers. The dependent variable for the fourth model is: conditional on receiving security cooperation that is not an alliance, arms transfers vs. military aid. For this variable, I use only the subset of data where the observations received arms or military aid. If an observation received arms, it is coded 1, and it is coded 0 if it received military aid.

I anticipate that the relationships that I hypothesized before will hold in the case of the United States with more types of security cooperation. The independent variables in this empirical analysis are the same as in the models presented above, but the models are specified in a slightly different manner. Since the United States is the only sending state in these models, I removed its POLITY IV score, since it does not vary, as well as the interaction term.

### **I.8.1 Empirical Analysis**

Table I.4 shows the results from the models. Assessing first the hypotheses associated with preference similarity, the models for each of the dependent variables show a positive, statistically significant relationship between the variable of interest and the dependent variable, again confirming the linear hypothesis that level of state risk is negatively associated with costly security cooperation. Specifically, the first model shows that preference similarity increases the likelihood that the United States will give the receiving state costly security cooperation as opposed to no cooperation at all. The second model shows that as the preferences of the receiving state and the U.S. become more similar, the receiving state is more likely to receive an alliance from the U.S. as compared to any lesser form of security cooperation or no security cooperation at all.

Table I.4: The Effect of State Risk on United States Security Cooperation, 1950–2001

	Security Cooperation	Alliance	Alliance Security Cooperation	Arms Sec. Coop., no Alliance
U.N. Affinity	0.387*** (0.041)	1.246*** (0.047)	1.106*** (0.053)	0.503*** (0.075)
No. of Rivalries (R)	-0.070*** (0.016)	-0.019 (0.015)	-0.003 (0.023)	0.340*** (0.033)
Shared Rival	-0.220 (0.167)	0.065 (0.294)	0.914*** (0.319)	4.310*** (0.113)
Capability Ratio	-0.349 (0.277)	2.189*** (0.315)	4.180*** (0.556)	3.580*** (0.847)
Distance	-0.0001*** (0.00000)	-0.0002*** (0.00001)	-0.0002*** (0.00001)	0.0001*** (0.00001)
Polity (R)	0.057*** (0.003)	0.064*** (0.003)	0.048*** (0.004)	-0.006 (0.004)
Constant	0.436*** (0.025)	-0.903*** (0.029)	-0.572*** (0.032)	-0.537*** (0.037)
N	6,243	6,243	4,365	2,248
Log likelihood	-3,763.739	-3,583.685	-2,653.635	-1,419.846
AIC	7,533.478	7,173.370	5,313.269	2,845.691

\*p < .1; \*\*p < .05; \*\*\*p < .01

(R) - Receiving State; (S) - Sending State

The third and fourth model explore the relationship between receiving specific types of security cooperation within the subset of observations where a state actually receives security cooperation. The third model compares the likelihood of receiving an alliance versus any other type of security cooperation, and I find that preference similarity makes receiving an alliance from the U.S. to be more likely. Finally, I restrict the data again, this time only looking at arms transfers and military aid. I posited earlier that I thought arms transfers were a more costly type of security cooperation. If this is the case, then states with closer preferences to the U.S. are more likely to receive arms than military aid, and this is exactly what I find.

As for the hypotheses specifying the relationship between rivalrousness and security cooperation, the results are somewhat mixed. There is a negative relationship between the number of rivals that the receiving state has and security cooperation from the United States. The second and third model, however, show no relationship between this variable and the likelihood of receiving an alliance, a relationship I expected to be negative. This effect could be being driven by the fact that the sending state for these models is the U.S., which, being the most powerful state in the system, may assess rivalrousness by the strength of the rival rather than the number. That is, it not be so concerned about several small states that another state has as a rival but one powerful rival may be of more concern. Finally, the last model show that states with more rivals are more likely to receive arms than military aid from the U.S. Again, this effect may be more attributed to the status of the United States in the international system than to the receiving state.

## **I.9 Conclusion**

In this article, I proposed that it was important to broaden our understanding of security cooperation to non-alliance forms of engagement. After defining and describing security cooperation more broadly and emplacing this proposal in the appropriate literature, I offered an explanation as to how sending states choose what cooperation arrangement to



extend to a state. In short, I proposed that sending states consider the risk that a receiving state poses to the sending state should it misuse the cooperation it receives. Based on the level of risk for misuse, the sending state then chooses a type of security cooperation of appropriate cost. The level of risk that a state poses is negatively related to the costliness of the security cooperation. I elaborated on this argument by explaining how preference similarity and rivalrousness are measures of risk, and I proposed a series of hypotheses relating these to security cooperation. I evaluated these hypotheses with two analyses. The first analysis explored how these variables affected major power security cooperation that included alliances and arms transfer data for all major powers. The second analysis focused on security cooperation from the United States, the dependent variable for this analysis additionally included data on military aid.

There are a few particularly novel aspects to this analysis. First, no one has offered an explanation for why preferences should relate to alliances beyond the claim that states with more similar interests are friends, and friends form alliances. I propose, instead, that states do not necessary use preferences to identify their friends with whom they want to cooperate but, rather, those states with which they really do not want to cooperate. Related to this, I use a measure of preference similarity, the U.N. affinity score (Gartzke 1998), that has heretofore never been used to analyze security cooperation of any kind, including alliance formation models, and I find strong positive relationships between preference similarity and the various forms of security cooperation.

The final novel aspect of this analysis is the dependent variable, which included data on various forms of security cooperation. This paper is a first step to broadening our understanding of security cooperation and a proof-of-concept, so to speak. An effort to generate data on other forms of security cooperation is an important next step. In the meantime, it is important to take advantage of, and make good use of the wealth of data that we have. The arms transfer data is an untapped spring. These data can be used in a variety of novel ways based on the vast amount of information available on each transfer. One urgent matter

would be using it, along with the alliance data to create a better, more informative variable of security cooperation. Three aspects of my analysis led to a loss of data in my dependent variable. First, I rolled arms transfer that occurred in the context of an alliance into that alliance. Second, I dichotomized the arms transfer and military aid data, which would be valuable as continuous variables. Finally, I had to analyze the data as a series of probit regressions as opposed to a coherent variable. Making progress on any of these fronts would be an advancement. In the end, however, I think this has shown the plausibility and need to broaden our understanding of security cooperation.

## CHAPTER II

### UNITED STATES SECURITY COOPERATION TO OTHER STATES AND COALITION BUILDING IN IRAQ AND AFGHANISTAN

#### II.1 Introduction

Operation Enduring Freedom commenced shortly after the attacks of September 11, 2001 on the United States by al-Qaeda. By 2002, over 40 states were part of the coalition on a mission to overthrow the Taliban government, replace it with one that is more democratic, and mete out justice to Osama bin Ladin and his followers in al-Qaeda who perpetrated the attacks. The United States received countless offers of assistance from allies and non-allies alike, and there was little question in the international community about the United States' right to retaliate against Afghanistan's Taliban government, which had harbored the terrorists that attacked it.

By the middle of March 2003, with the war in Afghanistan well under way, the United States, the United Kingdom and Spain submitted a bid to the United Nations Security Council to invade Iraq in order to forcibly disarm its weapons of mass destruction program. It became clear that several of Security Council members would use their veto power and vote against any resolution authorizing the invasion of Iraq. Shortly thereafter, the United States government announced that it would unilaterally proceed with a coalition-of-the-willing into Iraq, and that it did not need Security Council approval to take such action.

How did the United States use the security cooperation network it had developed over the course of decades to build coalitions suitable for fighting these wars, coalitions that were built under two very different sets of conditions? In this paper, I answer this question and conduct a systematic empirical analysis of the claims that I make. Some scholars and popular media have made claims, some backed with evidence, about the coercion that the U.S. employs against states to force them to join these coalitions (Anderson, Bennis, and

Cavanagh 2003; Newnham 2008). My goal is to neither confirm nor refute these claims but rather to make the connection between the relationships the the United States has maintained with other states through security cooperation and likelihood of them being involved in a war coalition. I also establish that the relationships that I find are not, in fact, the result of endogeneity. That is, I test to make sure that the fact that states are involved in the coalition are not the driving force behind the security cooperation they receive from the United States. While I am not looking for evidence of coercion, the test for endogeneity could be interpreted as test for bribery.

In short, I contend that the conditions under which the coalition for the war in Afghanistan was formed were suitable for the United States to bring together a powerful group of its closest allies to fight this war. In 2003, in the midst of fighting the war in Afghanistan, the United States needed to form a coalition to invade Iraq, an increasingly unpopular idea that, to many, reeked of illegitimacy. These conditions could scarcely have been more different than those in the case of Afghanistan, and I contend that, while its formal allies still proved to be some of its primary partners, the United States had to seek out those states with which it had formed cooperative bonds through its military assistance programs in order to build a multilateral coalition that gave the appearance of legitimacy to the invasion of Iraq.

This paper proceeds as follows. I start with a short discussion of the literature on coalition building. I follow this with some descriptions of United States security cooperation focusing on how this cooperation could prepare a state to be part of a coalition. I then develop my argument, and propose some hypotheses to test the claims that I make. In the fourth section, I present the research design and empirical analysis evaluating my hypotheses. I wrap up with the endogeneity test and some concluding remarks.

## **II.2 Literature Review**

This chapter is about the formation of wartime coalitions, not alliances. A coalition I am referring to consists of a group of states that comes together with the express purpose of

fighting a war and after the war ends, the coalition dissolves. An alliance may prove to be an integral part of a coalition, or even be the entire coalition, but coalitions do not have to have any alliance ties. Some alliances, in fact, are formed in war, and these may be considered a wartime coalitions if the members of the wartime alliance are the only members on their side of the war. alliance is often formed in peace for the purpose of deterrence. Alliances can be formed in wartime, and this may be equivalent to a wartime coalition if the members of the wartime alliance are the only members on their side of the war. It may also be the case that these states were a coalition before they signed the alliance.

This paper primarily contributes to three areas of the coalition formation literature: the types of coalitions that form, the role of alliances in coalitions, and the reliability of democracies in coalitions. The study of ad hoc, wartime coalitions is relatively new in international relations, with the majority of studies looking at this topic appearing in the past five to seven years. It builds on the alliance literature but is decidedly different in one major respect, highlighted by Weitsman (2003, 31): “It is somewhat surprising how thin the literature is on the dynamics of alliances during wartime.” The alliance literature has not produced much related to the role of alliance in wartime. It has certainly addressed the reliability of allies at the time of war (e.g Leeds 2003b; Leeds, Mattes, and Vogel 2009), but not their behavior during war.

Burden-sharing is one of the primary reasons that states form alliances (Olson 1965; Olson and Zeckhauser 1966; Sandler and Cauley 1975; Sandler 1992). Like the research on alliances and burden-sharing, one of the primary purposes cited for forming wartime coalitions is for burden-sharing and division of labor (Bennett, Leggold, and Unger 1997; Lake 1999). Bennett, Leggold, and Unger (1997) determined that the wartime coalition formed for the Gulf War was primarily a burden-sharing coalition jointly driven by their understanding that an occupied Kuwait posed a threat to their national security and by dependence on their alliance with the United States. Like the Gulf War, I contend that the conditions preceding the formation of the coalition in Afghanistan were suitable for

establishing a burden sharing coalition. Many states felt the threat of al Qaeda and were willing and able to contribute to the war effort.

States also create coalitions for the purpose of generating legitimacy for their cause. Bull (1977) contends that norms delineate how states should act in the international system, so state follow norms in order to act in an acceptable manner. One such norm, according to Finnemore (2003), is that states can only legitimately use force against other states multilaterally. Claude (1966) contends that, at that point in time, “collective legitimization [had] emerged as one of [the United Nations] major political functions.” If multilateral uses of force approved by the United Nations are what constitute legitimacy, then it follows that the unilateral use of force without approval of the United Nations is illegitimate. I argue that, since multilateralism is one source of legitimacy, the United States sought to form the Iraq war coalition to give at least the appearance of multilateralism for the purpose of generating legitimacy for its military actions. One striking feature of a legitimacy-seeking coalition is the obvious lack of burden-sharing in it.

Alliance reliability is also an important area of alliance research. Recent work, after controlling for the *casus foederis* of the alliance, has found that alliances are very reliable (Leeds 2003b; Leeds, Mattes, and Vogel 2009). As has been seen in the wars in Afghanistan and Iraq, allies are generally not the only states that contribute to a wartime coalition. Moreover coalitions are not always formed following an event that triggers the obligations of the alliance. The role of alliances in these coalitions has become a recent topic of study. That is to say, when a state goes to war, what role do its allies play in the coalition forms to fight that war? Tago (2007) finds that alliance relationships are a significant contributing factor to who joins a coalition. The two coalitions that are the topic of this study were formed under very different conditions, one after a direct attack on the United States and one for a discretionary war started by the United States, and the behavior of the U.S. allies was decidedly different in each case but with allies playing a major role in both cases.

The reliability of democratic allies in particular is also popular topic in alliance re-

search. These studies generally fall into two camps: democracies are more reliable allies (Reed 1997; Bennett 1997; Leeds 2003b; Leeds, Mattes, and Vogel 2009) and democracies are no more reliable than any other ally (Reiter and Stam 2002; Desch 2002; Gartzke and Gleditsch 2004). Some more recent studies that focus more broadly on coalitions have begun to examine the role of democratic states in the formation of wartime coalitions finding that democracies make more attractive partners in a coalition (Pilster 2011; Choi 2012). Additionally, Lake (2009), looking at hierarchy in international relations, finds that the closer states are to the U.S. in its security and economic hierarchy, the more likely they are to join coalitions. I contend that the likelihood of democratic allies or those higher in the military or economic hierarchy of the U.S. depends on the purpose for which the coalition was formed, burden-sharing or legitimacy, and if the coalition was made necessary by an event that triggered the *casus foederis*. In the section that follows, I explain how security cooperation makes states suitable for coalition operations with the U.S.

### **II.3 United States Security Cooperation**

The United States Department of Defense defines security cooperation as “those activities conducted with allies and friendly nations to: Build relationships that promote specified U.S. interests[;] Build allied and friendly nation capabilities for self-defense and coalition operations[; and] Provide U.S. forces with peacetime and contingency access.”<sup>1</sup> As is evident from the definition, the purpose of U.S. security cooperation is not solely to benefit the receiving state but to mutually benefit the receiving state and the U.S. simultaneously through the cooperative relationship. A key feature of the cooperation definition is that it is forward-looking identifying development of national “capabilities for... coalition operations” as a primary purpose.

The United States engages in a variety of types of security cooperation for different purposes, and often it will give several types of cooperation to a state at once. For instance,

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<sup>1</sup>“Defense Security Cooperation Agency: Frequently Asked Questions,” available at <http://www.dsc.a.mil/pressreleases/faq.htm>.

many allies of the U.S. will also receive arms transfers. It is important for allies to be well-equipped and for there to be a degree of interoperability between allies so the states can effectively fight alongside each other in a conflict, if need be. I will discuss military assistance, arms transfers, and alliances.

U.S. military assistance programs are largely grant-based programs that provide states with access to military schools, military training and the consultation of military officials in developing defense capabilities and strategies. Such assistance tends to have a direct effect on a small proportion of the overall force of a country with the hopes that such training and professionalization will have an indirect effect on the states military at-large. On a larger scale, it allows the U.S. to forge bonds with those military personnel in decision-making positions within the other military. Through consulting with and advising these people, the U.S. can help hone a more effective fighting force, which can be useful in coalitions operations. Moreover, these relationships are often with those people that the U.S. would need to approach in the case that it needs their assistance.

Arms transfers are similar to military assistance in the sense that they create relationships with decision makers in other states that are important for future cooperation. They are different in that, at a lower level of the military, where the military assistance dealt with people, arms transfers deals with equipment. Better equipment can certainly have the effect of creating a fighting force suitable for coalition operations. Moreover, it is possible to reach a broad number of military personnel relatively quickly with a couple hundred new rifles, or a few new helicopters. An additional benefit of arms transfers is that they encourage interoperability of equipment. If a state is receiving arms from the United States, there will be more common equipment across the two militaries if they should ever have to fight alongside each other, easing logistical costs.

Alliances offer many benefits to the states that share them that could prepare these states to be coalition partners, not the least of which is the bond they form by ex ante agreeing to come to each other's aid should the other be attacked. As a result of this commitment, allies



interact with each other often during peace time in order to prepare for the eventuality of entering combat together, and these interactions can occur at many different levels of the military, for the command structure down to the line units. Such collaboration can lead to a more seamless transition into a combat scenario. This fact is clear from the invasions of both Afghanistan and Iraq. In neither case was the invasion conducted by a large coalitions of states, but rather they were conducted by the U.S. and a few of its closest allies. It was not until after the initial invasion that the rest of the states joined the combat operations.<sup>2</sup>

One of the stated purposes of the security cooperation that the U.S. engages in with other states is to prepare these states for participation in coalition operations. While it is clear how the cooperation does this, what is less clear is how the U.S. takes advantage of the relationships that it has built through cooperation to construct the coalitions it fights wars with. I will provide the answer to this puzzle in the next section.

#### **II.4 Coalition Building in Afghanistan and Iraq**

When the United States set out to fight the wars in Afghanistan and Iraq, it needed to build multilateral coalitions for each, and the conditions for building each of these coalitions could not have been more different. In explaining the U.S. coalition building efforts, I make some assumptions. Typically, the question of coalition formation is formulated as “who joins coalitions?” I differ in this regard by framing the question in terms of how the U.S. forms its coalitions. While there is certainly an element of the coalition states having a choice to join, I contend that, by its position as the sole superpower and as the leading proponent of both of these coalitions, the U.S. had veto power over anyone who wanted to join. More over, evaluating the factors that influence the desire of a state to join a coalition is difficult when a state can reject their offer because we only observe what actually happens, which can lead to false inference when trying to explain willingness.

I contend that forming these coalitions was an exercise in influence for the U.S., which

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<sup>2</sup>Of the coalition that participated in Iraq, only four participated in the invasion: U.S., Britain, Australia and Poland. See <http://www.newsmax.com/Politics/Brzezinski-iraq-invasion-bush/2012/07/18/id/445806>.

is another area where other authors tend to focus and focus specifically on coercive influence by the U.S. Security cooperation plays a role in the decisions of the U.S. with respect to the formation of these coalitions, and there was, at the very least, an implicit agreement when the U.S. began cooperating with these states that there may come a day when that state is called upon to reciprocate the cooperation they have been given over the years in a situation such as this, and that the cooperative partners of the U.S. have at least some obligation, however small, to come to the assistance of the U.S. in its time of need. In the very least, the U.S. identifies the goals of its security cooperation in the definition presented in the previous section, so I presume that the states that receive cooperation understand that they are being prepared for an eventual conflict.

With respect to Afghanistan, the United States had been attacked, so few states questioned its right to strike back. Moreover, several of the alliances to which the United States is party were activated, including NATO and ANZUS.<sup>3</sup> These activations alone guaranteed that the United States would have a sizable group of states willing to come to its aid to one degree or other, in accord with the provisions of the alliances. In addition to its alliances, several non-ally states called to offer their condolences as well their assistance in tracking the terrorists down and bringing them to justice. In addition to the overwhelming sense of legitimacy that taking action against Afghanistan had in the international community, and the offers of assistance it received from allies and non allies alike, most of the states that the United States would want to be in a coalition with were relatively available. That is to say, there were no other major military conflicts in the world that had U.S. allies bogged down, so everyone was available to join a coalition.

The tragic terrorist attacks notwithstanding, the United States faced very favorable conditions for building a coalition to fight this war. NATO was an obvious choice to provide the backbone of the coalition given that the member-states were militarily capable states that had spend considerable time conducting peacekeeping operations together and training

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<sup>3</sup>See [urlhttp://www.nato.int/docu/update/2001/1001/e1002a.htm](http://www.nato.int/docu/update/2001/1001/e1002a.htm) and [urlhttp://australianpolitics.com/2001/09/14/government-invokes-anzus-treaty.html](http://australianpolitics.com/2001/09/14/government-invokes-anzus-treaty.html).

together over the years.<sup>4</sup> Even if the U.S. had not chosen NATO to spearhead this operation, it would have been able to choose nearly any group of states it desired. There was one constraint however: it would have been impossible to include all of the states that genuinely wanted to provide material assistance. As groups get large, the marginal benefit of an additional member diminishes (Riker 1963; Niou and Ordeshook 1994). Some states would have to be turned away and asked to help in a more distant, indirect roll. Under conditions as favorable as those the U.S. found itself in, the U.S. could develop a strong coalition of states with which it shared a favorable relationship, whose military it was familiar with and which would give it the best chance of completing the mission for which the coalition was needed.

The conditions in which the United States found itself in the months leading up to the war in Iraq stood in stark contrast to the can-do-no-wrong days following 9/11. There was an overwhelming lack of support from the international system, with some of the U.S.'s closest allies being the most vocal opponents.<sup>5</sup> Some even considered a unilateral decision to go forward with the invasion as a contravention of international law.<sup>6</sup> Even Kofi Annan, former UN Secretary General, opined that the invasion was illegal, saying that it “not in conformity with the UN charter [...] from the charter point of view, [the invasion] was illegal.”<sup>7</sup> Unlike the case of Afghanistan where the United States was attacked, the justification for invading Iraq was the belief that Saddam Hussein still had a weapons program and was currently developing weapons of mass destruction despite the repeated resolutions against the country from the United Nations Security Council. However, countries on the Security council did not believe this to be true, and, even after Colin Powell’s speech to present the evidence for war to the U.N., simply called on the U.N. to let the inspection

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<sup>4</sup>For example, NATO countries conduct joint military exercises together several times a year. See <http://www.nato.int/ims/1999/i99-004e.htm>.

<sup>5</sup>See Glenn Frankel, “Chirac Fortifies Antiwar Caucus,” *Washington Post*, available online at <http://www.globalpolicy.org/component/content/article/167/35223.html>.

<sup>6</sup>See “War would be illegal,” *The Guardian*, available online at <http://www.guardian.co.uk/politics/2003/mar/07/highereducation.iraq>.

<sup>7</sup>See “Excerpts: Annan interview,” *BBC News*, available online at [http://news.bbc.co.uk/2/hi/middle\\_east/3661640.stm](http://news.bbc.co.uk/2/hi/middle_east/3661640.stm).

continue.<sup>8</sup>

In response to the opposition from the Security Council and the international community at-large, the U.S. repeatedly threatened to forego U.N. approval and move forward with the invasion with the coalition-of-the-willing it had formed, though it only revealed the countries that were part of the coalition days before the invasion.<sup>9</sup> The U.S. had been speaking of this coalition for months as a way to give the impression of international support and consensus for the action, but the revelation of the list indicated some underwhelming partners.<sup>10</sup> While most clearly thought it the war was illegitimate, the construction of the coalition of the willing was obviously a move to generate legitimacy, and the revelation of the list of the coalition states further supports this assertion since most of the states could do little to share the cost of the war.

In addition to the lack of support from many states that the U.S. would traditionally look to for support and the overwhelming belief that this invasion would be wholly illegitimate, the United States had one other considerable obstacle to forming a coalition for a war in Iraq: it and most of its closest allies were in the middle of a major war in another country. As I discussed above, the conditions for creating a coalition before the war in Afghanistan could not have been better, so the United States understandably chose those states that would give it the best chance at winning. With those states bogged down, with whom would it partner to start a war in another country? Even if the states that were currently contributing to the effort in Afghanistan were willing to fight in Iraq in the face of so much opposition, and some were, it would be next to impossible to take advantage of their willingness without harming the progress of the war in Afghanistan. Very few of those states would be able to fight a two front war.

Where everything was aligned in the United States' favor leading up to the war in

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<sup>8</sup>“Powell: Iraq hiding weapons, aiding terrorists,” CNN, available at <http://www.cnn.com/2003/US/02/05/sprj.irq.powell.un/>.

<sup>9</sup>See Steve Schifferes, “US names ‘coalition of the willing’,” *BBC News*, available at <http://news.bbc.co.uk/2/hi/americas/2862343.stm>.

<sup>10</sup>See Emma Brockes, “What can Eritrea possibly do to help the US in Iraq?,” *The Guardian*, available at <http://www.guardian.co.uk/world/2003/mar/20/iraq.emmabrockes>.

Afghanistan, the U.S. could claim very few advantages in creating a coalition in the climate in which it found itself in early 2003. Given the two different circumstances in which the United States built these coalitions, how would they affect the coalition that it would build? Specifically, how would it affect the way the U.S. took advantage of the security relationships it shared with other states to build a coalition in these times.

The United States' closest partners in the international system are its allies. Not only do they share the bond of having the alliance, they tend to be similar on other characteristics too, such as regime type and in terms of culture (Lai and Reiter 2000). Moreover, alliances are generally reliable when it comes to responding to attacks on other members of the alliance (Leeds 2003b). Because of this bond that allies share, in addition to the reliability of allies, allies were more likely to be part of the Afghanistan coalition, and despite the fact that the U.S. was not attacked by Iraq, I would anticipate that allies would still be more likely than not to be part of the Iraq coalition.

H1a: States that were allies will be more likely to be involved in the coalition fighting the war in Afghanistan than non-allies.

H1b: States that were allies will be more likely to be involved in the Iraq war than non-allies.

States receiving arms transfers tend to be more militarily capable than the average state, but the similarities that they share along other attributes vary much more widely. Moreover, since there is no formal bond between these states and the U.S., they are not bound by any agreement to come to the aid of the U.S. in the event of a U.S. attack. Nevertheless, I would anticipate, since the U.S. was trying to build a burden-sharing coalition in Afghanistan, states that received arms in the past would be more likely to bear some of the weight of the war. I suspect that arms transfers would have a positive relationship with participation in the coalition in Afghanistan since the U.S. would want states that would be able to effectively fight the war.

In contrast, during the more tumultuous times for the U.S. before the start of the Iraq war, several of the states that it probably would have preferred to have in Iraq were already fighting in Afghanistan. Moreover, states generally were not making themselves available on account of the overall opposition to the war. In any case, the U.S. was less concerned about burden sharing in Iraq, so states with superior military capabilities were not necessary. I anticipate that there will be a negative relationship between arms transfers and those states that fought in the Iraq coalition.

H2a: States that received arms transfers are more likely to be involved in the war in Afghanistan than states that do not.

H2b: States that received arms transfers are less likely to be involved in the war in Iraq than states that do not.

States that received military aid are the least likely of those states that the U.S. engaged in security cooperation with to be able to help with the burden sharing coalition in Afghanistan. After the U.S. attacked, I am sure that many of these states offered to help the U.S. in the war effort, but the coalition needed states that could provide a substantial contribution most. Those states with which the U.S. shared an alliance with the U.S. and those states that had received arms from the U.S. are both more qualified for this task. Thus, I anticipate that states that receive military aid will be less likely to be involved in the war in Afghanistan.

Iraq is a different story, however. Two characteristics make states that have received military aid ideal coalition members in Iraq. First, these states are not likely to be fighting in Afghanistan making them militarily available to assist in Iraq. Second, they have engaged in security cooperation with the U.S., so they have forged some bond with the U.S. that ties them to U.S. security interests. This says nothing of their political support or opposition of the war effort though, but I do not think this matters much. Whether through coercion or other influential means, I contend that these are the states the U.S. will approach when

forming the coalition because of the cooperation they have received in the past through military aid. There is a tacit obligation to reciprocate, and the U.S. needs these states to do just that because it needs names of states it can include on the ‘coalition-of-the-willing’ list regardless of the military might they bring to the war effort. For these reasons, I think states that have received military aid from the U.S. in the past will be more likely to join the coalition in Iraq.

H3a: States that received military aid are less likely to be involved in the coalition the war in Afghanistan than states that do not receive military aid.

H3: States that received military aid are more likely to be involved in Iraq war coalition than states that did not receive any aid.

Having proposed several hypotheses, I layout my plan for assessing them.

## **II.5 Evaluating Involvement in the War Coalitions**

How did security cooperation from the United States influence states to join the coalitions in Afghanistan and Iraq? I evaluate this question using a monadic research design with data on state involvement in the Afghanistan and Iraq coalitions from 2003 and 2004, respectively, to 2009 and data on security cooperation from various sources. I include a spatial domain of all states included in the international system by the Correlates of War (COW) project. I estimate two sets of logistic regression models one for each coalition, using robust standard errors to correct for heteroskedasticity.

My dependent variables come from the UCDP/PRIO conflict data Harbom, Havard, and Nygard (2009). With these data, I isolated the conflict in Iraq and Afghanistan, and I identified those states involved in the wars during each year. I generated two variables with these data, one for each conflict. These variables are coded 1 if the state was involved in the conflict in a given year and zero otherwise. Table II.1 lists the states involved in the

coalitions.<sup>11</sup>

Table II.1: Participants in the Afghanistan and Iraq Coalitions

Coalitions	Participants
Afghanistan	Albania, Australia, Austria, Azerbaijan, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Greece, Hungary, Iceland, Ireland, Italy, Jordan, Latvia, Lithuania, Luxembourg, Macedonia, Netherlands, New Zealand, Norway, Pakistan, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom
Iraq	Albania, Armenia, Australia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Czech Republic, Denmark, Dominican Republic, El Salvador, Estonia, Georgia, Honduras, Italy, Kazakhstan, Latvia, Lithuania, Macedonia, Moldova, Mongolia, Netherlands, Nicaragua, Norway, Philippines, Poland, Portugal, Romania, Slovakia, South Korea, Spain, Ukraine, United Kingdom

Source: Harbom, Havard, and Nygard (2009)

I identified three forms of security cooperation that I anticipate have an effect on the likelihood a state will join a coalition. Additionally, I included several control variables that are competing explanations for why states would join these coalitions, as discussed above. The independent variables are as follows:

### **Alliances**

The alliance data I use for this analysis come from the Alliance Treaty Obligations and Provisions (ATOP) project (Leeds et al. 2002). These data identify interstate alliances for the temporal period 1816–2003. According to these data, the United States was party to nine different alliances in 2003. Five of its allies—Japan, the Philippines, South Korea, Pakistan, and Turkey—have bilateral agreements with the United States. Australia is a member of the ANZUS alliance with the United States, and, while New Zealand is also a member of this alliance, the United States and New Zealand do not have an alliance relationship. The remainder of its allies come from three large, multilateral alliances: the North Atlantic Treaty Organization (NATO), the Inter-American Treaty of Reciprocal Assistance

<sup>11</sup>Other states deployed troops to Iraq, such as Japan and New Zealand, but they were there for non-combat, humanitarian purposes. The only state that was not included on the list of states with troops in Iraq is Tonga, which deployed troops there in 2007. See Donna Miles, “Pacific Command Chief Praises Little Tonga for Big Iraq Contribution,” available at <http://www.defense.gov/News/NewsArticle.aspx?ID=47476>.



(the Rio Pact), and the Organization of American States. If the state was a member of any of these alliances, I coded the alliance variable as 1 and 0 otherwise.

Since these data end in 2003, I confirmed that they are each still in effect and extended them forward to 2009. Additionally, seven states—Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia, Slovenia—joined NATO in 2004, and Albania and Croatia joined in 2009. I added these states to the data. Finally, Mexico withdrew from the Rio Pact in objection to the Iraq War in 2004, but it is a member of the Organization of American States so it remains an ally of the United States for the duration of the data.

I anticipate that having an alliance with the United States will be make states more likely to be involved in the Afghanistan coalition than states without an alliance, as well as make states more likely to be involved in the Iraq coalition than states without an alliance.

### **Arms Transfers**

The data on arms transfers come from the Stockholm International Peace Research Institute (SIPRI) (Stockholm International Peace Research Institute 2011). From its arms transfers registers, which log which states give what arms to whom and when, SIPRI creates a Trend Indicator Value (TIV) that can be used for econometric analysis. This indicator “is based on the known unit production costs of a core set of weapons and is intended to represent the transfer of military resources rather than the financial value of the transfer.” Creating this value allows researchers to compare transfers both cross-sectionally and over time without worrying about currency conversions or the different types of weapons systems. For each observation, I included a variable that is the TIV of the transfers from the United States to the state in the observation in that year. I expect arms transfers to be positively correlated with states joining the war coalitions.

### **Military Aid**

The United States Agency for International Development (USAID) annually produces data on the military assistance that the United States give the other countries (United States

Agency for International Development 2011). The assistance comes in different forms including military education of foreign personnel in United States military schools, or foreign military training where the United States sends troops to another country to train some of their military units. USAID reports these figures in dollar amounts, and I include a variable of the annual amount of military assistance from the United States for each country. I expect military aid to have no effect in Afghanistan and to have a positive effect in Iraq.

In addition to the primary explanatory variables, I include some control variables that are likely to have an effect on both the primary independent variables and the likelihood that a state joins the conflict. In some cases, it is unclear whether these variables influence the security cooperation or whether the security cooperation influences these variables, making them competing, complementary or intervening variables. In any case, by including these variables I can produce more stringent conditions under which to test my hypotheses. The variables are: participation in the other coalition, regime type, preference congruence, and religious composition.

### **Participation in the other coalition**

I include a control variable that indicates if a state is a member of the other coalition. I expect that participation in one coalition makes participation in the other coalition less likely.

### **Regime Type**

Democracies are reported to not fight each others in wars (e.g Ray 1995; Bueno De Mesquita et al. 1999). The same forces that dissuade them from fighting against each other may also be a catalyst for cooperation (Reed 1997; Bennett 1997; Leeds 2003b; Leeds, Mattes, and Vogel 2009). If regime type is to have any effect on the likelihood of a state joining these war coalition, I would anticipate that more democratic states are more likely to fight in Afghanistan. The legitimacy problems of Iraq, and the fact that democracies tend to be wealthier and more powerful, qualities not needed in a legitimacy coalition, I would an-

anticipate that regime type does not make a state any more or less likely to join the Iraq coalition.

I measure the regime type of each country using the polity variable from the POLITY IV project (Marshall and Jaggers 2011). The polity variable measures regime type on a scale ranging –10 to 10 from a pure autocracy to a pure democracy. This variable ought to have a positive sign suggesting that democracies are more likely to join the United States in the two war coalitions. As I explained above, this may deviate for the war in Iraq as a result of the concern of states over the legitimacy of that particular conflict.

### **Preference Congruence**

Preference similarity has shown to be a strong predictor of international outcomes in several areas of international politics (Legro 1996; Gartzke 2000). As such, I anticipate that states with similar preferences will be more likely to be involved in Iraq and in Afghanistan. On the one hand, these states will naturally be available to fight in the Afghanistan coalition, and, on the other hand, these are the states that the U.S. is likely to approach to form a coalition for Iraq.

A measure of preference congruence identifies how closely two states preferences over foreign policy outcomes align. As such, scholars theorize that such a measure should be a good predictor of international outcomes (Bueno De Mesquita 1981). These have been measured in a variety of ways before, often using alliance portfolios congruence (Bueno de Mesquita 1975; Signorino and Ritter 1999). Since I am assessing the effect of security cooperation, including alliances, on the likelihood of a state joining a war coalition, a measure of preferences using alliances could skew my results. Instead, I use a measure based on roll call votes in the United Nations General Assembly developed by Gartzke (1998). This particular measure of preferences similarity is not susceptible to extreme characterizations of preference similarity because it is not based on costly political behavior like alliances. Moreover, preference similarity tends to transcend other indicators of similarity between

states (Gartzke and Jo 2006). I anticipate that this variable will have a positive sign, such that the greater preference congruence between the United States and the other state, the more likely that state will be to join the coalition.

### **Religious Composition**

A situation such as this is prime for assessing (Huntington 1992)'s 'Clash of Civilizations' argument. He predicted that the next major wars would be fought along civilizational fault lines, with the civilizations typically being delineated by religion and culture. In the case of Afghanistan, one civilization reached out and struck another with a deadly blow, provoking a larger war with that civilization. In the case of Iraq, a prominent member of one civilization repeatedly flouted the efforts of another civilization to get it to behave. This argument would pit the two civilizations against each other, suggesting that Muslim states are less likely to be involved in the conflicts on the side of the U.S., while Christian states should be more likely to be involved in the conflicts with the U.S.

Maoz and Henderson (2013) include data on the religious makeup of states in the international system since 1946, with an updated figure every fifth year. From these, for each observation I included the percent of the population that is Muslim and that is Christian in a state in the year 2005. I will use these data to assess the 'clash-of-civilizations' hypothesis.

#### **II.5.1 Assessing Afghanistan Participation**

The first set of models are designed to assess whether past security cooperation has an impact on a state fighting in the coalition against the Taliban in Afghanistan. The results for these models can be found in Table II.2. Since the vast majority of research on security cooperation has been done on alliances, I first assess this hypothesis and find that states that share an alliance with the United States are more like to fight in this coalition. After the September 11, 2001 terrorist attacks on the United States, NATO invoked Article V, the Australian President invoked the ANZUS treaty and President Bush invoked the Rio Pact. The actions by al Qaeda that day were a direct attack on the United States, and as a group,

these terrorists were clearly supported by the Taliban government in Afghanistan. So, the result that allies are more likely to be involved in this coalition is unsurprising.

Table II.2: Security Cooperation and Participation in the Afghanistan Coalition, 2003-2009

	Afghanistan Coalition		
Military Aid Amount (ln, L1)	-0.051 (0.037)	-0.077 (0.062)	-0.134** (0.052)
Arms Transfers (ln, L1)	0.118*** (0.025)	-0.006 (0.039)	0.003 (0.039)
Alliance (L1)	1.137*** (0.113)	0.964*** (0.178)	1.098*** (0.216)
Iraq		0.621*** (0.178)	0.628*** (0.183)
Polity Score		0.006 (0.021)	0.038** (0.019)
UN Affinity Score		2.279*** (0.279)	3.140*** (0.312)
Percent Muslim			3.103*** (0.493)
Percent Christian			1.969*** (0.392)
Constant	-1.673*** (0.097)	-0.714*** (0.189)	-2.522*** (0.369)
N	915	915	915
Log likelihood	-308.340	-235.631	-210.761
AIC	624.680	485.261	439.521

\*p < .1; \*\*p < .05; \*\*\*p < .01

The effect of a state receiving arms transfers from the United States is, at best, uncertain. It is only statistically significant in the most minimal of models, and it loses significance when other variables are included. I anticipated that arms would have a positive impact on the likelihood of a states involvement, but it is conceivable that the U.S. had enough support from its formal allies that it did not need to see the support of states with which it had only transferred arms. In fact, only 11 of the 40 states that fought with the coalition during this temporal period were not allies of the U.S., and of these eleven, New Zealand is actually part of one of the U.S.'s alliances without actually being allied to the U.S. Six others are European states where the U.S. has its closest alliance, and some of these states are non-aligned states. In general, states that were not allies were unlikely to be involved.

The first two models show that the effect of the military assistance that the United States gives to another state has a negative sign but is not statistically significant. The coefficient for this variable in the third model, however, is statistically significant. These findings are consistent with my expectations. As is the case with the arms transfers, the U.S. was able to garner enough support from its allies that it did not need the participation of most non-allies.

It makes sense that the United States, given a large number of states from which to create a coalition, would partner with its allies, the states to which it is closest. States choose allies, at least in part, based on some desire to have them as partners in conflict, and allies often prepare during peacetime to fight alongside each other. Moreover, the size of the coalition is a factor. Beyond a certain point, the marginal benefit of an additional state is such that it does not outweigh the difficulties of coordinating the fighting effort. So, it does not make sense to include every state that wants to help, and it makes sense to include those states that are going to offer the most help.

I control for the fact that a state is fighting in Iraq because I am trying to explain variation in both conflicts with the same explanatory variables and because participation in one conflict certainly effects the likelihood of participation in another. This variable is positive and statistically significant offering evidence that those states that support the U.S. efforts in Afghanistan are generally supportive of the efforts in Iraq.

Consider now the polity score of the state. In both models, the coefficient on this variable is positive, but it is only significant in the complete model. I expected that as states became more democratic that they would be more likely to be involved in the conflict in Afghanistan, seeking to assist the U.S., a fellow democracy. This hypothesis receives moderate support suggesting that the bond of democratic states can extend to supporting each other in war, that is not sufficient for such support.

As expected, the U.N. affinity score is positive and significant. As a state's voting record in the U.N. more closely resemble the U.S. voting record, they are more likely to

participate in the conflict. Since the members of the U.N. are voting on issues related to the international community, it is understandable that if states have common preferences on a large number of issues, they are likely to have common preferences with respect to specific conflicts.

The Clash of Civilizations hypotheses offer mixed results that offer partial support of Huntington (1992)'s argument. On the one hand, Christian states are far more likely to be part of the Afghanistan coalition suggesting that the attacks of 9/11 could have been perceived as an attack of one civilization on another. The peculiar finding is that participation also increases in likelihood with the percentage of Muslims in a state. This suggests not a clash of civilizations but rather a willingness of a civilization to help bring to justice those responsible when one of their own assaults another.

Have found generally positive support for the hypotheses pertaining to participation in the Afghanistan coalition, I turn to participation in the Iraq war coalition.

### **II.5.2 Assessing Iraq Participation**

The results for these models can be found in Table II.3. As with the Afghanistan coalition, U.S. allies are more likely than non-allies to participate in the Iraq coalition. This finding suggests that even in the face of great opposition, allies tend to stick together. What is even more striking is that the allies are sticking together in a situation where the *casus foederis* has not been met.

With the exception of the minimal model, arms transfers are negatively associated with participation in the Iraq war coalition. I did not have a strong expectation about the effect of this variable in this context other than thinking the effect would be less than the effect in Afghanistan, which is certainly the case here, though I do not have a good explanation as to why this is the case.

Military aid receipt makes a state more likely to be involved in the Iraq coalition, as I expected. As I discussed above, the effect of military aid in this situation had to do

Table II.3: Security Cooperation and Participation in the Iraq Coalition, 2004-2009

	Iraq Coalition		
Military Aid Amount (ln, L1)	0.157*** (0.033)	0.164*** (0.054)	0.172*** (0.057)
Arms Transfers (ln, L1)	0.005 (0.032)	-0.137*** (0.045)	-0.133*** (0.045)
Alliance (L1)	0.837*** (0.113)	0.606*** (0.173)	0.575*** (0.176)
Afghanistan		0.444** (0.200)	0.469** (0.198)
Polity Score		-0.010 (0.018)	-0.015 (0.018)
UN Affinity Score		2.193*** (0.415)	2.155*** (0.442)
Percent Muslim			-0.165 (0.360)
Percent Christian			0.019 (0.392)
Constant	-1.602*** (0.080)	-0.480** (0.241)	-0.460 (0.301)
N	764	764	764
Log likelihood	-289.489	-235.042	-234.851
AIC	586.978	484.084	487.702

\*p < .1; \*\*p < .05; \*\*\*p < .01

primarily with the circumstances under which this coalition was being formed. The United States needed support, and conditions were such that it was very difficult to get support from the traditional sources. Such a scenario makes the U.S. efforts at security cooperation valuable. Rather than having to lobby states in an issue area where they have little previous interaction, the U.S. had a large group of states that it had previously interacted with on security issues to which it could turn for help. Again, I am not assessing how the U.S. influenced these states as others have, but I am simply saying that a history of military aid makes a state more likely to have been chosen by the U.S. to participate in the Iraq war coalition.<sup>12</sup>

As was the case with the control variable for participation in the Iraq war, states that

<sup>12</sup>In addition to the lagged variable indicating the amount of military aid the state received last year that I use in this model, I estimated the model with a lagged rolling average and a lagged rolling sum of various lengths (3, 5 and 10 years) to see if a longer historical window would alter the results, but the sign and significance of this variable did not change.



participate in the Afghanistan coalition are more likely to participate in the Iraq coalition.

The U.N. Affinity score is, again, positive and significant. I did not expect this variable to change because the preferences of states are very often consistent in other issue areas. Despite the controversy surrounding the invasion of Iraq, it is understandable that states with the most closely aligned set of preferences would be the most likely to be part of the coalition.

Finally, I get null results for polity and each of the religion variables. I expected this result from polity, and I am a little surprised by the results of religion, in light of Huntington (1992)'s argument, but these results certainly offer evidence to the contrary of his argument. This war, like the war in Afghanistan, was directly between two civilizations, but neither civilization is more or less likely to be involved in the war in Iraq. This suggests that there is a more complex relationship between the civilizations than Huntington suggests.

Having found that the relationships that the United States developed with other states through security cooperation effected the choices that it made of which states to combine in the war coalitions, I want to show that this relationship is not endogenous, that the participation of a state was in fact result of historical interaction and the result of anticipated benefits from participating in the conflict.

## **II.6 Evaluating the Benefits of Participating in the War Coalitions**

The following models explore how participation in the coalitions in Iraq and Afghanistan in the previous year relate to the levels of aid that a state receives in the present year. The purpose of this is to show that participation in these coalitions was driven by past cooperation and not future gains. Another way to say this is that this test will evaluate whether states were paid or bribed to fight in these coalitions.

The dependent variables that I use in these models are military aid, arms transfers and economic aid. Military aid and arms transfers are no different than the variables I used in the models above. Economic aid, like military aid, comes from the USAID annual report

on foreign aid. It is reported in dollar amounts. In addition to economic aid, I generate another variable that I simply call Aid, which is the sum of military aid and economic aid.

To assess the effect of participating in these conflicts, I estimate a tobit model regressing the dependent variables on lagged participation in the conflicts, a lagged dependent variable and a series of other independent variables. The two variables that are consistent from one model to the next are regime type (measured by polity) and preference congruence (measured by the U.N. affinity score). The tobit model (Tobin 1958) is designed to estimate models with limited, censored dependent variable, such as a dollar amount. Considering this example, it models the likelihood that an observation receives zero dollars differently than the way it models how much an observation receives. The reason for this is that the process for choosing whether a state gets any dollar amount is different than the process for choosing what dollar amount the state gets.

Table II.4: Participation in War Coalitions and Security Cooperation

	Military Aid	Arms Transfers	Economic Aid	Aid
Iraq Coalition (L1)	0.051 (0.080)	-0.072 (0.321)	0.015 (0.089)	0.017 (0.087)
Afghanistan Coalition (L1)	-0.217*** (0.081)	1.360*** (0.291)	-0.211** (0.091)	-0.248*** (0.088)
Military Aid (ln, L1)	0.971*** (0.016)			
Arms Transfers (ln, L1)		1.362*** (0.058)		
Economic Aid (ln, L1)			0.951*** (0.015)	
Aid (ln, L1)				0.946*** (0.014)
Arms Transfers (ln)	-0.001 (0.016)		-0.030* (0.017)	-0.002 (0.016)
Military Aid (ln)		0.201*** (0.064)	0.057** (0.023)	
Alliance	-0.005 (0.066)	0.644** (0.286)	-0.071 (0.075)	-0.123* (0.073)
Polity Score	0.019*** (0.005)	-0.013 (0.024)	0.006 (0.006)	0.007 (0.006)
UN Affinity Score	-0.663*** (0.135)	0.602 (0.517)	-0.356** (0.148)	-0.357** (0.143)
Constant	-0.112*** (0.034)	-2.747*** (0.223)	0.237*** (0.054)	0.241*** (0.055)
Log likelihood	-688.091	-653.440	-851.068	-843.905
chi <sup>2</sup>	1,281.547*** (df = 3)	592.701*** (df = 3)	1,490.809*** (df = 3)	1,509.413*** (df = 3)
		610.120*** (df = 7)	1,505.973*** (df = 8)	1,519.950*** (df = 7)

\* p < .1; \*\* p < .05; \*\*\* p < .01

The results from these models are in Table II.4. First considering military aid, there is a positive and statistically significant association between the amount of aid a state received last year, and the amount it receives this year. It is necessary to include this variable because it allows us to isolate the effect of participating in a conflict from the fact that a state is likely to receive military aid simply because it received it last year. Turning now to the variables of interest, neither participating in the Afghanistan coalition nor the Iraq coalition last year has an effect on the amount of military aid a state is likely to receive this year in the full model, and there is a statistically significant negative effect in the limited model. These results show will clarify that the effect of past military aid influence a state's participation in the Iraq coalition is not endogenous; in other words, the states that participated in Iraq were not promised (and if they were promised, they were not given) military aid in exchange for their participation. What this also shows is that non-participation does not make a state less likely to receive military aid.

Looking at arms transfers, the results are strikingly different. As expected, arms transfers last year have a statistically significant positive effect on the likelihood of a state receiving arms this year, and so do participation in the Afghanistan coalition. Participation in Iraq has no effect on getting arms. This effect can be explained in a couple of ways. Either the participants in the Afghanistan coalition are being paid to participate in arms, or the arms transfers are important for war success. I imagine that it is the latter case. Unlike military aid, which is closely associated with training, arms transfers could have an immediate impact on a war making such transfers not only important, but vital. It is likely that we do not see the same effect in Iraq because the United States took on the burden of fighting that war. Certainly other states provided troops in Iraq, but the United States contributed around 90% of the troops for that conflict as opposed to around 10% in Afghanistan.<sup>13</sup>

The effect of participating in these wars on reception of economic aid or a combination of military and economic aid (aid) are very similar in that there is no positive effect of

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<sup>13</sup>Amy Belasco, "Troop Levels in the Afghan and Iraq Wars, FY2001-FY2012: Cost and Other Potential Issues," *Congressional Research Service*, available at <http://www.fas.org/sgp/crs/natsec/R40682.pdf>.

participation on reception of either of these forms of aid. The conclusion from this is the same as with military aid: the states were not given additional aid for participating in these conflict in any systematic way, nor did states lose aid for not participating.

## **II.7 Concluding Remarks**

In this paper, I have proposed an explanation for how the United States used its security cooperation network to inform its coalition-building decisions for the wars in Iraq and Afghanistan. In short, the circumstances under which the U.S. was building these coalitions was very different, so it took advantage of its security cooperation in different ways. The international environment of overwhelming support before the war in Afghanistan allowed it to create a powerful, cohesive coalition that consisted primarily of its allies and other states with which it had a strong relationship. In contrast, the international environment leading up to the invasion of Iraq was one of overwhelming opposition require that the U.S. seek other sources of support for this conflict. Those states from which it sought support were primarily those to which it had previously given military aid. I also showed that this effect was not driven by the promise of future aid to those who participated in these conflicts.

The United States uses its security cooperation network for different purposes depending on the circumstance in which it finds itself. States that agree to cooperate with the United States need to be prepared to support the U.S. one day because that is what the security cooperation is preparing it to do.

## CHAPTER III

### ASYMMETRIC ALLIANCE FORMATION AND WEAK STATE PROXIMITY TO THE POWERFUL STATE'S ENEMIES

#### III.1 Introduction

The United States emerged from World War II as the most powerful country in the world. Within five years of the end of the war, the U.S. had signed four military alliances with forty-one different countries covering most of Western Europe, much of Latin America and several states in Asia and the Pacific. Its alliance network represented about half of the countries in the world at that time as coded by the Correlates of War (COW) Project.<sup>1</sup> Of the United States' new allies, the United Kingdom had the greatest level of military capabilities but only a third of what the United States possessed. The mean level of military capabilities of its allies was about two percent of its own the military capabilities.<sup>2</sup> By the same token, the second most powerful country in the world at the time, the Soviet Union, was a little more than half as powerful as the United States, and its ten allies, the most powerful of which was China, had a mean level of capabilities that were about ten percent of the Soviet Union.<sup>3</sup>

The alliance patterns of the United States and the Soviet Union following World War II raise the following question: Why would strong states, the most powerful and militarily advanced countries in the world, seek out weak states as allies, especially when there is a risk that they might have to fight on behalf of the weak state at some point in the future?

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<sup>1</sup>According to the COW project, “[an] entity must be member of the United Nations or League of Nations, or have population greater than 500,000 and receive diplomatic missions from two strong states” to be included in the state system (Correlates of War Project 2011). There were fifty-one states in the United Nations in 1945, and the membership grew to seventy-six states by 1955 (<http://www.un.org/en/members/growth.shtml>). See [www.correlatesofwar.org](http://www.correlatesofwar.org) for additional information on state membership.

<sup>2</sup>I use the Composite Index of National Capabilities (CINC) scores to compute these statistics. The mean CINC score for the U.S. between the end of WWII and 1955 was 0.302. The highest CINC score of its allies in that time period belonged to the United Kingdom with a mean of 0.069, and the mean CINC score of all of its allies in that period was 0.006.

<sup>3</sup>The Soviet Union had the highest CINC score of non-allies with 0.166, China had a score of 0.100 and its allies had a mean capabilities score of 0.015.

Modern scholars widely regard alliances as “the primary foreign policy means by which states increase their security” (Reiter 1994, 1), but, with the exception of one or two states on each side (e.g. the United Kingdom and China), it is unclear how any of these states, by themselves and perhaps even collectively, really increases the security of the United States or the Soviet Union beyond what they can provide for themselves.

I present a geopolitical explanation in this paper for why strong states form alliances with weak states. Powerful states form alliances with weak states so the territory of the weak state will be available for them to use in the event of a nearby conflict. One of the key characteristics of a strong state is its ability to project power, but many international relations scholars agree that military capabilities degrade when projected over long distances (Boulding 1962; Starr and Siverson 1990; Gartzke and Braithwaite 2011). The strong state can use its alliance with the weak state to project some or all of its capabilities for a given nearby conflict and reduce the loss of strength it would experience from projecting those capabilities from its own territory. These weak states may not have military capabilities to offer as assistance to a powerful state, but they have resources such as military bases, airports and hospitals that a strong state ally can use to mitigate the distance between itself and its adversary.

In the next section, I review the relevant literature on alliance formation paying special attention to how the various explanations help us to understand major power alliance formation. Following this, I offer an explanation of why the location of the weak state matters to the strong state when it is making its alliance formation decisions and how being able to use another state’s territory mitigates the reduction in military strength that accompanies projecting power. Moreover, this should increase the likelihood that a strong state prevails in any given conflict. I use a statistical model with data on alliance initiation in the post-WWII period, and I find evidence that corroborates my hypotheses. Finally, I narrow my analysis to focus more closely on the United States, and I extend my argument to encompass its foreign basing decisions. I find evidence that suggest that the United States

considers the location of states when deciding how many troops to station overseas.

### **III.2 Security, Capabilities and Alliance Formation**

Realists scholars have long been the primary proponents of focusing on power as the key to understanding the interaction between states. While not all realists are alike, they generally agree that the distribution of power in the international system or between a pair of states is a primary determinant of outcomes in the system or in a dyad. While they do not agree on what the outcome will be given different power configurations – some realists conclude that power parity will lead to peace (e.g. Morgenthau 1948; Waltz 1979), while others claim that power preponderance is more peaceful (e.g. Organski 1968; Blainey 1988) – they do typically reason that, as a result of the uncertainty created by an anarchic international system where any state can attack another at any given time and the desire of all states to maximize their security to deter such attacks and prevail when they occur, there is a constant struggle for each state to accumulate the power necessary at least to maintain its security and perhaps advance it (Waltz 1979; Mearsheimer 2001). In short, despite the contradictory conclusions from various threads of realist thought, they would all agree that states never want their power (and therefore their security) to decrease, states should at least maintain their level of power so long as their security is not threatened, and states should increase their power in the face of a threat to their security.

Realism is not the only school of thought to acknowledge the importance of power relations for understanding international outcomes. The bargaining model of war in a general sense implies that the distribution of power has a conditional effect on the likelihood of conflict (Fearon 1995; Powell 1996; Fey and Ramsay 2011). For instance, Powell (1996) shows that the likelihood of being victorious in a conflict along with the benefits that can be expected from that conflict relative to the distribution of benefits beforehand determine the likelihood of conflict. The primary claim that Powell makes in this paper is that if the current distribution of benefits between two states does not approximate the distribution of



power between those states, then those states have a positive probability of conflict. This finding, then, allows for the possibility of conflict under conditions of both power parity and power preponderance conditional on the status quo. Recent empirical work has confirmed this finding. Reed et al. (2008) develop a novel measure of the status quo distribution of benefits using UN roll-call voting data and find that conflict in dyads is increasing the in the distance between the status quo and the distribution of power in the dyad.

The implications from the bargaining model help clarify the claims made by the realists regarding the relationship between power distribution and conflict. Additionally, it provides a possible explanation of why states might exhibit power-seeking behavior. Powell (1996)'s claim that conflict is more likely between two states when the distribution of power does not approximate the distribution of benefits implies that a state that the state that would benefit from conflict is a threat to the security of the state that would benefit from the status quo distribution of benefits. It would be in the interest of the latter state to increase its power such that the distribution of power in the dyad is closer to the current distribution of benefits. In doing so, it could avoid a conflict or some renegotiation of the distribution of benefits. This explanation of power-seeking behavior may be more nuanced than those that emerge from realist thought, but it is clear from either that the primary means a state has of increasing its security is through increasing its capabilities and the likelihood of being victorious in a conflict. The literature presents two primary ways by which a state can increase its likelihood of being victorious in a conflict: by developing arms and forming alliances, sometimes called internal balancing and external balancing, respectively (Waltz 1979).

The most obvious (but not necessarily the best) way for a state to increase its capabilities is to use its resources to develop its domestic sources of military strength such as growing the size of the military and training it to be more efficient, producing arms, and establishing the economic and industrial infrastructure needed to be a more powerful country. This development can have the effect of directly deterring other states from threatening or

attacking its territory because of its increased capabilities. The majority of the literature on capabilities development has considered it in one of two contexts: arms races (see Glaser 2000) and as a tradeoff to alliances (see Sorokin 1994). One important aspect of developing military capabilities as a means of increasing ones own security – but one that is often overlooked in the literature – is the necessity of having to project that power in the case of war.

Some loss of strength necessarily accompanies power projection (Boulding 1962; Starr and Siverson 1990; Gartzke and Braithwaite 2011). If a state is fighting abroad to protect its territory at home, projecting power almost certainly causes those military capabilities to degrade over distance, whereas if the state is fighting on its own territory, its military capabilities do not suffer. As Gartzke and Braithwaite recognize, this degradation of power across distance has not been considered in research on the relationship between military capabilities and war. The fact that distance compromises military capabilities could very well be a reason that states choose to form an alliance: the costs of an alliance may be less than the net cost of producing arms then projecting them across the globe.

Alliances allow states to take advantage of the military capabilities of another state, so when two states form an alliance, their likelihood of being victorious in conflict jointly increases making them both more secure. This understanding of alliance formation is typically called the capability-aggregation model of alliances. The deterrent effect that the alliance has on states that may want to threaten the members of the alliance is the reason that this aggregation of power increases the security of the states that form the alliance (Morrow 1994; Smith 1995, 1998). The deterrent effect of an alliance is intimately tied to the total amount of military capabilities the states in an alliance have. Restated another way, the increase in deterrence that any one state adds to an alliance is proportional to its level of military capabilities. In order for deterrence to be effective, a potential adversary must believe that, because of the addition of an ally, it will no longer be able to prevail in a

conflict against the state that acquired that ally.<sup>4</sup>

If the utility of an alliance for deterrent purposes is directly related to the level of military capabilities that an ally contributes to the alliance, this brings me back to the original question: why do powerful states form alliances with weak states? It is clear that the weak state in such a situation gains a significant level of security, and it is equally clear that the weak state has little to no deterrent value for the strong state against potential adversaries. The strong state is paying the costs and opening itself up to the risks associated with an alliance but receiving no security boost from it, so there has to be some explanation of how the formation of an asymmetric alliance directly serves the security interests of the powerful state other than capability aggregation and deterrence.

An alliance is asymmetric when the states have different reasons for seeking the alliance, and, according to Morrow (2000, 79), “[s]uch alliances with asymmetry of ends also show asymmetry of capabilities; the smaller ally receives security and makes concessions that its larger defender desires.” One explanation for why powerful states would form such an alliance is to restrain a smaller state that directly or indirectly threatens the security of the powerful state (Schroeder 1976; Weitsman 1997; Pressman 2008). In these situations, the powerful state can form an alliance with a weak state that is likely to start some conflict in which the powerful state would necessarily become involved. By forming the alliance, it can condition its involvement on the weak state not provoking or initiating the war and thereby prevent the war from occurring. I contend that such an alliance only indirectly increase the security of the powerful state because it does not increase its likelihood of being victorious in a conflict but it does decrease the likelihood that it will be in the conflict at all. It may also be the case that a powerful states could also use the autonomy benefits they receive from an asymmetric alliance to pursue changes in the status quo (Morrow 1991, 908-9). While Morrow confines his discussion of the benefits that the powerful state receives to the ability to change the status quo, it could be just as likely

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<sup>4</sup>Of course, the adversary must also believe that the ally is credibly committed to this alliance for the deterrence to work, but a highly committed but very weak state is likely to have very little deterrent effect.

that the powerful state wants to maintain the status quo with the alliance. Either way, the intuition behind the alliance is the same: having an alliance with a weak states enables the powerful state to project its power more effectively (see also Starr 1978). I contend that if it is the case that a powerful state seeks an asymmetric alliance for the purpose of being able to protect the status quo by more effectively projecting it capabilities, it is also receiving direct security benefits from the alliance.

To summarize, the current literature contends that states can increase their security by either developing military capabilities or forming alliances. By develops capabilities, the state makes itself more powerful but faces losing some of that power when the time comes to project it in a conflict. On the other hand, the state can increase its security by forming alliances and taking advantage of the military capabilities of its allies. Asymmetric alliances cannot serve this purpose, however, because the weak state does not offer any deterrent value to the powerful state. In these cases, the weak state gives up autonomy to the strong state in exchange for security. The powerful state can use the autonomy it gains from an asymmetric alliance for a variety of purposes such as restraining its ally or seeking changes in the status quo. In the next section, I present my argument that strong states form alliances with weak states and use the autonomy that they gain for the purpose of mitigating the loss of strength that they experience when they have to project power. Moreover, strong states choose those states that will position them closest to the locations where they may actually engage in conflict.

### **III.3 Alliances and Proximity to Potential Adversaries**

Consider the following scenario: State A and State B are both major powers, are rivals and are non-contiguous. As major powers, both of these states have sufficient military capabilities to project its power and initiate a war with the other should the necessity arise. State C is located closer to State B than State A, but it has few military capabilities to speak of, especially when compared to either of the other states and it would not succeed in a

conflict against either of these states. From the capabilities-aggregation perspective, State C has nothing to offer State A in the context of an alliance, so why would State A form an alliance with State C? In short, an alliance with State C reduces the distance to State B for State A, whereas the distance to State A from State B remains the same. Such a distance differential gives State A a strategic advantage in any conflict with State B and therefore increases State A's security, regardless of State C has anything to offer.

The deterrence literature typically discusses alliances as having a deterrent effect because the threat that having an ally fight alongside you increases the likelihood of losing a conflict and the costs of conflict because of the added military capabilities. How does deterrence work in the alliance illustrated above? State A certainly has a deterrent value because of its military strength, so adversaries are less likely to attack State C because of the risk associated with also having to fight against State A. State C, however, has no deterrent value that benefits State A. The deterrent value of State C comes from its the fact that its location allows State A to more efficaciously project its military power farther and wider.

Starr and Siverson (1990) call this effect of alliances "political technology" because they have the effect of decreasing both the absolute distance between units and the amount of time it takes to travel between the two units. Technologically advanced naval forces can have the same effect that Starr and Siverson (1990) are discussing here. An aircraft carrier can act as a base of operations from which missions can be conducted through the air against an enemy. Furthermore, ground soldiers can live on such a ship and infiltrate enemy territory come there either through the air or by boat. Without such technology the same missions tha

How does an alliance with a weak state mitigate the loss or strength that accompanies projecting power? Using the same example, consider State A's capabilities in a conflict with State B.<sup>5</sup> Without an alliance, State A's distance-weighted (or effective) capabilities,

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<sup>5</sup>The functions for the distance-weighted capabilities in this example are adapted from Gartzke and Braithwaite (2011), equation 10.

$cap_A$ , can be represented by:

$$cap_A = \frac{cap_{0A}}{1 + \alpha k^\beta}$$

where  $cap_{0A}$  are State A's total capabilities in its own territory,  $k$  is the distance between State A and State B, and  $\alpha$  and  $\beta$  are positive parameters. As Gartzke and Braithwaite (2011) note,  $\alpha$  should be small and  $\beta < 1$  will result in a declining marginal impact for the loss-of-strength gradient, which means that just having to project power any distance results in the greatest degradation in capabilities but that each additional unit of distance results in a smaller effect on State A's capabilities.

Now consider State A's distance-weighted capabilities if it has an alliance with State C represented by:

$$cap_A = \frac{cap_{0A}}{1 + \alpha(k-l)^\beta}$$

where  $l$  is the distance between State A and State C so that  $k-l$  results in the distance between State C and State B (assuming they are on a line with each other), the new distance that State A has to project its power. This formula assumes that State A is projecting the entirety of its power from State C's territory, whereas the more likely scenario is that State A would only be projecting some of its capabilities for State C's territory, which can be represented by:

$$cap_A = (p) \frac{cap_{0A}}{1 + \alpha k^\beta} + (1-p) \frac{cap_{0A}}{1 + \alpha(k-l)^\beta}$$

where  $p$  is the proportion of State A's capabilities being projected from its own territory and  $1-p$  being the proportion of capabilities being projected from State C's territory. For any  $p < 1$ , State A's effective capabilities will be greater by having the alliance than by not.

Consider the opportunity cost for these states not forming an alliance. For State A, the strong state, would have to bear the full loss-of-strength gradient if it engaged in conflict with State B. The alliance could be the difference between victory and defeat in such a war. State C, the weak ally, can not depend on the deterrent effect of having State A as an alliance partner. Just as important, should State C get into a conflict, it could not count

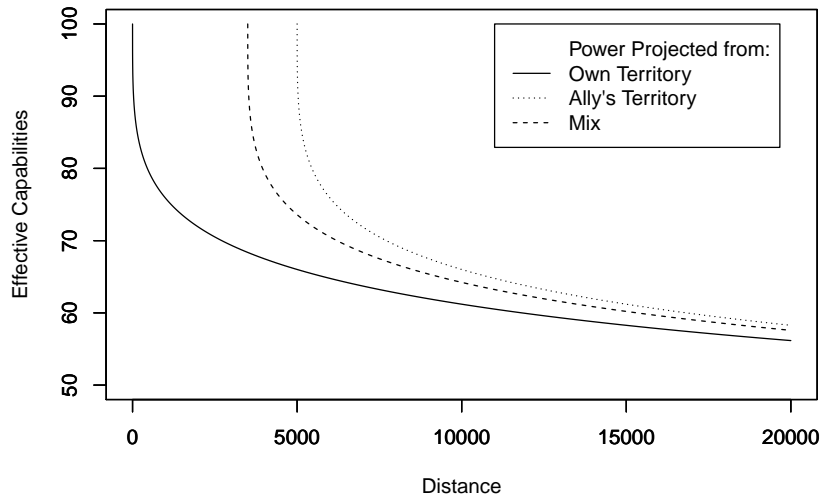


Figure III.1: A Major Power’s Effective Capabilities after Projecting Power from Different Locations

on the military capabilities of State A to protect it. Essentially, this alliance could be the deciding factor in a conflict for either of these states.

As I discuss below, I contend that the autonomy that powerful states receive through asymmetric alliances allows them to project their military capabilities farther than they would otherwise be able to do, thus, having the effect of increasing their military capabilities and the probability that they will be victorious in a given military conflict. Wars occur when there is disagreement about the relative power between the states (Blainey 1988). Uncertainty about the outcome of a war can lead to differing assessments of whether one can do better by fighting than by negotiated settlement.

H1a: Strong states are more likely to form alliances with weak states as the distance between the weak state and the nearest likely adversary of the strong state decreases.

#### III.4 Testing the Effect of Proximity on Alliance Formation

Do strong states actually consider the proximity of other states to its potential enemies when making alliance formation decisions? I assess this hypothesis using a novel quasi-triadic

research design. The purpose of this design is to explain outcomes in the relationship between two states, A and B, using indicators about the relationship between these two states and a third state, C.<sup>6</sup> I use the ‘quasi-’ distinction because my unit of analysis is the directed-dyad-year but my unit of observation is the directed-triad-year. Another way of saying this is that I am trying to explain outcomes in the A-B dyad with information from the A-B-C triad.<sup>7</sup> I have chosen to use this design because it most closely corresponds with components of the argument that I presented above: State A is increasingly likely to form an alliance with State B (the A-B dyadic outcome I am trying to explain) as distance between State B and State C (the B-C dyadic indicator I am using to explain the outcome) decreases when State C is the nearest likely adversary of State A (the A-C dyadic indicator) to State B. The quasi-triadic research design is portrayed visually in Figure III.2.

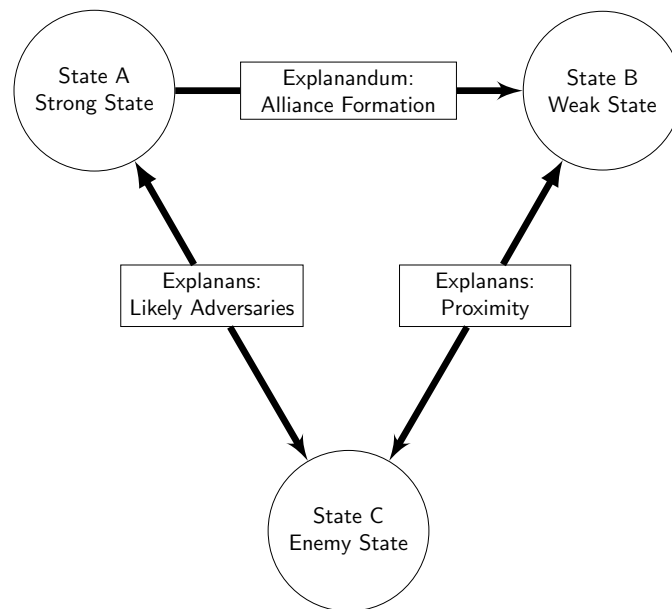


Figure III.2: Quasi-Triadic Research Design of Alliance Formation

<sup>6</sup>Early (2012) uses a design similar to mine to explore the effects of U.S. economic sanctions on the targeted states trade with other states.

<sup>7</sup>An example of true triadic analysis (with the goal of identifying outcomes in the triad) can be found in Cranmer, Desmarais, and Kirkland (2011), which finds that when two pairs of states in a triad share an alliance (e.g. A-B and B-C), the third pair (A-C) is likely to form an alliance as well and ‘close the triangle’. Moreover, triads have particular importance in social network analysis (see Maoz 2010). For other examples of forms triadic analysis, see Lee, Muncaster, and Zinnes (1994) and Crescenzi (2007).



Many studies in international relations in the past two decades have used a dyadic or directed-dyadic research design that allowed scholars to answer questions about how intra-dyadic characteristics influence various outcomes within that dyad, the most notable of which is the democratic peace proposition (e.g. Maoz and Abdolali 1989). While I am not denying the importance of dyadic analysis, dyads do not exist in a vacuum, so it is important to consider factors outside of the dyad when trying to explain dyadic outcomes. Some dyadic research does do this to a degree. For example, the empirical research in deterrence includes data on whether states have an alliance outside of the dyad in order to explore the effect of alliances on conflict, but including such a variable cannot identify how any particular alliance or how an alliance with any particular state affects the likelihood of conflict. By using a form of triadic research design, I can isolate how particular states influence intra-dyadic behavior.

For my analysis, I use a directed-triadic dataset for the temporal period 1946-2001. As Figure III.2 shows, every observation has information about three states. As its base, the dataset starts with every directed dyadic observation where the initiator, which corresponds to State A, is included in the the Correlates of War major power data set and the defender, State B, is a minor power. Partitioning the data in this way is necessary since I am seeking evidence as to why strong states would form alliances with weak states. The third state, State C, is whichever of State A's enemies (I will define this in detail later) is geographically closest to State B.

Since I am analyzing the conditions under which pairs of states form alliances rather than the conditions under which alliances persist, I use the modeling technique found in Maoz (2010) for alliance formation. The important distinction between analyzing alliance formation and alliance persistence is the form that the dependent variable takes. Table III.1 offers an example how to generate this dependent variable, which is a fairly simple process. I started with the alliance existence variable and recoded all observations of the variable that were not the first year of the alliance to 'missing'. The reason for this coding scheme is

Table III.1: The Alliance Formation Variable for a Dyad

Year	1	2	3	4	5	6
Alliance Existence	0	1	1	1	1	0
Alliance Formation	0	1	NA	NA	NA	0

that an alliance cannot be formed where an alliance already exists, and to answer a question about alliance formation, it is necessary to have only observations where an alliance formation can actually occur.<sup>8</sup> If an alliance between two states dissolves, the dyad returns to the dataset with dependent variable coded as ‘0’.<sup>9</sup> I estimate the statistical model using a probit regression with robust standard errors to correct for heteroskedasticity.

### III.4.1 Dependent Variable

The data for the alliance formation variable come from the Alliance Treaty Obligations and Provisions (ATOP) project (Leeds et al. 2002). This project generated detailed data on alliances 1816-2003 with information related to the contents and obligations of the agreement for each of its members. I subset these data to include only alliances defined by the ATOP project as being ‘active’ alliances. An alliance is considered to be active if “[it] includes any promise of active military support (e.g., defense or offense) by any alliance member” (Leeds 2005, 21). As noted in the quote, the ‘active’ category includes Leeds et al.’s ‘offense’ and ‘defense’ categories. A more recent typology of alliances (Benson 2011) focus on the conditions for intervention to assign alliances into deterrent and compellent categories; the alliances in each of these categories are also in the ATOP ‘active’ category.

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<sup>8</sup>It is possible for a pair of states to have more than one alliance at a time, but in this coding scheme, the formation of a new alliance between two states that already have an alliance is not coded as a new alliance formation. The reason for this choice is that it is not clear than an additional alliance makes any sort of difference in terms of the security of either state. Moreover, the motivations behind forming an additional alliance are unlikely to be the same as forming the first alliance.

<sup>9</sup>One drawback of this method is that I lose a lot of information from the observations where the dependent variable is coded as missing. The alternative to this, which I will discuss in greater detail later, is to code these observations as ‘0’, but it is not exactly the case that an alliance does not exist in those observations resulting in two different types of ‘0’ observations in the dependent variable.

I made the distinction between active and non-active alliances for two main reasons. First, this is what people generally imagine of when they think of a military alliance, one state fighting along another state in a military conflict. Second, I wanted to exclude alliances that do not seem to make sense. For instance, there are two agreements coded by the ATOP project, International Agreement on the Neutrality of Laos and the Helsinki Accords, that identify the United States and the Soviet Union as being allies for the better part of the cold war. In reality, the former is an agreement to not interfere in Laos and for the parties to consult with each other should such interference occur. The latter is a non-aggression pact that is still in effect today that includes 52 signatories. These are the types of agreement that I wanted to exclude from my dependent variable because I thought the definition was so broad to be almost meaningless.

I used the subset of data that included only active alliances to generate my alliance variable, coding it 1 if a pair of states shared an alliance in a given year and 0 otherwise. When I created my alliance formation variable, discussed above, I only coded the formation once. If an alliance was already in force when another alliance was formed between two states, I did not code the variable as having another alliance formation.

### **III.4.2 Independent Variables**

My independent variable of interest is **Distance to the Nearest Likely Adversary**. Creating this variable requires two sources of data: data on likely adversaries and data on distance between each state. For distance data, I chose capital-to-capital data, which is readily used in international relations analyses (e.g. Gartzke and Braithwaite 2011). I chose to use this measure because any of the major power's troops that are within the minor powers borders will be just that, within its borders, not along it. Moreover, wherever they will be engaging the enemy will likely be within the borders of another country. It is unlikely that the exact location from which they will be deploying and where they will be fighting will be the capital of any country; it is not perfect in that sense but we cannot know where a war

might actually be fought. Nevertheless, I think this measure of distance better represents the true distance that some major power would have to project its forces. To generate these data, I use Weidmann, Kuse, and Gleditsch (2010)'s CShapes package in the R statistical toolkit. This package consists of a series of world maps in geographic data format consistent with the entry and exit dates of countries in the Correlates of War project. The package uses the data in these maps to generate a variety of distance measures (capital-to-capital, centroid and minimum) between any two states in the system on any date 1946-2008.

I extracted the capital-to-capital distance between every pair of states in the system on the first and last day of each year 1946-2001 so I could be sure that every dyad-year observation would be represented. If a new state was added during the year, each of its dyad would only be represented once while each dyad that was in the system for the entire year would be represented twice. I then removed duplicate dyad-year observations, keeping the observation from the last day of the year in case any changes in the system had occurred during the year that affected the distance between states. This produced a vector of distance values for every dyad-year observations in the data.

I next had to identify those states with which the major powers were most likely to get into conflict. There has been considerable IR scholarship in the area of rivalry in recent years, so this seemed like the best place to start. There are two primary data sets that identify interstate rivalries, Colaresi, Rasler, and Thompson (2008) and Diehl and Goertz (2000), but they have operationalized the concept in different ways. The primary difference between these measures is that Colaresi, Rasler, and Thompson's strategic rivals are subjectively defined by the perceptions of state leaders that the two states are enemies. On the other hand, Diehl and Goertz's enduring rivals are defined by the extent to which a pair of states engages in conflict. The former type of rivals may or may not have ever experienced a conflict, but each aware that they competitors that threaten each other (see also Thompson 2001). I opted to use strategic rivalries to identify those states with which major powers were most likely to get into conflict because I think it better represents true rivals.

Two states may have been involved in some skirmish at some point in the near past, so the enduring rival dataset would code them as rivals. In reality, they may not see each other as competitors or enemies, and in fact, there are some instances where that dataset codes pairs of states that are allied as rivals. These states may truly be rivals, or they could have just fought like brothers. Either way, the variable treats it the same.

I created the **Distance to the Nearest Likely Adversary** by first subsetting the capital-to-capital distance dataset for each major power such that it included only observations of distance between the strategic rivals of any given major power and other states. This produced a dataset of dyads of the major power's rivals and all the other states in the system for each year. Thus, in any year that a major power had more than one strategic rival, there was more than one observation per other state per year. In such situations, I took the minimum of the various distances between the other state and the major power's rivals.

Table III.2 provides an example of how I generated the **Distance to the Nearest Likely Adversary** for the China-Laos dyad and the China-Cambodia dyad in the years 1972 and 1973. In 1972, China has strategic rivalries with the United States, the Soviet Union and Taiwan. I computed the distance between each of these states and Laos and Cambodia. Taiwan was nearest to both of these states, so the capital-to-capital distance between these two states and Taiwan was selected as the value for this variable for those dyads. In 1973, Vietnam became a strategic rival of China. Since Laos and Cambodia are closer to Vietnam than they are to Taiwan, the distance between these two states and Vietnam was chosen over the distance to Taiwan.

This variable is a continuous variable ranging from 0 to 19430 kilometers. As I state in my primary hypothesis above, I expect that likelihood of alliance formation in major power dyads increases as the other state gets closer to one of the major powers rivals. Conversely, I expect alliance formation to be less likely as the distance increases, so I anticipate there will be a negative relationship between this variable and alliance formation. This variable

Table III.2: An Example of Generating Distance to the Nearest Likely Adversary

Year	Major Power	Other State	Rival of Major Power	Distance	Distance to Nearest Rival
1972	China	Laos	United States	14418.3319	2305.4434
			Soviet Union	7544.4622	
			Taiwan	2305.4434	
1973	China	Laos	United States	14418.3319	1060.3656
			Soviet Union	7544.4622	
			Taiwan	2305.4434	
			Vietnam	1060.3656	
1972	China	Cambodia	United States	13707.5828	2109.4795
			Soviet Union	6815.6795	
			Taiwan	2109.4795	
1973	China	Cambodia	United States	13707.5828	482.4977
			Soviet Union	6815.6795	
			Taiwan	2109.4795	
			Vietnam	482.4977	

presents one problem, however. I anticipate that small values of this variable will make alliance formation most likely, but the smallest value, 0, means that the others state is a rival of the major power, making it the least likely candidate for an alliance. As such, I include a variable in my model to indicate whether the other state is a strategic rival to control for observations where the value of this variable is 0.

### III.4.3 Control Variables

The process of selecting control variables to use in this research design differs somewhat from typical studies of alliance formation. Typical studies of alliance formation make the claim that some characteristic within a dyad (e.g. joint democracy, high levels of trade) accounts for the observed variation found in alliance formation. Accordingly, these studies include other characteristics within the dyad that could account for the variation found in the variable of interest (e.g. geographic proximity). Because my variable of interest is characterized by the relationship between the minor power state and the rival state in the triad, the typical control variables used in a dyadic analysis (e.g. joint democracy in

the unit of analysis) have little relevance. The control variables I use are in the minor power–rival edge of the triad. For example, while it is unlikely that the distance between the minor power and the rival state has any effect on the likelihood of the major power and the minor power being democratic, that distance is likely to have an effect on the political similarity between the minor power and the rival since we know that regime types, especially democracies, tend to cluster together (Gleditsch 2002). As such, all but one of my control variables are within the minor power–rival state edge of the triad rather than within the major power–minor power edge of the triad.

In addition to the primary variable of interest, distance between the minor power and the rival, I use three main controls: one in the major power–minor power dyad and two in the minor power–rival dyad. These are: shared rivalry and, regime type similarity and shared alliance. Figure III.3 shows how I explain major power–minor power alliance formation, including all of the variables and their expected directions.<sup>10</sup>

### **Shared Threat**

The only control variable in my analysis that is in the major power–minor power edge of the triad is shared threat. Walt (1987) identifies three components of the level of threat that a state poses to another—military strength, geographic proximity and intentions—and claims that the threat that one state poses to another increases as the distance between them decreases. Since I have already identified the rival state as a potential threat to the major power, it follows that as the distance between the minor power and the rival state decrease, the threat that the rival state poses to the minor power increases thereby increasing the likelihood that the major power and the minor power will have a shared threat. I expect that this result, in turn, will make the major power more likely to form an alliance with the minor power, which is consistent with Walt’s primary claim that states will bandwagon together in the face of a shared threat. Given that threat cannot be completely explained by

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<sup>10</sup>It is worth noting that since I am claiming that alliance formation is most likely at low values of distance, I expect that the coefficient on this variable will be negative.

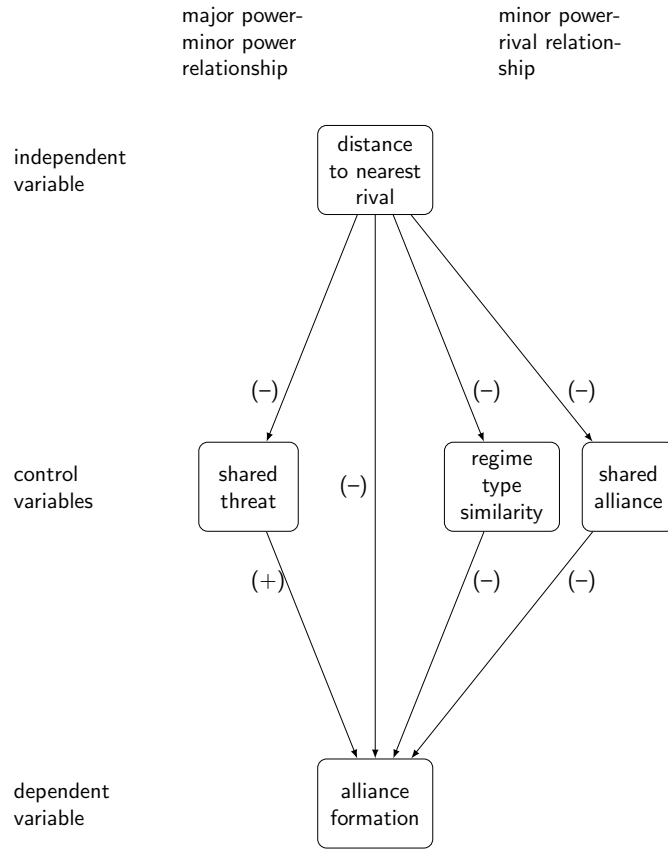


Figure III.3: Explanatory Path of Alliance Formation

proximity, I consider it to be a competing explanation for alliance formation.

To identify whether the major power and minor power share a threat, I use the same strategic rivalry (Colaresi, Rasler, and Thompson 2008) that I use to identify the major power’s rivals for the analysis. With these data, I generate a variable for shared rivalry that is coded 1 when the rival of the major power is also a rival of the minor power in a given year and 0 otherwise. By including this variable in the analysis, I can also test a very common hypothesis in international relations (e.g. Maoz 2010):

H1b: Major powers are more likely to give minor powers an alliance when that minor power also has a rivalry with the nearest rival of the major power.

In other words, this hypothesis says that “the enemy of my enemy is my friend.”



### **Regime Type Similarity**

Gleditsch (2002) shows that democracies tend to cluster in space. Given this relationship between regime type and proximity, I would expect that the nearer the minor power to the major power, they are more likely to have a similar regime type. Moreover, rivals are likely to have dissimilar regime types. If regime type similarity increases in proximity, and dissimilar regime types are less likely to form an alliance (Lai and Reiter 2000), I would expect that regime type similarity between the minor power and the rival state would decrease the likelihood that they form an alliance.

I use the Polity IV data on regime type (Marshall and Jaggers 2011) for the minor power and the rival state and generate a regime type similarity variable with the following formula:

$$RegSim_{wr} = (|Polity_w - Polity_r| - 20) \times -1$$

where  $RegSim_{wr}$  is the regime type similarity between the minor power and the rival state,  $Polity_w$  is the regime type score of the minor power, and  $Polity_r$  is the regime type score of the rival state. With this variable I assess the following hypothesis:

H1c: Major powers are less likely to form alliances with minor powers as the minor power and the nearest rival of the major power have more similar regime types.

### **Shared Alliance**

Several empirical studies on alliance formation and persistence have found that proximity and alliances are correlated (e.g. Lai and Reiter 2000; Gibler and Wolford 2006; Gartzke and Weisiger 2013). This finding would suggest that as the distance between the minor power and the rival state decreases, their likelihood of having an alliance ought to increase. Maoz (2010) finds evidence for the principle that ‘the friend of my enemy is my enemy’, so if the minor power is allied with the rival state, the likelihood that the major power will form an alliance with that minor power should be quite low.

I use the ATOP alliance data (Leeds et al. 2002) to identify the years during which the minor power and the rival state share an active alliance, coded 1, or not, coded 0, as discussed above. With these data, I evaluate the following hypothesis:

H1d: Major powers are less likely to form alliances with minor powers if the minor power and the nearest rival of the major power share an alliance.

### III.5 Empirical Analysis

I begin my analysis with a bivariate test of the relationship between the proximity of a weak state to a major power's strategic rival and the likelihood that the major power forms an alliance with that weak state. In a two-sample t-test comparing the distance between the

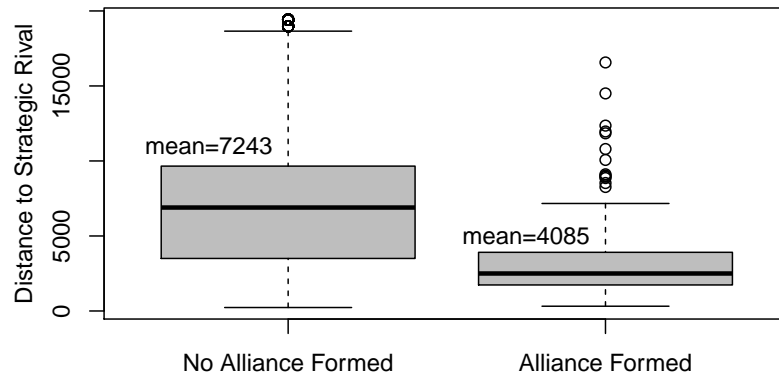


Figure III.4: Distribution of Distance by Alliance Formation

minor power and the nearest strategic rival of the major power, the mean of those states with which the major power formed an alliance was more than 3000km closer than the mean of those states with which the major power did not form an alliance, which is a statistically significant difference ( $t = -6.7648$ ,  $df = 65.463$ ,  $p\text{-value} < .0001$ ). This finding makes it clear that I can reject the null hypothesis that the distance to the nearest rival for those states that did not form an alliance with the major power is less than or equal to the distance for

those states that did form an alliance. The box plot in Figure III.4 graphically represents this relationship, and it clearly shows that neither of the confidence intervals around the means, while they slightly overlap, do not envelop the other mean. This simple bivariate test provides the initial evidence that my hypothesis is correct.

Table III.3 shows the results of three statistical models of alliance formation, each one with more variables than the last. If nothing else is clear from this table, my variable of interest, the distance between the minor power and the rival of the major power, is negatively signed and statistically significant in each model, as I had anticipated. These results provide further evidence to suggest that major powers do consider the location of their minor power allies, perhaps even over and above other considerations. Figure III.5 shows the marginal effect of distance on a major power's choice to form an alliance with a minor power.<sup>11</sup> This figure is especially interesting because it shows that distance has very little effect on this decision until the minor power state is within about 5000km of the rival state, but after this threshold, there is an increasing likelihood that the state will receive an alliance. All said, from the maximum distance to the minimum, there is a change in the likelihood of alliance formation of about 1.8%.

Another interesting aspect of the effect plot is the shape of the curve in Figure III.5, which reflects the decreasing marginal cost of having to project power. As I mentioned above, each additional distance unit of power projection costs slightly less than the unit before it making the initial units the most expensive. When states choose alliance partners, this plot shows that the difference in choosing a partner that is, for example, 500km away versus 1000km away is greater than the difference in likelihood for states that are 1000km and 1500km away. They want to get as close as they possibly can because military capabilities deteriorate most quickly closest to where they are stationed.

The results for the control variables generally comport with my expectations with the exception of shared rivalry. Shared rivalry, as I expected, is positively correlated with ma-

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<sup>11</sup>This figure uses 0.5 as the base probability of alliance formation, which is inconsistent with the data. What this figure shows, however, is the change in probability of alliance formation at different distances.

Table III.3: Major Power Alliance Formation and Proximity to its Rivals, 1946-2001

	Model 1	Model 2	Model 3
<b>Minor Power - Rival</b>			
Distance to Rival of Major Power (log)	−0.356*** (0.047)	−0.334*** (0.057)	−0.412*** (0.060)
Political Similarity		−0.031*** (0.007)	−0.029*** (0.007)
Alliance			−0.633*** (0.155)
<b>Major Power - Minor Power</b>			
Shared Rivalry	0.219 (0.223)	0.320 (0.235)	0.355 (0.240)
Constant	0.226 (0.381)	0.335 (0.475)	1.056* (0.504)
<i>N</i>	22325	20257	20257
AIC	848.894	694.588	679.500
BIC	945.056	821.248	837.825
log <i>L</i>	−412.447	−331.294	−319.750

Robust standard errors in parentheses

† significant at  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

major power–minor power alliance formation, it is not statistically significant. Walt’s 1987 balance-of-threat theory and many empirical studies have examined the adage, ‘the enemy of my enemy is my friend’ (Lee, Muncaster, and Zinnes 1994; Maoz 2010), but this friendship does not seem sufficient enough to necessitate a powerful state giving an alliance to a weak state. Political similarity between the minor power and the rival decreases the likelihood that the major power will give an alliance to the minor power. Scholars have found that politically similar states are less likely to be conflictual (Souva 2004), more likely to fight alongside each other in conflict (Werner and Lemke 1997), and more likely to form alliances (Lai and Reiter 2000). In short, politically similar states are more likely to be friendly with each other, so a state that is friendly with the enemy of a major power is unlikely to get an alliance from that major power. This variable is statistically significant in both models. When the minor power and rival share an alliance, then, as anticipated, the major power and minor power are less likely to form an alliance.

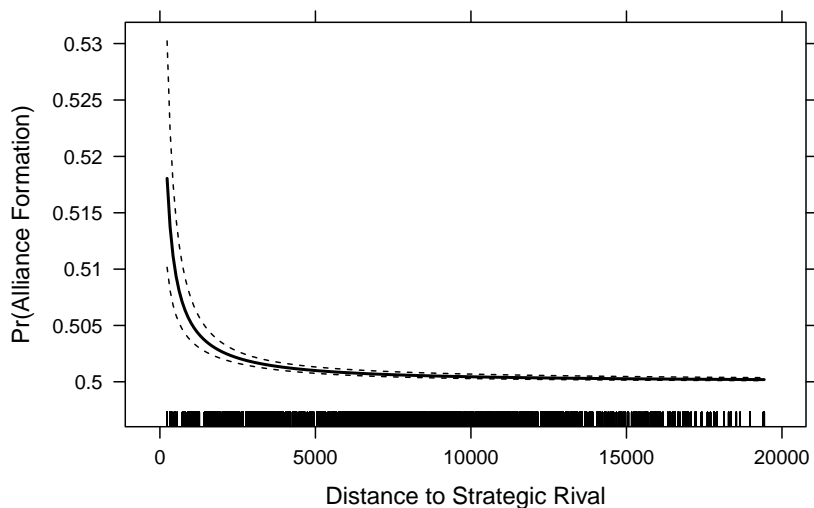


Figure III.5: Marginal Effect of Distance to Major Power Rival on Alliance Formation

### III.6 Robustness Check

I had to make several choices when constructing these statistical models, but these choices, if they are measuring the same concept, should have little bearing on the results if the logic of the argument is correct. I perform three sets of robustness checks on my statistical models to ensure that my results were not an artifact of these choices. In what follows, I reestimate my model with a different estimation technique proposed by Beck et al. (2001), with minimum distance also generated from Weidmann, Kuse, and Gleditsch (2010)'s CShapes package in R, and with Diehl and Goertz (2000)'s enduring rivalry data. I use these robustness checks to show that I would have gotten the same or similar results even with other choices. The results can be found in Table III.5.

#### III.6.1 Modeling Choice

As an alternative to modeling technique that I used above from Maoz (2010), I reestimate the model with a modified version of the transition model presented in Beck et al. (2001). Estimating this model necessitates generating a different dependent variable than the one I used in the models presented above. To generate this variable, I stopped after the first

step for generating the dependent variable I used above. An example of how I generated the variable can be found in Table III.4. This variable still leaves me with the problem that I had earlier: the 0's in this variable represent both when there is no alliance in the dyad and when the alliance is not in its first year, and in the latter scenario no alliance can be

Table III.4: An Alternative Alliance Formation Variable for a Dyad

Year	1	2	3	4	5	6
Alliance Existence	0	1	1	1	1	0
Alliance Formation	0	1	0	0	0	0
Alliance Years	0	1	2	3	4	0

formed. In my primary model, I dealt with this problem by recoding these observations to missing. The transition model in its original form addresses this problem by including an alliances years variable and a natural cubic spline to account for the observations where no alliance can be formed. I modify the technique by instead using a cubic polynomial of alliance years similar to the cubic polynomial of peace years recommended in Carter and Signorino (2010) for when examining conflict initiation. The purpose of the cubic polynomial is to control for the periods of time during which an alliance cannot be formed because an alliance already exists.

### III.6.2 Measures of Distance

Weidmann, Kuse, and Gleditsch (2010)'s CShapes package in R also generates minimum distance, which, in addition to capital-to-capital distance, has been used in the international relations literature Gleditsch and Ward (2001, see). The minimum distance measure is generated by taking the distance from the nearest points along the borders of two countries. I stated my reasoning for using capital-to-capital measurement above, and I think that is a preferable measure for this particular analysis. There may be good reasons for using minimum distance though. Suppose major powers formed alliances with minor powers based on the proximity of the minor power to a specific location within its rival. If this was the case, minimum distance would be a better choice. I could also make the assumption that

the loss of strength that comes from projecting power only occurs outside of the borders of the territory where the troops are stationed and the territory where the troops are landing, and I do not think this would be too unreasonable.

### **III.6.3 Rivalry Data**

For the last robustness test, I used the enduring rivalry data (Diehl and Goertz 2000) instead of the strategic rivalry data. The major difference between these rivalry data and the strategic rivals is that these are constructed in an objective, replicable, algorithmic manner using the frequency of conflict between two states. These are desirable properties for scientific research. My primary reason for not using these data in the primary model is that it occasionally regarded a pair of states as rivals because they had had a skirmish in the past but were not really rivals. I am not denying that that may be true, but Diehl and Goertz do show that dyads that have experienced conflict in the past are more likely to experience it in the future. As such, while there may be some pairs of rivals that are not truly rivals, these are likely to be outliers.

### **III.6.4 Robustness Test Results**

The results from reestimating the primary model with slight changes to the data or estimation technique are shown in Table III.5.<sup>12</sup> The results in each of these models are very similar to the original model. Most importantly, the primary independent variable is negative and statistically significant in each of the models. In the Beck et al. (2001) model, political similarity between and having an alliance between the minor power and the rival state are both negative and statistically significant as I expected. The coefficients for each of the variables in this model are considerably smaller than in the other models. Since the transition model retains observations where the states already share an alliance making it impossible for an alliance to form in those observations, the distance between mean value

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<sup>12</sup>In each of these models, I only changed one aspect of the original model. For instance, column 1 show the original model reestimated using Beck et al. (2001)'s technique and column two uses minimum distance data, but there is no column that uses both.

Table III.5: Major Power Alliance Formation and Proximity to its Rivals, Robustness Tests, 1946-2001

	Beck et al 2000	Minimum Distance	Enduring Rivals
<b>Minor Power - Rival</b>			
Distance to Rival of Major Power (log)	-0.053*** (0.014)	-0.091*** (0.011)	-0.416*** (0.056)
Political Similarity	-0.003 <sup>†</sup> (0.002)	-0.028*** (0.007)	-0.024*** (0.006)
Alliance	-0.107* (0.044)	-0.503*** (0.144)	-0.504* (0.205)
<b>Major Power - Minor Power</b>			
Shared Rivalry	0.066 (0.060)	0.443 <sup>†</sup> (0.238)	-0.171 (0.207)
Constant	-7.098*** (0.116)	-1.800*** (0.130)	0.934* (0.456)
Alliance Years	28.612*** (0.015)		
(Alliance Years) <sup>2</sup>	-14.628*** (0.007)		
(Alliance Years) <sup>3</sup>	0.252*** (0.000)		
<i>N</i>	23283	20257	22127
AIC	16.000	700.276	803.529
BIC	273.775	858.601	963.620
log <i>L</i>	24.000	-330.138	-381.765

Robust standard errors in parentheses

<sup>†</sup> significant at  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

of these variables in the observations where there is no alliance and where there is an alliance is much smaller, so a marginal change in these variables results in a smaller change in their effect on alliance formation. This is a definite drawback of using this modeling technique. The Maoz (2010) model is not ideal because I certainly lose information in the observations that are excluded from the model, but I think this is preferable to including information in observations where the dependent variable cannot vary.

The results for the model using minimum distance instead of capital-to-capital are almost identical, showing that the model is robust to changes in distance measure. In fact,



shared rivalry reaches statistical significance in this model specification. Since this is only one out of four models, I do not put much weight on that finding, but it is consistent with other empirical research on the topic. Consistent with the primary models and each of the robustness check models, political similarity and shared alliance between the minor power and the rival are both negative and significant, as expected. The model that uses enduring rivals rather than strategic rivals produces consistently similar results to the primary model on all variables except shared rivalry. While this has only been significant in one model, it has the wrong sign in this model. This result means that these data have more observations where the major power and minor power share a rivalry but do not form an alliance, there are fewer observations where they do not share a rival but do form an alliance, or some combination of the two. I suspect it is likely to be the first explanation. As I discussed above, the construction of the enduring rivalry data makes it more likely that rivals will be included that are not true rivals. As such, the major power may not experience any real threat from some state classified as a rival and, therefore, may not be inclined to form an alliance with a minor power that is near to the rival and for which that state is also a rival. Nevertheless, this model produced results very consistent with my expectations, and these results as a whole show that my primary hypothesis appears to be robust to changes in the data.

### **III.7 The Effect of Proximity on the United States' Foreign Basing Decisions**

To this point, I have produced evidence that powerful states form alliances with weak states that are close to their enemies in a general sense, across many powerful states. In what follows, I look more closely at the case of the United States, applying the argument to this particular case and extending the hypothesis to the foreign basing decisions of the U.S. The United States has, far and away, the most extensive foreign military base network in the world with more than 600 military bases outside<sup>13</sup> of the 50 states as of 2010; the United

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<sup>13</sup>See the Department of Defense's "Base Structure Report Fiscal Year 2010 Baseline: A Summary of DoD's Real Property Inventory" available at <http://www.acq.osd.mil/ie/download/bsr/bsr2010baseline.pdf>.

Kingdom comes in a distant second with just shy of 30.<sup>14</sup> Additionally, the United States has ships deployed at sea carrying all the necessities – including tanks, food and water – for deploying to basically any location in the world.<sup>15</sup>

My argument contended that powerful states would ally with weak states in order to use their territory to aid the powerful state in projecting power in order to minimize the loss of strength that accompanies such action. This argument assumes that once the alliance is formed, the powerful state will then utilize that territory to prepare for a potential conflict. The agreement itself does little to mitigate the loss incurred by projecting power, so if this really is the primary reason that states form these asymmetric alliances, we should find more than just the alliance agreement. They should be exercising their new-found autonomy and using this territory to prepare for a possible conflict.

I adapt the original hypothesis presented at the start of the paper to the United States case for evaluation. Additionally, I propose an hypothesis relating the distance between the minor power and the rival and the number of troops the U.S. stations in the minor power. Specifically, the hypotheses are as follows:

H2a: The United States is more likely to form an alliance with a weak state as the distance between the weak state and the nearest likely adversary of the United States decreases.

H2b: The United States will place more troops on the territory of a weak state as the distance between the weak state and the nearest likely adversary of the strong state decreases.

Table III.6 contains the results of the empirical analysis of these hypotheses. I evaluate

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<sup>14</sup>See James Rogers and Luis Simon, 2009, “The Status and Location of Military Installations of the Member States of the European Union and Their Potential Role for European Security and Defense Policy” available at [http://www.europarl.europa.eu/meetdocs/2004\\_2009/documents/dv/sede300309studype407004./SEDE300309StudyPE407004\\_en.pdf](http://www.europarl.europa.eu/meetdocs/2004_2009/documents/dv/sede300309studype407004./SEDE300309StudyPE407004_en.pdf).

<sup>15</sup>See Robert A. Chilcoat and David S. Henderson, 1994, “Army Prepositioning Afloat” available at <http://www.fas.org/man/dod-101/sys/ship/docs/jfq1004.pdf> and “Army Prepositioned Stock (APS-3)” available at <http://www.globalsecurity.org/military/agency/army/aps-3.htm>.

the first hypothesis with the same data and modeling technique used in the primary model presented in the third column of Table III.3, with the only exception being that the data is a subset of the original data including only triads containing the United States as State A. The results are nearly identical as those from the original model. Most importantly, the variable of interest, distance to the rival of the United States, has a negative sign and is statistically significant. The marginal effect of this variable is shown in the first panel of Figure III.6. Similarly to the original model, the change in likelihood across the range of the values of distance is about a 1.5% increase in likelihood of alliance formation.

Table III.6: U.S. Alliance Formation, Basing and Proximity to its Rivals

	Alliance Formation	Basing
<b>Minor Power - Rival</b>		
Distance to Rival of Major Power (log)	-0.429*** (0.100)	-4130.655*** (518.305)
Political Similarity	-0.050*** (0.013)	-334.214*** (49.927)
Alliance	-4.273*** (0.150)	-6639.767*** (777.440)
<b>Minor Power - Rival</b>		
Shared Rivalry	0.980 <sup>†</sup> (0.523)	-1905.237* (958.314)
Constant	1.655* (0.783)	43172.609*** (4970.032)
<i>N</i>	4485	6280
AIC	280.236	145254.311
BIC	408.406	145389.214
log <i>L</i>	-120.118	-72607.156

Robust standard errors in parentheses

<sup>†</sup> significant at  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

My expectation about the direction of the control variables has not changed for this analysis, and they each have the anticipated sign. Moreover, shared rivalry is significant in this model unlike the model presented earlier. Considering that the United States was at the forefront of the cold war for much of this temporal period, it is unsurprising that the United

States would be more likely to form an alliance with other rivals of either the Soviet Union, Cuba or China. Additionally, I find that the United States is less likely to form an alliance with minor powers that are political similar to or share an alliance with the nearest rival to the major power.

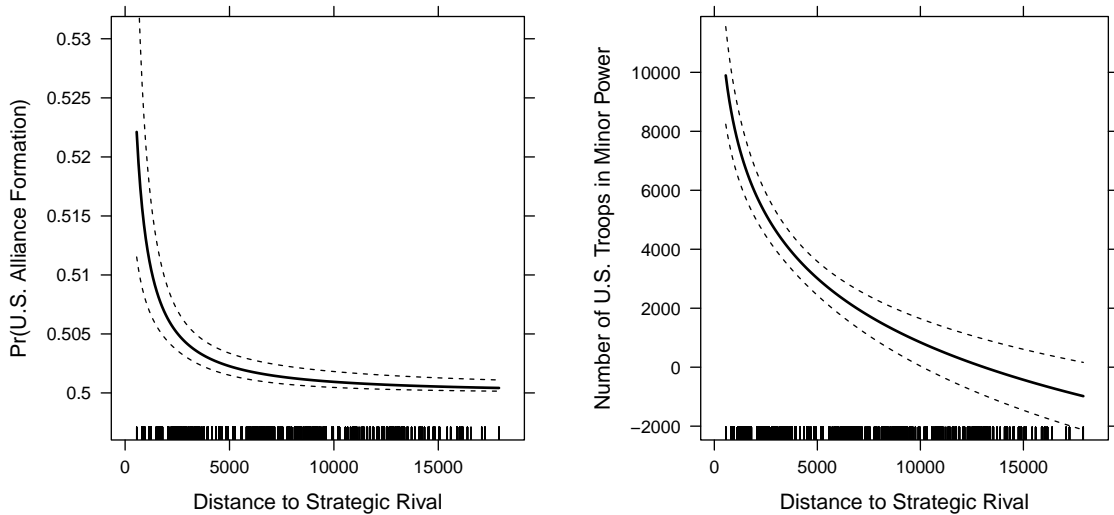


Figure III.6: Marginal Effect of Distance to Rival on U.S. Alliance Formation and Troop Basing

I evaluate the second hypothesis with the same data from the original model with the exception of the dependent variable. The dependent variable for this model is the number of troops stationed in a minor power country. These data come from a report produced by Peter King at the Heritage Foundation and they cover the 1950–2005 temporal period.<sup>16</sup> I estimated a linear regression model by maximum-likelihood with robust standard errors. The results from this model are in the second column of Table III.6.

The results of this model provide evidence in favor of accepting my hypothesis. The coefficient for the distance between the minor power and a U.S. rival is negative and statistically significant, meaning that as distance grows, the number of U.S. troops shrinks. Conversely, as the distance between the minor power and the U.S. rival decreases, the number of troops stationed in that particular state increases, the expected relationship. The

<sup>16</sup>The report is available at <http://www.heritage.org/Research/NationalSecurity/cda06-02.cfm>.

marginal effect plot for the distance variable is presented in the second panel of Figure III.6, and it clearly shows that a decrease in distance from 10,000 km to 0 km increases the number of troops in that country by around 10,000 or about the size of a division of the U.S. Army.

The control variables in the basing model are the same as in the previous model, and my expectation about their sign and significance is naively the same as in the alliance formation models, but there is minimal research on the correlates of foreign basing. The coefficients on these variables are all as expected with the exception of shared rivalry, which is negative and significant and leads to around 2,000 fewer troops than in states that do not share a rival with the United States. I do not have a good explanation for this result, but my suspicion is that the result is more accidental than by design. It could be the case, however, that the minor power may be more likely to engage its rival in conflict when it has U.S. troops in it more regularly than when it does not and more regularly than a non-rival minor power with U.S. troops within its boundaries.

### **III.8 Conclusion**

The explanations for alliance formation that have been offered in the academic literature fall short when trying to explain why powerful states form alliances with weak states. In this paper, I have presented a novel geopolitical explanation that contends that powerful states form alliances with weak states in order to mitigate the loss of strength that they experience when having to project power. To explore the plausibility of this argument, I constructed a quasi-triadic research design and estimated a statistical model that established that major powers are more likely to form alliances with weak states if they are located close to a rival of the major power.

Alliances are important to a state's security, so states do not form them lightly. When an alliance is activated, it can be very costly for states to fight in a conflict, or should they decide to abandon the alliance, their reputation would be tarnished. As such, I argue that

alliances are primarily a tool to increase security for a state. The scholarly explanations of asymmetric alliances tend to neglect the security motivations for forming the alliance of the major power. These arguments instead focus on what I would consider to be secondary motivations for alliances that only have an indirect effect on security. Some of these include restraint, trade and political fellowship. The capability-aggregation model of alliance formation offers a direct link between the alliance and the increase in security of the states involved through the aggregated capabilities, but this model is not suitable for asymmetric alliances because the weak state does not have any meaningful military capabilities to offer the powerful state meaning that any increase in security for the powerful state would be negligible. The trade-off model highlights the autonomy that the powerful state gains through an asymmetric alliance, but Morrow (1994)'s contention is that this autonomy give the major power a chance to change the status quo. It is unclear how a state's efforts to change the status quo increase its security.

The explanation for asymmetric alliance formation that I present in this paper provides a direct link between the alliance and the increase in security for the powerful state. Without the alliance, if the powerful state needed to project its capabilities to participate in a conflict, it would suffer some loss of strength to do so as a result of the distance it was projecting. On the other hand, if it had an alliance with a state near to the conflict location, it could project its capabilities from the territory of that state reducing the power-depleting effect of distance. This effect of having the alliance increases the powerful state's security because it enables the powerful state to use its capabilities more efficiently, and capabilities are the cornerstone of deterrence. Any way a state can increase its capabilities (or effective capabilities in this case) increases the state's ability to deter potential adversaries and, thus, increases its security.

This argument finds support from a cross-sectional model of major powers as well as from an application of the argument to the U.S. case including an extension to its foreign basing decisions. Moreover a series of alternately specified models produce the same re-

sults. The evidence from these models show that powerful states clearly take the location of its potential allies into account when forming alliances. The closer an ally is located to a potential adversary affords the powerful state the opportunity to use its forces as efficaciously as possible.

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