Tied to Conflict: The Causes and Consequences of Rivalry Linkage

Douglas Hamilton Spence
dspence7@utk.edu

Recommended Citation
To the Graduate Council:

I am submitting herewith a dissertation written by Douglas Hamilton Spence entitled "Tied to Conflict: The Causes and Consequences of Rivalry Linkage." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Political Science.

Brandon C. Prins, Major Professor

We have read this dissertation and recommend its acceptance:

Ian Down, Nathan Kelly, Wonjae Hwang, Carl Pierce

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)
Tied to Conflict:
The Causes and Consequences
Of Rivalry Linkage

A Dissertation Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Douglas H. Spence
August, 2012
This dissertation examines rivalry linkages—ties such as alliances or shared disputes which connect different international rivalries to one another. Drawing on steps-to-war theory, I argue that many rivalry linkages form as a result of the coercive, “power politics” strategies that rivals often employ in their dealings with one another. These strategies encourage states to attempt to gain advantages over their rivals by pursuing alliance partners or by inviting third parties to intervene in their disputes. Consequently, when rivalries employ these strategies, they tend to establish linkages between their rivalry and others. I also argue that the accumulation of rivalry linkages has several important effects on rivalry dynamics. First, linkages provide an avenue for diffusion of conflicts across rivalries, making it more likely that rivalries will “catch” others’ disputes and that their disputes will be joined by third parties. Second, the presence of rivalry linkages also complicates diplomatic negotiations and makes it more difficult for rivals to resolve their disputes peacefully.

I test some of the implications of my theory in three empirical chapters. The first chapter examines the causes of rivalry linkage. Consistent with the argument, I find that states involved in rivalry were significantly more likely to form alliances and join in disputes with other states that were also involved in rivalries. These kinds of linkages are especially likely to form between rivalries that shared common enemies. In the second chapter, I explore the effects of rivalry linkages on the risk of militarized disputes and war between rivals. Using bivariate probit models, I find that rivalries with larger numbers of linkages are more likely to experience militarized disputes and that these disputes are more likely to be joined by other states and to escalate to war. The third chapter assesses the impact on de-linking on rivalry duration. Here, I find that rivalries which accumulate larger numbers of linkages tend to last longer and the severing of rivalry linkages (or de-linking) significantly shortens rivalry. Together these findings suggest that linkages have important effects on rivalry dynamics, and that they deserve greater attention from scholars and policymakers.
# TABLE OF CONTENTS

## I. INTRODUCTION

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Rivalries in International Politics</td>
<td>7</td>
</tr>
<tr>
<td>Rivalry Linkages</td>
<td>13</td>
</tr>
<tr>
<td>Plan of the Dissertation</td>
<td>18</td>
</tr>
</tbody>
</table>

## II. THE RIVALRY RESEARCH PROGRAM

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>21</td>
</tr>
<tr>
<td>Identifying and Conceptualizing Rivalry</td>
<td>24</td>
</tr>
<tr>
<td>Identifying Rivalry</td>
<td>24</td>
</tr>
<tr>
<td>Conceptualizing Rivalry</td>
<td>27</td>
</tr>
<tr>
<td>Theoretical Foundations and Empirical Findings</td>
<td>38</td>
</tr>
<tr>
<td>The Contributions of Rivalry Research</td>
<td>38</td>
</tr>
<tr>
<td>Modeling Rivalry Development</td>
<td>41</td>
</tr>
<tr>
<td>The Future of Rivalry Research: Beyond the Rivalry Dyad</td>
<td>51</td>
</tr>
</tbody>
</table>

## III. THE CAUSES OF RIVALRY LINKAGE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>56</td>
</tr>
<tr>
<td>Steps-to-War Theory</td>
<td>60</td>
</tr>
<tr>
<td>Steps-to-War Theory and Rivalry Research</td>
<td>64</td>
</tr>
<tr>
<td>Power Politics and the Formation of Rivalry Linkages</td>
<td>66</td>
</tr>
<tr>
<td>Forming Alliances</td>
<td>68</td>
</tr>
<tr>
<td>Expanding Disputes</td>
<td>71</td>
</tr>
<tr>
<td>Data and Methods</td>
<td>74</td>
</tr>
<tr>
<td>Modeling Alliance Formation</td>
<td>75</td>
</tr>
<tr>
<td>Modeling Dispute Expansion</td>
<td>77</td>
</tr>
<tr>
<td>Empirical Results</td>
<td>79</td>
</tr>
<tr>
<td>Alliance Formation</td>
<td>79</td>
</tr>
<tr>
<td>Dispute Expansion</td>
<td>83</td>
</tr>
<tr>
<td>Conclusion</td>
<td>93</td>
</tr>
</tbody>
</table>

## IV. THE CONSEQUENCES OF RIVALRY LINKAGE

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>96</td>
</tr>
<tr>
<td>Extant Work on the Effects of Rivalry Linkage</td>
<td>98</td>
</tr>
<tr>
<td>A Theory of the Consequences of Rivalry Linkage</td>
<td>104</td>
</tr>
<tr>
<td>Conflict Diffusion</td>
<td>104</td>
</tr>
<tr>
<td>Dispute Escalation</td>
<td>108</td>
</tr>
<tr>
<td>Data and Methods</td>
<td>114</td>
</tr>
</tbody>
</table>
Empirical Results.................................................................120
Conclusion..............................................................................132

V. DE-LINKING INTERNATIONAL RIVALRIES .........................135

Introduction..............................................................................135
The Effects of De-Linking on Rivalry Duration........................137
Data and Methods...................................................................143
Empirical Results....................................................................147
Conclusion..............................................................................155

VI. CONCLUSION......................................................................158

Introduction..............................................................................158
What Have We Learned About Rivalry Linkage?......................160
Future Research.......................................................................164
Policy Implications.................................................................171

LIST OF REFERENCES.............................................................175

VITAE......................................................................................184
LIST OF TABLES

Table 3.1: Logit Estimates of Alliance Formation .............................................80
Table 3.2: Changes in Predicted Probabilities of Alliance Formation .................81
Table 3.3: Observed and Expected Frequencies of Complex MIDs by Rivalry Phase...84
Table 3.4: Logit Estimates of Dispute Expansion .............................................86
Table 3.5: Changes in Predicted Probabilities of Dispute Expansion....................87
Table 3.6: Logit Estimates of Alliance Formation between States Involved in Rivalry...92
Table 3.7: Logit Estimates of Dispute Joining by Rivals ................................90
Table 4.1: Summary Statistics (Rivalry Dyad-Years, 1816-2001) .........................119
Table 4.2: Bivariate Probit Estimates of Dispute Onset and Expansion ...............121
Table 4.3: Bivariate Probit Estimates of Dispute Onset and Escalation to War ....124
Table 4.4: Changes in Predicted Probabilities of Dispute Onset, Expansion and Escalation .................................................................129
Table 4.5: Observed and Expected Frequencies of Dyad-Years with MIDs, Complex MIDs and War by the Number of Rivalry Linkages .........................131
Table 5.1: Cox Proportional Hazard Model Estimates of the Effects of Rivalry Linkages on the Risk of Rivalry Termination .................................149
LIST OF FIGURES

Figure 4.1: Plot of the Survival Function of Rivalry, Varying Rivalry De-linkage………………………………………………………………………………………………..151

Figure 4.2: Plot of the Survival Function of Rivalry, Varying the Number of Rivalry Linkages………………………………………………………………………………….153
CHAPTER I
INTRODUCTION

Introduction

On its surface, the visit by Russian President Dmitri Medvedev to the small, sparsely populated island of Kunashir on September 10th, 2010, would seem to be to be an unlikely candidate to be the trigger for a major international incident. Medvedev spent just four hours on the island. For most of his visit, he played tourist. He visited a geothermal power station and a fish packing plant, sampled the local caviar and spoke with shopkeepers. Before leaving, he made a short speech pushing the government’s plans for promoting regional economic development. “Life will be better here”, he said, “like it is in central Russia” (Anishchuk 2010, 1). That evening, he even posted a picture of the island’s coast on his official Twitter account with the caption: “There are so many picturesque places in Russia… Kunashir” (Zakaria 2010).

However, despite his short stay, Medvedev’s visit to Kunashir did not go unnoticed by the international community. This is because Kunashir is one of the four disputed Southern Kuril Islands, which were seized by Soviet forces from the Japanese Empire in the closing days of World War II. Although Russia has occupied and governed the islands since 1948, Japan still considers them to be part of its territory, and their occupation remains an emotional issue for many Japanese. The day after Medvedev’s visit, the Japanese Prime Minister, Naoto Kan, described it as an act of “impermissible rudeness” and recalled his ambassador from Moscow (Oki and Yamaguchi 2010). The Russian foreign minister, Sergei Lavrov, then responded coldly, declaring that the
Japanese response was “unacceptable” and proudly proclaiming that “the Russian president was visiting Russian land” and “Russian territories” in “a Russian region” (Anishchuk 2010, 2). Five months later, Medvedev announced that in order to better defend Kunashir against potential Japanese aggression, Russia had deployed an advanced anti-aircraft missile system to the island and had begun plans to substantially increase in the size of its pacific fleet (Reuters 2011). Perhaps most alarmingly for the Japanese, this increase in Russian military deployments also coincided with the release of a joint statement by both China and Russia which asserted the legitimacy of both countries’ territorial claims\(^1\) against Japan and their desire to work together in order to address them (Oki and Yamaguchi 2010). The sudden involvement of China (which is now Japan’s biggest trading partner) in the dispute raised fears in Japan that the Chinese and Russians might attempt to use economic pressure in order to force Japan into giving up its claims. Although the immediate danger of an international crisis has now passed, tensions in the region remain high.

Diplomatic rows, like the dispute over Medvedev’s visit to Kunashir, can sometimes be quite puzzling for observers of international politics. We generally like to assume that most states, especially those that are large, powerful, and economically advanced, will behave rationally, and that their governments will place objective national interests and their citizens’ well-being ahead of petty disputes or nationalist saber-rattling. However, in this case, three of the world’s largest and most powerful states seem to have been willing to risk economic disruptions, and perhaps even military conflict, in order to

\(^{1}\)China’s primary territorial claims against Japan concern the uninhabited Senkaku islands, which are claimed by China but have been controlled by Japan since 1895.
secure their claims to a few small pacific islands. For political scientists, the apparent willingness of three major powers to risk so much over such seemingly small stakes raises several important questions.

First, how did the dispute over the Southern Kurils become so salient? The islands are arguably peripheral territories for both Russia and Japan. They are relatively poor in natural resources and have few inhabitants, and they have never been a part of either country’s historical homelands. Why, then, is control over the islands such an important issue in both countries?

Second, why has this dispute continued to remain so contentious for so long? In the more than fifty years since the islands were first seized, both of the governments which were originally party to the dispute have collapsed, and Japan and Russia have made fundamental changes to their foreign policy. In Japan, the constitution now asserts that the Japanese people have forever renounced war as a legitimate means for settling international disputes, and Japan has formally given up its territorial claims to former colonies in places like Korea and Taiwan. Likewise, during the collapse of the Soviet Union, Moscow relinquished its control over vast stretches of territory in Eastern Europe and Central Asia. Given the scope of these territorial concessions, why should these governments continue to covet four small islands in the North Pacific?

Third, why has China now decided to become involved in the dispute? By issuing a joint statement with Russia, it has made the dispute over the Southern Kuril Islands an important part of its own bilateral relationship with Japan, endangering an increasingly important trading relationship and jeopardizing continued cooperation from Japan in regards to other issues, such as Japan's willingness to withhold diplomatic recognition
from Taiwan. Why would China risk its relatively good relationship with Japan in order to help the Russians?

These are difficult questions, and it is perhaps tempting to ignore them, and to dismiss the Kunashir incident as being simply the product of Russian or Japanese nationalism, or a lack of proper caution by the leadership in both countries. However, doing so would abandon an opportunity for inquiry, and also overlook an important fact about the Kuril Islands dispute; a fact which suggests that the dispute may still produce new confrontations in the future. For what makes this dispute so dangerous is not just that it evokes nationalist sentiment or creates opportunities for leaders to inflate external threats. What makes this dispute particularly dangerous is that it is also situated within the context of an enduring rivalry relationship. For more than 150 years, Russia and Japan have been in a state of enduring rivalry, and have experienced an unbroken series of more than fifty militarized disputes, including two wars. Although the issues, leaders and governments associated with these disputes have changed dramatically over the years, the rivalry has endured and deepened, to the point to which it has become well established in both countries’ foreign policy institutions and national cultures. Consequently, when disputes occur between Russia and Japan, they take place within the context of a longer history of recurrent military confrontation and national grievances. This history magnifies the importance of seemingly minor issues, like the dispute over ownership of the Kuril Islands, and it encourages leaders and citizens on both sides of the rivalry to see each other’s intentions as hostile. In this environment, even relatively small actions, like an official visit or even a provocative tweet, can be interpreted as threats. Thus, rivalry goes a long way towards explaining why the Kuril Islands dispute is so
salient, and why it does not appear to be going away any time soon.

Yet, in itself, the concept of rivalry does not tell us much about the third question associated with the Kunashir incident, concerning China’s motivations for becoming involved in the dispute. If anything, the existence of a Russo-Japanese rivalry suggests that China should wish to avoid becoming entangled in a long-running international feud. Furthermore, if one focused only on the Russo-Japanese rivalry and ignored China’s involvement, then one would also miss an important dimension of the Kunashir incident and underestimate the risks which a confrontation with Russia over the issue poses for Japan.

In order to fully understand Kuril Islands dispute, as well many other confrontations between rivals, it is sometimes necessary to go beyond the notion of international rivalry as being simply a relationship between a pair of states (or dyad) with a history of conflict. Often, rivalries also entail recurrent interactions with third parties. In some cases, these third parties intervene in ways which constrain rivals and lessen the risk of military confrontations, but in others, such as in the case of China's involvement in the dispute over the Kurils, they intervene in ways which raise the stakes and increase international tensions. These interventions are likely to be especially dangerous when third parties are also involved in rivalries themselves. In these situations, they bring with them their own diplomatic baggage and conflict histories, which can serve to promote the escalation of the dispute or even encourage additional states to become involved.

In this regard, China’s potential motivation for becoming involved in the Kuril Islands dispute becomes much clearer when one considers its rivalry relationships and the linkages between them and the Russo-Japanese rivalry. Since the 1870s, China has had
ongoing rivalries with both Russia and Japan. Consequently, China has a potential interest in how the Russo-Japanese rivalry plays out, as it pits two of its enemies against one another. While the Chinese ultimately may not want either side to emerge victorious, they do have an interest in making sure the rivalry remains costly for both Russia and Japan, so that it consumes resources which might otherwise be directed towards both countries’ disputes with China. In this regard, the Chinese have intervened in Russo-Japanese disputes in the past and have often sought to play one side off of the other in order to further their foreign policy goals. For example, during the latter decades of the Cold War, the People’s Republic of China occasionally worked with Japan to thwart Soviet ambitions in East Asia. In fact, as recently as 1989, China had publicly supported Japan in the Kuril Islands dispute, and had asked the Soviet Union to consider returning the islands (Oki and Yamaguchi 2010). However, since the collapse of the Soviet Union, China has tended to work with Russia in an attempt to limit the expansion of Japanese and American influence in the region. Thus, in this light, Kunashir is not just a potential point of confrontation between Russia and Japan. It is also an important part of a broader complex of regional security relationships that involve several competing major powers.

In this dissertation, I attempt to shed light on some of these complex rivalry relationships by examining the linkages which connect different dyadic rivalries to one another. In doing so, I build on the work of a small, but significant, group of studies within the rivalry literature which suggest that extra-dyadic relationships (or in other words, relationships with third parties) have an important effect on rivalry dynamics. My dissertation contributes to this research by developing and testing a theory which explains how most rivalry linkages form and which generates a number of expectations about how
the accumulation of linkages is likely to affect rivals’ behavior. The results of my empirical analyses, which are presented later in this manuscript, lend support to the theory and indicate that rivalries which become linked tend to last longer and entail higher levels of conflict.

In the next section of this chapter, I discuss the significance of rivalries in international politics and the role that the rivalry concept plays in the scholarly study of international conflict. I then describe more precisely what rivalry linkages are, and provide a brief review of the literature that addresses them. In the last section, I present a plan for the rest of the dissertation.

**Rivalries in International Politics**

Rivalries are long-term, competitive relationships between pairs of states that are characterized by recurrent militarized disputes and mutual perceptions of threat, hostility and mistrust (Diehl and Goertz 2000; Thompson 2001). Today, there are 37 ongoing rivalries in the international system involving 39 states. Each of the world's major powers is currently involved in at least one international rivalry, as are all nuclear states, with the exception of France. Afghanistan holds what is perhaps the dubious distinction of being the current world leader in rivalry, with five active contests. Some of these rivalries are fairly old, like its rivalries with Russia and Pakistan (which began in 1980 and 1949, respectively), but others, like its rivalries with Tajikistan and Uzbekistan are relatively new and emerged after the end of the Cold War (both rivalries began in 1993).

---

2This figure is calculated using the Diehl and Goertz (2000) list of international rivalries and includes both “enduring” and “proto” rivalries.
The same is also true of rivalries in the international system more broadly. While the average rivalry has been around for more than 30 years, 13 new rivalries have formed since 1990.

Rivalries are important for students of international conflict because rivals are much more likely to fight one another than are other pairs of states. Although rivalries account for only a tiny fraction of all dyads, they are responsible for about 75% of wars and about 80% of militarized disputes (Goertz and Diehl in Midlarsky 2000, 225). Thus, most international conflict is conflict between rivals. Rivals also tend to fight one another repeatedly over time. Since 1945, almost half of all inter-state wars occurred as part of a series of confrontations between rivals, such as Israel and Egypt (five wars) or India and Pakistan (four wars). Furthermore, even when rivals are not fighting, they often engage in behaviors that have serious consequences for international security, such as arms races or the issuing of coercive threats.

The extraordinary conflict-proneness of rivalries is made all the more striking when one considers that outside of rivalry relationships, the world appears to be growing more peaceful. The frequency of inter-state wars, especially between major powers, seems to have been declining since the end of World War II (Mueller 2009), and for large portions of the planet, including most of the states in Europe and the Western Hemisphere, large-scale military conflict has become nearly unthinkable. Although many states continue to have disputes, sometimes quite serious ones, there seems to be very little support among elites or the mass public in much of the world for resolving these disputes in ways that might entail the use of military force. This is a profound change from centuries of common practice in statecraft, and it has led John Mueller (2009) to
suggest that war, like dueling, may be fading out of existence as a socially acceptable institution for resolving conflicts. Other scholars are less optimistic about the end of war, but it is widely accepted that much of the world now lies within a “zone of peace” (Singer and Wildavsky 1993, 4) maintained by factors such as joint democracy (Doyle 1986, Maoz and Russett 1993), high levels of economic interdependence (Oneal and Russett 1997) or nuclear deterrence (Zagare 1990).

Thus, rivalries are something of an oddity in international politics; they are small islands of enduring conflict in a much larger sea of more peaceful dyads. For this reason, researchers frequently use rivalry as a means of selecting cases in which to test theoretical arguments about the causes of war or other conflict phenomena, such as arms races (Diehl 1985) or deterrent threats (Huth and Russett 1993). In addition, there is also a significant literature which examines rivalry as a subject of inquiry in its own right. These studies have made a significant contribution to conflict research by revealing that many militarized disputes are related to one another over time and by helping scholars to better understand the ways in which individual conflicts fit within the broader context of enduring international relationships.

Yet while rivalries have become an increasingly important part of the study of international relations, there is still a great deal that we do not know about them. For one thing, it is still not entirely clear what causes rivalry in the first place. Some studies have shown that states are more likely to develop rivalries when they have disputes over highly salient issues (Hensel 1998) or have disputes that end in stalemates (Goertz, Jones and Diehl 2005), but we are still a long way from being able to predict when and where new rivalries are likely to emerge. Likewise, we still do not fully understand the processes by
which rivalries develop and change over time. Here, there is ongoing debate about the nature of rivalry dynamics, with some studies arguing that rivalries tend to be relatively stable relationships (Diehl and Goertz 2000) and others arguing that they tend to escalate as they wear on (Hensel 1998).

One of the least understood aspects of rivalry is the way in which different rivalries may be connected to one another. This area has received very little attention from rivalry researchers because they have generally been more interested in examining the connections between rivals’ interactions over time rather than at looking at the ways in which these interactions might be linked to events in other rivalries. However, as a practical matter, it is clear that rivalries are often strongly affected by events in other ongoing international conflicts. The rivalries that existed between many US and Soviet client states, for example, were frequently influenced by changes in relations between their superpower patrons, and it is perhaps not surprising that few of these contests have survived the end of the Cold War. Similarly, many contemporary rivalries, such as those between Israel and its Arab neighbors, appear to be closely connected, as they revolve around common sets of issues and share many of the same militarized disputes. Scholars have long been aware that these kinds of extra-dyadic relationships exist (Kinsella 1994, 1997; Schroeder in Thompson 1999; Colaresi 2005), but so far, these relationships have largely been ignored by the rivalry literature. Only a handful of studies devote much attention to the issue of rivalry linkage, and even for these works, linkages were generally not their primary concern.

For students of international rivalry, the failure to address rivalry linkages is potentially problematic for several reasons. First, if these extra-dyadic linkages do have a
significant effect on rivals' behavior, then it raises the possibility that existing models of rivalry dynamics or rivalry conflict may be vulnerable to omitted variable bias (Vasquez and Leskiw 2001). That is, we may be ignoring an important set of influences on rivalry which may account for unexplained aspects of rivals' behavior or which may interact with other known explanatory variables and causal relationships. If this is true, then existing models of rivalry may be underspecified. Second, the neglect of rivalry linkages also leaves us blind to important research questions. For example, rather than simply asking what causes conflicts between rivals, we might also ask what causes conflicts between rivals to spread to other dyads, or what causes states in one rivalry to become involved in the affairs of another. These questions can help to push the rivalry research program forward into new areas and help to provide a new source of insights into the sources of conflict between rivals.

For policymakers, there are also a number of reasons why the issue of rivalry linkage should not be ignored. If linkages exacerbate rivalry conflict, then this suggests that conflict mediation efforts may need to be multilateral in nature or that they may need to be focused on particular rivalries which lie at the center of broader structures of interconnected conflicts. In addition, the possibility that conflicts may spread across rivalries suggests that rivalry linkages may also pose serious implications for national security. If conflicts can diffuse across rivalry linkages, then states may need to worry not only about relations with their own rivals, but also about events in other rivalries to which they may be connected. Furthermore, while many rivalry linkages have been highly visible, others are not, and there is a risk that linkages and extra-dyadic relationships might go unnoticed by policymakers until it is too late. For example, when Austria-
Hungary invaded Serbia in 1914, most observers in Austria-Hungary and elsewhere appear to have been largely unaware of the dense web of interconnections that lay between the 21 international rivalries that were ongoing in Europe at the time (Thompson 2003). Thus, while many in Austria-Hungary expected that Russia would become involved in the war, few suspected that this relatively minor conflict in the Balkans would spread further, or that it would ultimately become a war so large and so destructive that it would result in the collapse of the Austro-Hungarian Empire.

In sum, rivalry relationships have become an integral part of research on international conflict because they help to identify the relatively small number of states that have a significant chance of using force against one another. Thus, rivalries can be said to provide a good approximation of what Singer and Wildavsky (1993, 5) describe as a “zone of turmoil”—the zone where coercive, power politics are regularly practiced, and where the threat of inter-state war remains real—that is of crucial interest to many international relations scholars. Yet while researchers have succeeded in isolating these islands of conflict from the larger pool of dyads, they have largely neglected the connections that exist between rivalries. Or in other words, they have ignored the many bridges and tunnels which link these islands together. These connections are important because they establish pathways by which events, such as arms races or wars, can potentially spread from one rivalry to another, or in some cases, perhaps even into the “zone of peace” beyond.
Rivalry Linkages

Research on rivalry linkages is in its infancy. While students of rivalry have long been aware of the fact that many rivalries appear to be connected, and that these connections seem to have important effects on rivals’ behavior, few scholars gave the possibility of rivalry linkage much explicit empirical or theoretical attention. However, this has begun to change in recent years, as a handful of studies have begun to investigate the consequences of rivalry linkage, and to incorporate linkage into existing models of rivalry dynamics. This work is built largely on the efforts of Diehl and Goertz (2000), who provide what is arguably the first attempt to systematically identify the connections between rivalries, and to develop and test hypotheses about their effects. Their work has been very influential, and has made at least three important contributions to scholarly understanding of rivalry linkage.

First, unlike many previous studies, Diehl and Goertz attempt to specify concretely what it is that rivalry linkages are. Although they do not go so far as to provide a single, formal definition of rivalry linkage, Diehl and Goertz do argue that linkages are generally spatial or political relationships which connect individual dyadic rivalries to the larger “enduring rivalry system” (2000, 245). Thus, Diehl and Goertz (2000, 247) suggest that, at any given time, many of the world's rivalries are likely to be connected to one another, in what Buzan (1983) describes as “security complexes”, comprised of overlapping conflicts that involve several different pairs of states. In addition, they also suggest that rivalries between major powers, such as the US and the Soviet Union, are likely to produce systemic effects which trickle down to influence rivalries throughout the international system. Consequently, for Diehl and Goertz, rivalry linkages are an
important feature of the external environment in which rivalries develop, and their presence or absence is likely to have a significant impact on rivalry dynamics.

Second, Diehl and Goertz build on this notion of rivalry linkage by identifying four distinct forms of linkage— alliance ties, joint disputes, common foes and shared borders. Rivalries become linked by alliance ties when one state in a rivalry establishes a formal alliance with a second state in another rivalry. For Diehl and Goertz, formal alliances are the most obvious and direct form of rivalry linkage, as they demonstrate the existence of interdependent security interests between the two pairs of rivals, and to reflect an “explicit choice” by states “to connect their mutual security fates” (2000; 246), In addition, Diehl and Goertz also suggest that rivals can become tightly linked, even in the absence of a formal alliance, when they share common militarized disputes. When states from different rivalries participate in the same militarized disputes, this is believed to provide a good indication that the rivalries are directly linked by common issues or shared security interests. For example, Egypt and Syria's rivalries with Israel are linked to one another because these states fought together against Israel during the Six Day and Yom Kippur wars. As with the existence of formal alliances, shared disputes are assumed to provide evidence that rivalries are tightly connected.

The other two forms of rivalry linkage—common foes and shared borders—are treated by Diehl and Goertz as being evidence of much looser connections between rivalries, which they describe as “indirect”. Rivalries can be said to be linked through common foes when two states are involved in rivalries with the same enemy. Thus, the rivalries between India and China and between Vietnam and China are linked by a common foe. Rivalries are linked by a shared border when they are contiguous by land.
Both of these types of linkages are considered to provide an indication that states in these rivalries are likely to have overlapping security concerns, since states presumably have interest in their rival’s other conflicts with third parties, and in third-party conflicts that involve neighboring countries. Yet since neither of these forms of linkage requires direct action by states in order to be established, they are considered to be less direct forms of linkage than alliances or shared disputes.

Yet while this four-part typology of rivalry linkages has been very useful for researchers, it is important to remember that it is not exhaustive. It is certainly possible that rivalries may be linked in other ways, such as through trade relationships or through joint membership in intergovernmental organizations. These kinds of ties are also likely to have a significant impact on rivalry dynamics, and future research would do well to broaden the notion of rivalry linkage and explore the impact of other types of third party relationships. However, since work on rivalry linkages remains underdeveloped this project leaves this task for other scholars and focuses on the four types of linkage identified by Diehl and Goertz. In doing so, it hopes to make it easier to compare the empirical results produced by this dissertation with those of previous studies.

Third, in addition to identifying the different forms of rivalry linkage, Diehl and Goertz also offer some initial arguments about the ways in which linkages are likely to affect rivals’ behavior. In general, they argue that linked rivalries should tend to exhibit higher levels of conflict and last longer than rivalries which are not linked to other conflicts. This argument is based the finding that complex MIDs and wars, which involve three or more participants, tend to last longer and escalate faster than other disputes.

---

3 I am grateful to Carl Pierce for this point.
(Gochman and Maoz 1984). Since rivalry linkages presumably make it more likely that new MIDs between a pair of rivals will become complex, then it stands to reason that MIDs that occur within linked rivalries should generally be more severe than conflicts that occur in other rivalries.

Diehl and Goertz therefore make an important contribution and have provided a framework for subsequent studies seeking to explore the connections between different dyadic rivalries. Yet, while their work has been path-breaking, efforts to test their arguments empirically have faced several significant challenges. One problem is the high number of linkages that exist between rivalries. By their count, only one rivalry (involving Honduras and Nicaragua) has developed without becoming linked to other rivalries at some point in its duration, and the average rivalry develops 18 such connections. In addition, most rivalry linkages are created in the early phases of the rivalry life cycle, when rival states begin to “lock-in” to patterns of conflictual and competitive behavior. This makes it very difficult to compare the behavior of linked rivalries to those that exist in isolation. Another problem concerns the tendency for several different types of linkages to occur together. For example, states that share a common enemy are likely to be contiguous with either each other or their enemy, and they may be especially prone to form alliances. This introduces significant potential for multicollinearity into analyses, making it difficult to parse out the effects of different kinds of rivalry linkage.

Both of these issues are made more difficult to address by the fact that Diehl and Goertz examine the effects of rivalry linkages from the perspective of a particular approach to rivalry dynamics—the punctuated equilibrium model—which assumes that
rivalries typically change very little over time. In their own analyses, Diehl and Goertz therefore do not examine how the accumulation of linkages affects rivalries over time. Instead, they focus their attention on comparing the effects of rivalry linkages across rivalries. That is, they investigate whether rivalries which accumulated greater total numbers of rivalry linkages also experienced higher average levels of conflict over the course of the rivalry. This approach makes sense from the perspective of punctuated equilibrium models, but it ignores a great deal of valuable information about the changes that occur in the number of linkages and in patterns of rivalry conflict over time.

Although other studies have employed different approaches that are more sensitive to changes in the number of linkages and in rivals’ behavior, this work has produced mixed findings, some of which conflict with those produced by Diehl and Goertz (Stinnett and Diehl 2001, Valeriano 2008).

In regards to theory, Diehl and Goertz's work also has some limitations. They treat rivalry linkages largely as exogenous characteristics of the external environment in which rivalries develop. Consequently, they provide no theoretical explanation for how or why rivalry linkages form, nor do they offer an explanation for rivalry de-linking. This, again, is problematic because rivalries seem to form new linkages and terminate old ones frequently throughout the course of the rivalry, which is generally not what punctuated equilibrium models of rivalry would expect. In addition, Goertz and Diehl's arguments about the effects of linkages on rivals' behavior rest on the assumption that the formation of linkages will make it more likely that new MIDs between a pair of rivals will become complex. This assumption has never been tested empirically, and the mechanisms by which linkages might encourage dispute expansion remain unclear.
As a result, while Diehl and Goertz have laid an important foundation for research into rivalry linkages, there is still much to learn. This dissertation employs their framework for identifying rivalry linkages, but develops a new and expanded theory of the causes and consequences of linkage formation. Drawing on steps-to-war theory (Vasquez 1996), I argue that linkage formation is an important part of the process by which rivals compete with one another, and that many linkages form as a result of the coercive “power politics” strategies that rivals often employ in their dealings with one another. This argument has important implications for the effects of rivalry linkage as it helps to explain why linkage formation encourages the expansion and escalation of rivals' militarized disputes. As a result, these arguments help to fill in some of the gaps in the existing literature on the effects of rivalry linkage and yield novel hypotheses.

**Plan of the Dissertation**

In the following five chapters, I investigate the causes and consequences of rivalry linkage. I begin in Chapter II by reviewing the theoretical and empirical literature generated by the rivalry research program, with an eye towards showing how further work on the subject of rivalry linkages can contribute to rivalry research. I argue that while students of rivalry have made important contribution to conflict studies, by showing that many conflicts are related to one another over time (as part of enduring rivalries between the same pairs of states), they have neglected to address the other ways in which disputes may be related to one another—such as through shared issues or spatial relationships. These other kinds of relationships hold the key to revealing much about the sources of rivalry dynamics.
Chapters III, IV and V each present a part of my theory of the causes of and consequences of rivalry linkage. They can each be read as stand-alone pieces which develop and test hypotheses about causes of rivalry linkage, the effects of linkages on rivals' conflict behavior, and the effects de-linking on rivalry duration, respectively. Consequently, each of these chapters contains its own theoretical section and empirical analyses, as well as a review of the relevant literature.

In Chapter III, I explore the causes of rivalry linkage. I begin by discussing how the existing literature has largely ignored the question of how linkages form. This is because most studies treat rivalry linkages as external environment conditions which are assumed to be largely exogenous to rivals' interactions. I argue that approach is problematic because most linkages tend to form after rivalries are underway, and in most cases, reflect conscious decisions by policymakers to engage in behaviors (such as dispute-joining) which will connect their rivalries to other conflicts. To address this problem, I introduce a new explanation for linkage formation. Drawing on steps-to-war theory, I argue that many linkages emerge as a byproduct of the coercive, “power politics” practices that rivals often employ in their efforts to compete against one another. In some cases, these linkages are created deliberately, while in others, they emerge inadvertently as a result of prolonged periods of security competition. These arguments yield four hypotheses, which are then tested in two sets of empirical analyses. In the first set of analyses, I examine alliance formation as the dependent variable, while the second set of analyses examines the expansion of militarized disputes. The results lend support to the argument, as I find that states involved in rivalry are more likely to form alliances and that militarized disputes are more likely to become complex when they involve rival
Chapter IV takes up the question of how linkages affect rivals' conflict once they are in place. While many studies suggest that linkages should tend to exacerbate rivalry conflict, these arguments have not been adequately tested, and the mechanisms linking linkages to higher rates of conflict remain unclear. In this chapter, I provide a more fully-developed explanation of the effects of rivalry linkages which stresses the tendency for rivalry linkages to produce complex militarized disputes, that other studies have shown to be more likely to escalate to war. However, I also argue that linkages may contribute to the risk of dispute escalation in the absence of dispute expansion. I test these claims using two sets of bivariate probit models. The results provide support for my argument, as they show that the accumulation of linkages increases both the risk of dispute onset (in first stage of the models), and the risk that disputes will become complex or escalate to war (in the second stage of the models).

In Chapter V, I examine the effects of de-linking on rivalry duration. Here, I draw on the arguments developed in the previous two chapters to hypothesize that the severing of linkages should shorten rivalry. The results again provide support for arguments about the causes and consequences of rivalry linkage. The results of survival hazard models reveal that the accumulation of larger numbers of rivalry linkages significantly lengthens rivalry duration, while de-linking substantially increases the risk of rivalry termination.

When considered together, these chapters provide an account of the process by which rivalry linkages form, and of the effects that these linkages have on rivals’ behavior once they are in place. It therefore sheds light on a crucial, but neglected, aspect of rivalry—that it affects not only the two states involved the rivalry relationship, but also
third parties as well. In Chapter VI, I conclude with a review of the contributions made
by this dissertation to our understanding of rivalry, and to international conflict more
broadly. I also discuss the ways in which the findings of this study could further
developed in future research, and consider the implications of this research for
policymakers seeking ways to better manage and mitigate rivalry conflict.
CHAPTER II
THE RIVALRY RESEARCH PROGRAM

Introduction

It is only within the past 20 years or so that rivalries have become the subject of much explicit theoretical or empirical attention. Prior to this period, rivalry was just one of many terms used casually by scholars and diplomatic historians to describe relations of enmity between states. There was no common understanding of precisely what rivalries were, nor was there any body of theory that endeavored to explain why they formed or how long they endured. Most early empirical work on rivalries was interested in identifying them primarily because of their potential value as a case-selection device for testing other theories about international conflict. For example, Wayman (1982, 1983) who provides what is arguably the first attempt to identify international rivalries, is interested in isolating pairs of states that perceive each other as threats in order to test some of the implications of power transition theory. Beyond specifying some conditions under which states might be considered rivals, he offers little discussion of what rivalries are or how involvement in a rivalry might influence states' behavior. In a similar fashion, other studies have employed various operational definitions rivalry to test hypotheses related to arms races (Diehl 1985), deterrence (Huth and Russett 1993) and conflict mediation (Grieg 2001). Thus, as Goertz and Diehl (in Midlarsky 2000, 225) observe, the concept of rivalry is somewhat unusual in that a number of operational definitions of rivalry were established before it become a topic of much theoretical interest.
However, this early research produced important findings that helped to spark interest in international rivalries as a subject of study in their own right. Perhaps the most significant of these is the observation that, despite representing a tiny fraction of all possible dyads, rivalries account for very large proportion\textsuperscript{4} of militarized disputes and wars. The desire to explain this finding has motivated much of the work in the rivalry research program. In this effort, the rivalry literature has largely focused on two main tasks. First, researchers have endeavored to identify ongoing international rivalries and elucidate the conditions that make these dyads different from others in which conflict is less frequent. Second, the tendency for longstanding rivalries to experience recurrent conflicts has led many researchers to postulate that these disputes may be related to one another over time. Or in other words, that the high levels of hostility and conflict observed between rivals in the present is a product of their history of confrontations in the past. A large body of research has sought to test this proposition and model the dynamics by which patterns of conflict develop and change within rivalries over time. In doing so, this work has provided a new methodological and theoretical perspective on the causes of war, which is sometimes described as a distinct “rivalry approach to war and peace” (Goertz and Diehl in Midlarsky 2000).

In this chapter, I review the progress that has been made by the rivalry research program in regards to both of these projects. I argue that while rivalry researchers have made significant advances in regards to how they conceptualize rivalries and model their dynamics, scholarly understanding of rivalry is limited by the tendency of most studies to

\textsuperscript{4}Just how much conflict is associated with rivalry depends on how rivalries are operationalized. For example, according Diehl and Goertz’s (2000) list of enduring rivalries, rivals have accounted for roughly half all wars since 1816. If one uses Thompson’s (2001) list of strategic rivalries, this figure increases to 77%.
ignore the impact of factors and events which occur outside of the rivalry dyad. This approach obscures many of the external influences on rivals' behavior and places an unnecessary constraint on the scope of rivalry research.

Identifying and Conceptualizing Rivalry

Identifying Rivalry

The term rivalry has typically been employed by international relations scholars to describe some sort of long-term relationship of enmity between states. Early work often used the term rivalry loosely, alongside other terms like “international enemies” (Finlay, Holsti and Fagan 1967), and rarely specified precise conditions that could be used to distinguish rivalries from other dyads. Instead, these studies relied on historical convention and scholarly norms to identify rivalries. Most of this work took the form of case studies of individual rivalries, which were usually conducted with the goal of testing some other theory within the context of the rivalry relationship. These studies were generally limited to the analysis of great power rivalries (especially the US-Soviet rivalry) and other dyads whose relationships were covered extensively by historians.

However, the opportunities available to rivalry researchers expanded dramatically with the introduction of the Militarized Interstate Dispute data set by Gochman and Maoz (1984). They examined the behavior of all states between 1816 and 1976 (subsequently updated to 2001) in order to identify every instance in which one government threatened, displayed or used military force in its dealings with another. Whenever one of these instances occurred, the relevant dyad was said to have experienced a militarized interstate dispute, or MID. The MID data were quickly seen as valuable by rivalry researchers
because they provided a source of information about dyads’ conflict history. Rather than relying on historical convention, researchers could now use the repeated occurrence of MIDs to identify which dyads had developed protracted, hostile relationships. In addition, since the MID data included all dyads, scholars could also hope to identify the complete population of rivalries. This opened up the possibility of investigating whether there were certain characteristics which were common to all rivalries and that distinguished them from non-rivalries. These possibilities inspired the first efforts to develop operational definitions of rivalry.

Most of these initial definitions used the MID data to identify dyads as rivalries if they experienced a certain number of MIDs within a given period of time. This method, which is often described as the dispute density or dispute threshold approach, is based on the assumption that militarized disputes have a long-term effect on dyadic relations that gradually dissipates over time (Goertz and Diehl 1993). When states experience a MID, it is expected that their relations will generally become more hostile, but that eventually, the salience of the dispute will fade and relations will return to normal. However, if states experience a series of disputes then relations are likely to stay hostile for an extended period of time. Thus, recurrent MIDs can be seen as evidence of an enduring, hostile relationship. For the purposes of operationalization, this relationship is usually treated as beginning during the first dispute in the series and as ending when the effects of the last dispute have dissipated. For example, Wayman (1982) assumes that disputes have a 10 year effect on relations, and identifies rivalries as those dyads which experience two or more disputes within this 10 year period. He then assumes that rivalries end once 10 years pass without a new dispute. Subsequent studies have generally followed Wayman's
approach, but have raised the number of disputes necessary (in most cases, to between 5 and 7) for a series to considered evidence of a rivalry (Goertz and Diehl in Midlarsky 2000). Others have also added new criteria, such as the requirement that disputes be related to the same general issues (Klein, Goertz and Diehl 2006), or that rivalries persist for some minimum period of time, usually 20 to 25 years, (Diehl and Goertz 2000). Some studies have also used dispute counts in slightly different ways, such as Gochman and Maoz (1984), who identify dyads as rivalries if they engage in a disproportionate share of the total number of MIDs that occur in the international system.

Perhaps the single most widely used dispute density measure is the one developed by Diehl and Goertz (2000). They consider dyads to be in a state of enduring rivalry if they have experienced six or more MIDs over a period lasting at least 20 years, while dyads which have less than three disputes are said to have experienced isolated conflicts. Their measure is unique in that it also includes an intermediate category—proto-rivalry—which records dyads which have more than three disputes but lack the number of requisite disputes or duration to be considered enduring rivalries. This approach reflects Diehl and Goertz's contention that rivalry is best seen as a continuous concept, with rivalries exhibiting considerable variation in terms of their intensity or duration (2000, 22). Proto-rivalries have been used by empirical studies as a control group (Cioff-Revilla in Diehl 1998), or to examine questions related to rivalry development (Goertz, Jones and Diehl 2006). The proto-rivalry category also helps to address an important problem that arises from the use of dispute density measures. Since these measures can only identify rivalries ex post (after they have experienced the requisite number of disputes), ongoing rivalries cannot be identified by researchers when they are still in the early phases of the
relationship. This is troubling because many of the most important policy implications of rivalry research relate to conflict management, and to the possibility of identifying those dyads that are at significant risk of experiencing wars and crises. If one cannot accurately identify rivalries while they are still “young” then the possibilities for successful conflict management are likely to be significantly diminished. By classifying some dyads as proto-rivals, Goertz and Diehl make it possible to identify these young rivalries while still maintaining a clear distinction between isolated conflicts and enduring rivalries.

However, it should be noted that the most recent version of the data set has moved away from this tripartite framework, and has reclassified proto rivalries as enduring rivalries (Klein, Goertz and Diehl 2006). This approach still permits researchers to include shorter or younger rivalries in analyses, but attempts to make a clearer distinction between rivalry relationships and isolated conflict. Although Goertz and Diehl still argue rivalry is best seen as a continuous concept, their current position is that shorter or younger rivalries should not be treated as being conceptually different from enduring rivalries. Instead, they suggest that rivalry should be seen as a single concept with individual rivalries exhibiting varying degrees of duration and intensity.

**Conceptualizing Rivalry**

While studies employing the dispute density approach produced a large number of competing operational definitions and lists of rivalries (see Diehl and Goertz 2000 for a review), they have nonetheless produced quite similar findings in regards to the proclivity of rivals to engage in militarized conflict. Regardless of the measure employed, these findings reveal a striking pattern in which the small number of dyads identified by
scholars as rivalries account for a large proportion of the conflict that occurs in the international system. For example, Gochman and Maoz (1984) find that 70% of MIDs were initiated by just 30 highly disputatious states, and that almost all of these states were involved in enduring rivalries. Similarly, Diehl and Goertz (2000) find that approximately 75% of MIDs and 80% of wars have occurred between states involved in either proto or enduring rivalry. They calculate that, on average, the probability that a rivalry will experience a war over the course of its lifetime is 0.59 for enduring rivalries and 0.32 for proto rivalries.

Coinciding with Bremer’s (1992) well-known work on “dangerous dyads” and the shift towards dyadic analysis more generally, these findings have inspired scholars to identify the conditions that make rivalries distinct from other dyads. This literature has produced a set of criteria that are frequently used in conceptual definitions of rivalry. Although not all studies emphasize the same conditions, three types of characteristics—related to the duration of the relationship, the presence of militarized competition, and expectations of future conflict—feature in nearly all formal definitions of rivalry. In addition to these three criteria, many studies also suggest that definitions of rivalry need to consider the nature of issues under contention and the perceptions of decision-makers. Each of these conditions will now be discussed in turn.

Virtually all attempts to conceptualize rivalry emphasize their duration in some way or another. Rivalries are often conceptualized as long-term contests between states over some particular set of issues (Bennett 1998). While there is some debate over just

---

It should be noted that while Gochman and Maoz use the term “enduring rivalry” they identify rivalries in different way than Goertz and Diehl (2000). They base their measure on the share of total disputes associated with the dyad, rather than on the number of disputes which occurred within a given period of time.
how long these kinds of hostile relationships need to last in order to be considered rivalries, most studies agree that rivalries need to endure long enough for states to significantly adjust their behavior and implement long-term competitive strategies—such as the pursuit of alliances or arms buildups (Diehl and Goertz 2000). Thus one of the things that makes rivalry distinct from other conflictual international relationships, such as those associated with isolated disputes or wars, is that they endure for an extended period of time and entail significant, non-transitory changes in policy. Rivals orient themselves towards protracted conflict with one another and “lock-in” new policies and institutions devoted to security competition (Goertz Jones and Diehl 2006). For example, after the First Kashmir War, both India and Pakistan established a network of permanent military bases and garrisons along their borders (Ganguly 2001). India also created new army divisions with the equipment and training necessary to fight in the cold, mountainous regions around Kashmir. These policies took several years to implement, but once in place, they helped to facilitate a strategy of ongoing security and lock-in an enduring rivalry.

Rivalries are also generally distinguished from other types of competitive international relationships, such as economic competition over markets, by the fact that the relationship is militarized (Diehl and Goertz 2000). This means that competition regularly involves the threat or use of military force. States involved in rivalry are expected to engage in coercive diplomacy that entails some real risk of military confrontations and war (Vasquez 1996). Consequently, rivals are likely to perceive each other as the source of significant military threats, and perceive events that arise within the rivalry relationship in terms of their implications for national security. Thus, rivalries can
be distinguished by the fact that their participants tend to see military force as a valuable tool for managing the relationship and frequently use it in an attempt to secure their objectives.

Finally, most studies assume that participation in rivalries entails some sort of expectation on the part of decision makers that future conflict is likely (Goertz and Diehl in Midlarsky 2000). When rivals face off against one another, these interactions take place within the context of a broader history of protracted, militarized competition. Rivals are likely to have used force against one another in the past, and to have experienced recurrent threats and crises. Over time, these experiences are believed to create expectations in the minds of decision makers that this pattern of conflict will continue in future interactions. As a consequence, decision makers are expected to be less willing to trust or cooperate with their rivals than other states (Hensel 1998). They are also expected to take steps to prepare militarily for future MIDs and wars. Since conflict with rivals is always on the horizon, decision makers are likely to feel pressured to engage in arms buildups and pursue alliances with third parties. They may also be tempted to launch preemptive attacks if they feel that their rival is gaining the upper hand. Tragically, since these efforts are frequently reciprocated by the rival, they often serve to sustain the rivalry and can result in escalatory “conflict spirals” that lead to war (Senese and Vasquez 2008).

Together these three elements—duration, militarization and expectations of future conflict—comprise what might be considered as a minimal, behavioralist conception of rivalry. According to this view, “all that matters” when conceptualizing rivalry “is that states use the military tools of foreign policy in the conduct of the rivalry and expect to
do so again in the future” (Goertz and Diehl in Midlarsky 2000, 226). Rivalries are therefore defined primarily in terms of the ways in which pairs of states attempt to deal with contentious issues, rather than in terms of the characteristics of disputants or of the issues themselves. States are considered to be rivals as long as they behave as such, by engaging in security competition and experiencing recurrent militarized confrontations. Dispute density measures are well suited to identifying this conception of rivalry. They provide a means of capturing the series of disputes that comprise the life of the rivalry, and of separating them from the “white noise” of more isolated conflicts. However, despite their popularity, the dispute density approach and the broader behavioralist conception of rivalry have been strongly criticized in recent years. Most of this criticism has been focused on two main points.

First, many scholars object to the decision by proponents of the behavioralist approach to ignore the issues which underlie rivalries. They argue that this decision obscures an important dimension of the rivalry concept and results in less valid measures of rivalry. In regards to the former problem, a number of scholars have suggested that issues play a pivotal role in determining the ways which rivals behave towards one another, and are thus an important source of influence on rivalry dynamics and the process by which rivalries escalate to war. For example, Vasquez (1996) argues wars are most likely to occur in rivalries which are dominated by disputes over territorial issues. He suggests that the use of force is likely to be especially attractive as a means of dealing with territorial issues, because states can use their militaries to physically occupy disputed territories (armies are, after all, in the business of taking and holding territory). Territorial issues also tend to be highly salient with domestic audiences, making
concessions more politically costly. Consequently, states involved in rivalries over territorial issues are expected to be more likely to rely on coercive strategies and engage in behavior that increases the risk of war. Territorial disputes have also been shown to increase the risk of rivalry onset (Vasquez and Leskiw 2001) and to produce rivalries that entail higher levels of conflict (Vasquez 1998). Most recently, Colaresi, Rasler and Thompson (2007) have expanded this framework to incorporate positional issues—disputes between states over their relative status or position in international hierarchies. They find that rivalries over positional and territorial issues exhibit different patterns of behavior, with the former being less likely to start their own dyadic wars, but more likely to join ongoing wars that began in other dyads. These findings suggest that operational and conceptual definitions that ignore the nature of underlying contentious issues may be missing an important element of the rivalry relationship and a valuable source of information about the causes of recurrent conflict.

As for concerns about measurement validity, Goertz and Diehl (in Midlarsky 2000, 227) point out that many extant operational definitions of rivalry draw connections between disputes that might be better seen as being unrelated. For example, most dispute density measures treat the series of six disputes which occurred between Britain and Brazil in the middle of the 19th century as indicative of a single ongoing rivalry. Yet these disputes were over very different issues, with some being related to the slave trade and others to competing territorial claims. One might therefore argue that these disputes are better seen as part of several distinct conflicts rather than a single enduring rivalry. For this reason, Diehl and Goertz's (2000) own dispute-density measure includes only those disputes that are linked by a common issue. Bennett (1998) makes a similar point in
regards to measures of rivalry termination. While most operationalizations consider rivalries to have ended when a certain period of time passes without a new dispute, this approach ignores the question of when decision-makers themselves believe that the rivalry is over. This is problematic because some rivalries may experience extended periods of time without the occurrence of MIDs, even though both sides still consider themselves to be actively engaged in security competition. For instance, although no MIDs occurred in the Anglo-German rivalry between 1899 and 1911, this was a period of considerable diplomatic tensions and an ongoing naval arms race that would ultimately contribute to the onset of World War I (Valeriano 2008). Some measures, such as Wayman’s (1982) would have considered the rivalry to have ended in 1909. Consequently, Bennett (1998) provides an alternative measure of rivalry termination which requires both the absence of new MIDs and evidence, in the form of public statements or formal agreements, which shows that the underlying contentious issues have been resolved. Rivalries are then considered to have ended at the moment in which the contentious issues associated with the rivalry were actually settled.

Skepticism concerning the connections between recurrent disputes has also helped to motivate Gartzke and Simon's (1999) so called “hot hand” critique of the rivalry research program. They challenge the assumption made by rivalry researchers that recurrent disputes are related to one another over time, and posit instead that these patterns might simply result from chance. Using a poisson model, they estimate the probability of observing a certain number of disputes within a single dyad, given the assumption that disputes occur independently from one another. They find that it is not unlikely that a dyad could experience enough disputes through chance to be classified as
a rivalry even if these disputes were not related. Thus, it is possible that the strings of recurrent disputes identified researchers as rivalries may be little more than “hot hands”, series of unrelated random events which are fallaciously treated by human observers as evidence of patterns or relationships. While Gartzke and Simon do not go as far as say that these findings indicate that rivalries do not really exist, they do suggest that researchers need to do more to demonstrate the temporal processes associated with the rivalry concept, and pay greater attention to other plausible explanations for dispute recurrence.

Both of these tasks are taken up by Colaresi and Thompson (2002), who directly test the claim that past conflicts have an effect on future interactions. They find that dyads which experienced a diplomatic crisis were much more likely to experience additional crises in the future, and that these crises were more likely to result in the use of force. Furthermore, all the dyads which experienced more than two crises had been correctly identified by other studies as rivalries. These findings suggest that the recurrent conflicts which occur in some dyads are in fact related to one another, and that extant measures of rivalry do a fairly good job of capturing these relationships. Of course, as Colaresi and Thompson (2002, 1195) observe, the actual process by which past disputes influence future disputes is not yet fully understood.

A second major challenge to the behavioralist approach concerns its emphasis on militarization. While most scholars consider militarization to be an important characteristic of rivalry, many are wary of relying on MIDs as the sole indicator of when a rivalry relationship is present. This approach ignores other behavior associated with militarized competition, such as arms races and alliance seeking, as well as the
psychological or perceptual aspects of rivalry, such as expectations of future conflict or the perception of threat. It also creates several potential problems for empirical analyses. One issue is that the behavioralist approach classifies some disputatious dyads as rivals even though one state may be much more powerful than the other. In these cases, recurrent MIDs may reflect efforts by the stronger state to coerce the weaker state by threatening to use force, rather than an ongoing rivalry in which both states see each other as peer competitors (Goertz and Diehl in Midlarsky 2000). These kinds of dyads may be disputatious enough to be identified as a rivalries by most dispute density measures, but they seem to have relationships that are conceptually different from those associated with rivalries (Thompson 1995).

Another problem is that the emphasis placed on MIDs may result in an arbitrary and inaccurate measure of when rivalries begin and end. While most studies treat the onset of the first MID as the moment in which a rivalry begins, it is often unclear exactly when the rivalry relationship became established. In some cases, rivalries appear to have developed gradually after several disputes occurred. In others, states seemed to have believed themselves to be rivals before they experienced their first militarized confrontation. For this reason, Thompson (2001) suggests that that the timing and extent of militarization should be left open as an empirical question. He argues that the mutual perceptions of threat and the desire to engage in competition are the best indicators of rivalry, and that while most rivalries probably experience MIDs early in the life the rivalry, others may not. By understanding what causes rivalries to become militarized, he suggests that it may be possible to gain new insights into how conflict within rivalries can be prevented or managed.
These issues have also led to the development of a competing approach to conceptualizing and identifying rivalries. Using historical sources, Thompson (2001, 560) identifies “strategic rivalries” as those dyads that see each other “as (a) competitors, (b) the source of actual or latent threats that have some potential for becoming militarized, and (c) as enemies”. Thus, Thompson's notion of strategic rivalry relies on policymakers' perceptions as described in foreign policy documents and secondary sources rather than the occurrence of MIDs. In this regard, Thompson’s procedure offers a means of directly capturing the perceptual aspects of the rivalry concept.

However, Thompson's method has generally not supplanted dispute-density approach as the preferred measure of rivalry among empirical studies. This is partly because Thompson has not released the exact procedures for how his list of rivalries was coded, making it difficult to replicate his data or examine questionable cases. Furthermore, there are important differences\(^6\) between the list of strategic rivalries identified by Thompson and those generated by dispute-density approaches (for a detailed discussion of these differences see Colaresi, Rasler and Thompson 2007, 36-71). Thompson's list includes more rivalries between minor powers and fewer rivalries between mixed dyads involving both major and powers. This may reflect some of the differences between Thompson's historical sources and those used for the MID data, but it is also indicative of deeper disagreements about the nature of rivalry. Behavioralist conceptions of rivalry tend to emphasize protracted, militarized competition as the hallmark of rivalry, but for Thompson, the salience of the issues and disputes for

\(^6\)Thompson’s (2001) list correlates poorly (level of agreement = 0.203) with that produced by Diehl and Goertz (2000). However, levels of agreement are also very low for different rivalry lists producing by competing dispute density measures (Colaresi, Rasler and Thompson 2007). This is surprising given that one of the supposed benefits of the dispute-density approach is its objectivity.
policymakers is generally more important (Diehl and Goertz 2000, 147). Thus, Thompson is willing to exclude some longstanding, militarized rivalries if they are not considered sufficiently important by policymakers, and to include relatively short or unmilitarized competitions that were highly salient. Thompson's view reflects his position, developed in earlier work on “principal rivalries” (1995), that the concept of rivalry ought to apply only to the relationship between states and their primary competitors. Some scholars do not share this view, and prefer to treat rivalry as a relationship that can form between any pair of states so long as they are able to sustain militarized competition.

There is also disagreement concerning the starting and ending points of many rivalries. Thompson identifies the beginning of rivalry as the moment when both states perceive each other threats, enemies and competitors, and considers rivalries to end whenever any of these conditions is no longer met for either side. This approach is advantageous in that, at least in principle, it captures the precise moment when decision makers themselves believe that a rivalry has begun or ended. However, it does tend to identify the onset of rivalries very early, making it difficult to employ in empirical analyses of the causes of rivalry. For example, approximately, 8% of strategic rivalries begin during or before the year 1816, which is the earliest point for which data is available for many variables related to international conflict. Many others begin during the first year that one participant is a member of the international system, creating a similar problem. In addition, Rasler and Thompson (2006) find that among states with territorial disputes, most strategic rivalries begin well before MIDs occur. This finding appears to challenge many theoretical arguments within the rivalry research program,
which generally tend to argue either that rivalries evolve gradually out of recurrent disputes (Hensel 1998) or that the onset of disputes and rivalry should begin at roughly the same time (Diehl and Goertz 2000). Consequently, there remains considerable debate over which approach best records the development of international rivalries.

However, as a practical matter, it has become increasingly common for studies in the rivalry literature to include both measures of rivalry in empirical analyses. The use of both measures reflects a growing agreement among rivalry researchers that protracted militarized competition, contentious issues, and mutual perceptions of threat are all important elements of the rivalry concept. While no existing measure may capture all of these dimensions perfectly, the prevailing operational pluralism can be seen as a source of strength for rivalry research, as it offers opportunities to test the robustness of observed relationships and explore how findings may change when different measures of rivalry are employed.

**Theoretical Foundations and Empirical Findings**

*The Contributions of Rivalry Research*

The study of international rivalries marks a significant shift in the way that scholars examine interstate conflict (Diehl and Goertz 2000). Whereas most studies in the conflict literature have been focused on explaining the onset of war, rivalry research takes a broader perspective and examines the entire rivalry relationship. Wars may occur within the context of this relationship, but rivalry researchers are also interested in other forms of conflict, in disputes which fall short of war, and in explaining the onset and termination of the rivalry relationship itself. Thus, the study of rivalry directs scholarly
attention towards a broader range of dependent variables, and towards a more long-term view of conflict processes. In addition, the rivalry approach also requires researchers to pay greater attention to conflict management. Since rivalry researchers consider peace to be the absence of hostile relations, rather than simply any period of “not war”, they often take an interest in the interactions which occur between rivals after wars have come to an end (Vasquez and Leskiw 2001).

In terms of methodology, rivalry research is distinguished from much of the other work on international conflict by the fact that it typically begins with the assumption that disputes between rivals are related to one another across time. Instead of treating disputes or wars as independent observations, rivalry research explicitly incorporates longitudinal relationships into theory and research design. For instance, Hensel's (1998) work treats the disputes that occur between rivals as part of an evolving rivalry relationship, and relies on factors related to conflict history as an important explanation for dispute behavior. In contrast, other studies in the conflict literature typically employ a cross-sectional research design which seeks to explain the occurrence of conflict in terms of contemporaneous conditions. Even when theories do specify longer term processes, they are often tested in a fashion which ignores the impact of conflict history and which treats temporal relationships largely as a form of bias that must be controlled for statistically (Diehl and Goertz 2000). However, as Vasquez and Leskiw (2001, 298) point out, the decision to ignore the impact of conflict history is tantamount to making the assumption that the underlying relationships between states do not significantly influence conflict behavior. Instead of relying on this assumption, rivalry research seeks to uncover and model the processes by which past conflicts influence future interactions.
Furthermore, while most studies of conflict have tended to use the concept of rivalry merely as a means of selecting cases, the rivalry literature suggests that it deserves a place within the theoretical framework itself. Rather than simply being a static background condition, the rivalry literature argues that rivalry should be seen as an evolving relationship which may change over time or interact with other conflict processes. It suggests that students of international conflict should incorporate rivalry relationships into their analyses as independent variables, and be cognizant of where the conflict processes fit into broader relationships. Recent work in steps-to-war theory provides an excellent example of this kind of research (Senese and Vasquez 2008). Here, scholars have identified the development of rivalry as an important step to war, and as a variable which interacts with other factors, like territorial disputes or arms races, to make war more likely. Valeriano (2008) has also applied the steps-to-war approach to the study of the causes of rivalry, suggesting that these same processes may also play an important role in explaining how rivalries develop.

As a result, rivalry research can be seen as offering a distinct approach to the study of war and peace. Rather than simply asking “what causes war?”, students of rivalry investigate the broader historical relationships in which most wars occur. This approach points to new independent and dependent variables, and provides a new spin on many old hypotheses about the causes of international conflict. It has opened up entirely new areas of inquiry and provided researchers with the opportunity to examine old theories in novel ways. However, despite these contributions, it is only relatively recently that empirical studies have begun to examine rivalries as their primary focus. This work has largely been directed towards uncovering the factors which influence the onset,
dynamics and duration of international rivalries.

**Modeling Rivalry Development**

While there is no general theory of rivalry, most research has been guided by one of two models of rivalry development. The first, known as the evolutionary model, suggests that rivalries tend to develop gradually out of repeated confrontations between the same pair of states. Studies employing this approach typically begin with the assumption that states tend to respond in kind to coercive or cooperative behavior. For example, Hensel (1998) suggests that the use or threat of force tends to produce a “feedback effect” on perceptions of threat and hostility in future interactions. When states use force or employ other coercive tactics against one another during disputes, it is expected that this will increase likelihood that more disputes will occur and that these disputes will be more severe. Over time, these behaviors can become mutually reinforcing, leading to a pattern of recurrent disputes that eventually develops into an enduring rivalry. In regards to rivalry dynamics, evolutionary models generally posit that conflict between rivals should exhibit an escalatory pattern in which disputes grow more intense as the rivalry matures (Hensel 1996). Wars are expected to be more likely to occur later in the life in the rivalry as a result of the gradual buildup of hostility. However, some studies do suggest that rivals can halt or reverse this process of escalation by adopting more peaceful approaches to dispute resolution, or as a consequence of mediation by third parties (Hensel 1999, Grieg 2001). As for rivalry duration, the evolutionary model posits that disputes are likely to recur when they end in stalemates or entail higher levels of force (Stinnett and Diehl 2001, 720). Thus dispute severity and the absence of decisive
outcomes can be seen as factors which contribute to the duration of rivalry. Some studies also suggest that rivalries should become difficult to terminate as they grow older, and that mature rivalries are only likely to come to an end once one side becomes exhausted and is no longer able to continue the competition (Hensel 1996). Thus the greatest opportunities for conflict management are expected to occur early in the life of the rivalry.

Why are conflictual behaviors self-reinforcing? Many studies emphasize the tendency for the use of force to create new grievances by causing casualties or changing the distribution of territory between adversaries (Hensel 1999). Likewise, verbal threats and displays of force are believed to increase perceptions of threat and reduce domestic resistance to militarized responses. Thus, in Vasquez's (1993, 199) words, militarized disputes can serve to “create a constituency for hardliners” and thereby increase the likelihood that states will resort to the use of force in their future dealings with each other. Other scholars also suggest that patterns of recurrent conflict may also reflect an addiction process, in which states which lose territory or prestige in past confrontations initiate new conflicts in order to recoup their losses (Stinnett and Diehl 2001). Regardless of the precise process believed to be at work, studies utilizing the evolutionary model share a common emphasis on the idea that “disputes beget disputes”, and that the behavior of disputants plays a crucial role in determining whether or not a rivalry will develop.

In contrast, the punctuated equilibrium model of rivalry suggests that patterns of conflict within rivalries are relatively stable, and that most rivalries are caused by exogenous factors that are largely outside of the control of disputant states (Diehl and
Goertz 2000). According to this perspective, levels of conflict and cooperation between states tend to fluctuate randomly around some sort of equilibrium level. For some dyads, this equilibrium might be peaceful and cooperative. For others, it might entail high levels of conflict and significant risk of war. Where this equilibrium lies is believed to be largely determined by structural factors, such as those related to the contentious issues shared by the dyad, the characteristics of the individual states involved, or the structure the international system. Changes in this equilibrium are expected to be most likely to occur when exogenous shocks, like world wars or regime changes, disrupt the stability of the existing relationship. These shocks create brief windows of opportunity when major changes in international relations are possible. Thus, shocks are seen as providing a set of necessary, but not sufficient, conditions for significant international change (Goertz and Diehl 1995)

In this light, rivalries represent one particularly disputatious type of relationship, in which the equilibrium level of conflict and cooperation, known as the “basic rivalry level” (BRL), is characterized by frequent militarized confrontations (Diehl and Goertz 2000, 165). Most rivalries are believed to be caused, at least indirectly, by some sort of exogenous shock which initially transformed the relationship between the adversaries and locked them into rivalry. Although relations between rivals are likely to experience many short-term changes, the punctuated-equilibrium approach suggests that, over the long-term, rivalry dynamics should exhibit a stable or “flat” pattern with no secular trend in levels of hostility. Thus, the age of the rivalry is expected to have little bearing on the risk of war. Instead, scholars employing the punctuated-equilibrium approach focus on
identifying the BRL and the degree of volatility\(^7\) of the relations between rivals. Rivalries are more likely to experience war when the BRL is more hostile or when the volatility of rivals’ relations is greater. However, despite the general stability of rivalry relationships, the punctuated equilibrium model suggests that changes in the relations between rivals are likely to be rapid during the beginning and ending phases of the rivalry. During these periods, the relationship between rivals is likely to have been disrupted by some sort of shock or change in the underlying structural conditions, opening up opportunities for decision makers to make dramatic changes in policy. Exogenous shocks are therefore seen as a primary cause of both rivalry onset and termination.

What accounts for the stability of rivalry relationships? In early work, Goertz and Diehl (1993) relied on the assumption that rivalries where maintained by psychological processes, in which recurrent disputes served to lock-in mutual perceptions of enmity, and resulted in the creation of stable long-term identities for both adversaries. Thus, rivalries were believed to endure in part because rivals carried the psychological baggage of past conflicts with them into new disputes (Colaresi 2004, 556). More recently, Diehl and Goertz (2000, 134) have suggested that the stability of rivalries also reflects the internal nature of the foreign policy decision-making processes. Here, they make a clear connection between the application of punctuated equilibrium models in rivalry research to work which uses this approach in the study of domestic policy-making and public administration. In these fields, scholars like Kingdon (1984) and Tucker (1982) have argued that because of bureaucratic inertia, major policy changes are very difficult to

\(^7\)In this sense, the term volatility refers to the extent to which random variation in rivals’ relations diverges from the BRL. Volatility is high when relations frequently stray far from the BRL and low when relations stay close to the BRL.
achieve and are only likely to occur during fleeting moments when the interests of various actors align in favor of change. During other periods, policy changes are likely to be incremental if they occur at all. Thus, in the context of rivalry, major changes in either states’ foreign policy are unlikely except during the windows-of-opportunity created by external shocks. If a new rivalry happens to form during one of these windows, then the punctuated-equilibrium model suggests that there is relatively little that decision makers can do to bring it to an end until another window of opportunity forms.

Empirical studies have produced some support for both models. Consistent with the evolutionary model’s account of the causes of rivalry, a number of studies have found that disputes are more likely to recur when they entail higher levels of force or end in stalemates (Stinnett and Diehl 2001; Goertz, Jones and Diehl 2005; Hensel in Diehl 1998). Similarly, Valeriano (2008) observes that dyads are more likely to develop enduring rivalries when they attempt to settle their initial disputes the use of “power politics” strategies, such as coercive diplomacy, arms buildups and the pursuit of alliances. In addition, a number of studies have produced evidence to support the notion that interactions between pairs of states evolve over time as a result of learning processes. For example, Maoz and Mor (2002; 1996, 156), find that learning processes account for many of the changes that occur in patterns of interactions between rivals, but that they observe “exogenous changes”, like major shifts in the distribution of power, also play an important role.

Variables associated with the punctuated equilibrium model also fare well in analyses. Many of the structural conditions associated with the outbreak of war—such as contiguity, power parity, or the absence of joint democracy—have been found to increase
the risk that dyads will develop rivalries, and to be associated with rivalries that have a higher BRL (Maoz and Mor 1996, Vasquez 1993, Hensel et al 2000, Goertz and Diehl 2000). Likewise, disputes over territorial issues have been found to be more likely to develop into rivalries, and to produce rivalries that last longer and entail higher levels of conflict (Vasquez and Leskiw 2001; Vasquez 1998; Stinnett and Diehl 2001). Perhaps the strongest source of support for the structural approach comes from evidence concerning the role of external shocks. Goertz and Diehl (1995) find that almost 90% of enduring rivalries began within 10 years of at least one exogenous shock. These findings lend considerable weight to the punctuated equilibrium model’s explanation for rivalry onset.

In regards to rivalry dynamics, a prominent early study by Leng (1983) found that recurrent crises tended to produce an escalatory pattern that almost always resulted in war by the time of the third crisis. Likewise, several studies by Hensel (1996, 1998) find that militarized disputes tend to become more severe and more frequent as adversaries develop a longer history of conflict. However, Goertz and Diehl (2000) have also produced strong support for the punctuated equilibrium model. After examining changes in the severity levels of MIDs over the course of 63 enduring rivalries, they observed that 74.6% of rivalries exhibited a flat or stable BRL, while only 3.2% exhibit a pattern of increasing dispute severity. The remainder of cases were divided among rivalries with decreasing (7.9%), convex (4.8%), concave (7.9%) or wavy (1.6%) patterns. These conflicting findings have been reconciled to some extent by Colaresi (2002), who finds

---

8This was done in three different ways. First, a regression line was estimated for each rivalry by regressing the severity level of the disputes on number of the dispute in the rivalry sequence (first, second, third, etc.) Second, rivalries were also classified graphically using scatterplots of dispute intensity over time. Finally, Goertz and Diehl also compared the severity levels of the first and last three disputes were with each other and with the mean level for the rivalry as a whole.
that while most rivalries exhibit a sharp escalation in hostilities early in their life cycle, hostility levels typically fall after these initial increases, and then exhibit relative stability.

Attempts to test the evolutionary and punctuated-equilibrium models have largely produced mixed findings. Goertz, Jones and Diehl (2005) observe that rivalries are more likely to continue when the most recent dispute involved the use of force or ended in a stalemate, but these findings are only significant during the early phases of the rivalry relationship. Along with Colaresi’s (2002) findings, these results seem to suggest that dispute behavior has little effect on rivalry duration once the rivalry become well-established. Likewise, the finding that the hazard rate for rivalries increases as they grow older casts doubt on the claim that older rivalries are more difficult to terminate (Bennett 1998, Cioff-Revilla in Diehl 1998). As for the punctuated equilibrium model, Goertz and Diehl (1995) observe that most rivalry terminations do follow shortly after some sort of political shock. However, efforts to test this relationship statistically have generally produced mixed results, with some types of shocks having a significant impact, but not others (Bennett 1998, Goertz and Diehl 2000).

Thus, while empirical studies suggest that the evolutionary and punctuated equilibrium models each capture an important aspect of rivals’ behavior, neither approach has become dominant. Most analyses find that the onset, dynamics and duration of international rivalries are best explained by models which combine variables from both approaches (Stinnett and Diehl 2001, Bennett 1998). Unfortunately however, there is currently no theoretical framework for integrating the evolutionary and punctuated equilibrium models.
Both models have also faced significant criticism on theoretical grounds. The primary challenge for the evolutionary model concerns the initial decision by states to threaten or use force against one another, thereby initiating the first MID in the rivalry. Most studies employing evolutionary models simply take the occurrence of the first dispute as given\(^9\), and then focus on explaining how past uses of force influence subsequent interactions. Yet since the use of force rarely produces a decisive resolution to contentious issues (roughly 60% of MIDs end in stalemates) and may result in costly rivalries or wars, one might reasonably ask why it is that states see the use of force as a desirable means of resolving disagreements (Gochman and Maoz 1984). The answer to this question would seem likely to hold important insights into the processes behind the development of rivalry and be important for identifying potential rivals. It also raises the potential for omitted variable bias in empirical studies since factors which cause initial disputes to become militarized may be important determinants of behavior in future interactions (Colaresi and Thompson 2002).

For the punctuated equilibrium model, the principal charges have been that it is underspecified and that its expectations are difficult to falsify. While it identifies exogenous shocks as necessary condition for rivalry onset and termination, it does not make any precise claims about the intensity, duration or even the direction of the effects that particular kinds of shocks are expected to produce. This is particularly problematic because the same shocks can produce effects that vary dramatically across different dyads. For example, World War II was a systemic shock that created some new rivalries,

\(^9\)Most studies justify this decision by asserting that other theories from the conflict literature can be called upon to explain initial disputes. From the perspective of the evolutionary model, rivals do not begin to behave differently from other dyads until the rivalry is underway.
terminated some old rivalries, raised the BRL in some cases, lowered it in others, and in some dyads had no significant effect on relations. All of these outcomes are consistent with the punctuated equilibrium model. Furthermore, since shocks of some form or another occur fairly frequently, most major changes in dyadic relationships occur within a few years of several different shocks, making it difficult to determine which, if any, were most responsible.

In response to these issues, recent studies have increasingly begun to look to other sources for insights into the processes that influence rivalry dynamics. In this regard, perhaps the single most common area of inquiry has been the role that domestic political processes play in sustaining rivalries. While studies employing evolutionary or punctuated models often incorporate domestic political variables into their analyses, these factors have rarely been their primary concern. Here, researchers have had to look for guidance from other theories in the conflict literature. For example, Colaresi’s (2004, 2005) work draws on steps-to-war theory in order to argue that the recurrent conflict associated with rivalries strengthens the domestic political position of hawkish leaders. Consequently, the duration of rivalries can be explained in part by domestic incentives that leaders have to take hardline positions when dealing with rivals or to engage in threat inflation. Consistent with this argument, Colaresi has found that leaders which make un-reciprocated offers to cooperate with rivals are much more likely to lose office (2004), and that leaders are less likely to attempt to deescalate rivalries when public suspicion of rivals is high (2005). In addition, Colaresi has also suggested that the domestic process of “rivalry outbidding”, in which elites compete for popular support by taking more hardline positions in response to external rivals, may be responsible for many cases in which
rivalries escalate to war. Thus, he points to domestic political incentives as an important
source of influence on rivalry dynamics.

Others have also explored the impact of domestic politics from the perspective of
the literature on international bargaining. According to this view, rivalries are a product of
bargaining problems which prevent both state from arriving at a mutually acceptable
resolution to their contentious issues (Bennett 1998, Maoz and Mor 2002). Changes in
domestic political institutions are expected to create opportunities for states to bring
rivalries to an end because they can change the preferences of leaders or increase the
capacity of states to commit to agreements. For example, Bennett (1998) finds that
regime changes significantly shortened rivalry duration. Likewise, Prins and Daxecker
(2009) find that by establishing liberal institutions, both domestically and internationally,
rivals could mitigate some bargaining problems and increase the likelihood of rivalry
termination.

In sum, the rivalry research program has developed a fairly sophisticated
understanding of the processes by which rivalries develop and change over time. There is
a large body of consistent findings that suggest rivalry dynamics are influenced by a
variety of factors, such as disputants' behavior, structural conditions, political shocks and
domestic political processes. These findings have provided important insights into
processes which lead to international conflict and have offered a new perspective on the
causes of war and peace. However, there remains considerable disagreement about how
rivalries should be identified and about which models best capture rivalry dynamics.
Rivalry research has made a significant contribution to the study of international conflict. It has been able to do so, in large part, because it abandoned the assumption that disputes and wars were independent of one another and acknowledged the potential temporal relationships between them. Yet despite making this advance, the rivalry literature has been slow to address the possibility that disputes might be connected in other ways. For example, it is plausible that some disputes might also be linked through spatial relationships, such as those that form when conflicts that begin in one dyad expand geographically to involve dyads that include neighboring countries. In these cases, the militarized disputes in several different dyads would be connected both temporally and spatially. If researchers ignored the possibility of a spatial linkage between disputes then they would be likely to miss both relationships. Likewise, disputes may also be connected through other kinds of ties, such as those created by alliances or common enemies. States may join a dispute in another dyad to help defend an ally, or they may attack a rival that is temporarily distracted by a conflict with another enemy. These kinds of processes, described elsewhere as “conflict diffusion” (Siverson and Starr 1991), are largely ignored by existing studies of rivalry. Most research begins with the assumption that rivalries are purely dyadic relationships, and then examines the effects of independent variables related to conditions within the dyad or its participant states. While studies employing the punctuated equilibrium approach do examine the impact of events that occur outside of the rivalry, these analyses have generally been focused on the impact of broad systemic shocks like world wars or shifts in the global distribution of
power. Thus, students of rivalry still know very little about how rivalries are affected by their connections to other dyads.

However, it is not hard to find evidence that these kinds of ties have often had a significant impact on rivals’ behavior. For example, studies of minor power rivalries during the Cold War often refer to the role that military aid and other forms of support from the US and Soviet Union played in maintaining the rivalry (Colaresi 2005, Thompson 1998, Kinsella 1995). Conversely, no discussion of the US-Soviet rivalry would be complete without acknowledging the ways that the behavior of client regimes in places like Vietnam, Korea, Cuba and Afghanistan influenced relations between the two superpowers. Unfortunately, existing work in the rivalry research program largely ignores these kinds of connections. This might be understandable if the Cold War era were unique in regards to the tendency for different dyadic rivalries to form ties to one another, but the evidence suggest that these kinds of rivalry linkages are far from rare. In one of the few efforts to document linkages between rivalries, Diehl and Goertz (2000) observe that these ties are nearly universal. Since 1816, only one rivalry, between Nicaragua and Honduras, has developed without forming ties another ongoing rivalry at some point in its duration. Furthermore, some small groups of rivalries appear to be so tightly interconnected that they might be better thought of as singular rivalry “clusters” or “complexes” than as sets of distinct dyadic relationships. In these cases, shared borders, as well as overlapping networks of alliances and shared disputes make it difficult for states in any one dyad to manage their relations without also considering the others. For instance, few analysts would think of discussing ways to manage conflict in Israel’s rivalry with Egypt without also addressing its rivalries with its other Arab neighbors or
the underlying Palestinian issue.

Perhaps the most prominent evidence of the significance of rivalry linkages is provided by work on causes of multilateral wars. Several recent studies have identified the connections between rivals as crucial to explaining the process by which World War I spread from a seemingly minor conflict between Serbia and Austria to a great power war involving most of the states in Europe (Thompson 2003; Vasquez et al 2011). Similar arguments about the role of rivalry linkages have also been made in regards to the spread of participation in World War II (Vasquez in Diehl 1998) and the diffusion of conflict in the Middle East (Kinsella 1995). Consequently, an understanding of rivalry linkages would appear to be essential for scholars and policymakers seeking to manage patterns of conflict within rivalries.

Research into the causes and consequences of rivalry linkage has the potential to make at least three significant contributions to the literature on rivalry, and to the research on international conflict more broadly. First, it introduces a new set of independent variables which are likely to have important effects on rivals’ behavior. Thus, the study of rivalry linkages opens up a new area of inquiry and has the potential to improve the explanatory power of existing models. In addition, rivalry linkages may also condition the effects of other well-known influences on rivalry dynamics. For example, it seems plausible that rivalry linkages may serve to transmit some of the effects of domestic political shocks, like regime changes or civil wars, to other dyads, or that the presence of rivalry linkages might impair the effectiveness of states’ efforts to pursue conflict management.

Second, the study of linkage also points towards useful new ways of
conceptualizing or classifying rivalries. In this respect, Valeriano and Powers (2011) identify “complex rivalries” as groups of three states whose relationships are connected by common issues or shared disputes, and in which there is active threat of militarized conflict between all parties. One might go even farther, and identify entire clusters or systems of interconnected rivalries, and classify them in terms of their degree of interconnectedness or the number of dyads involved. This may open new avenues of research into whether the density of linkages or size of clusters affects conflict management. It holds the potential to help policymakers by offering a clearer picture of where individual rivalries fit into broader networks of relationships. Eventually, one may even be able to identify pivotal rivalries or contentious issues that can become the focus of conflict management efforts at the system level.

Finally, linkage research draws attention to possibility of studying rivalries at an entirely new level of analysis. Rather than treating rivalries as a collection of independent, disputatious dyads, one might use the linkage approach to analyze changes in the larger networks of interconnected rivalries. By tracking the ways that patterns of connections evolve over time, it may be possible to gain insights into broader processes which influence dynamics of multiple rivalries simultaneously. In addition, this approach permits the use of new methodological tools, like social network analysis, which have the potential to address novel research questions, or provide additional leverage when testing existing theories. In short, the study of rivalry linkages offers the potential to explore a new realm of international interactions that lies in between individual dyads and the broader international system.

However, before these efforts can begin, one needs a working theory of how
rivalry linkages form and shape rivalry dynamics at the dyadic level. To test such a theory, it is also necessary to have a system for identifying and classifying different types of rivalry linkages, so they can be measured. Both of these tasks are taken up in the next chapter.
CHAPTER III
THE CAUSES OF RIVALRY LINKAGE

Introduction

In 1974, Somali diplomats signed a treaty of friendship and cooperation with the Soviet Union. In return for granting the Soviets basing rights at the port of Berbera, Somalia became the target of a generous military and economic aid program. Over the course of the next three years, Somali military spending more than doubled, and the Somali military became one of the most well-equipped in the region, fielding 250 Soviet T-34 and T-50 tanks as well as 50 MiG fighters, and supported by more than 1,500 Soviet advisers and trainers (Colaresi 2005, 64). Somalia's ruler, Siad Barre, wasted no time in using these resources to facilitate a more assertive foreign policy. In the name of creating a “Greater Somaliland”, the Barre regime demanded territorial concessions from Ethiopia, Djibouti, and Kenya. These claims ultimately resulted in war in 1977, when Barre decided to invade Ethiopia and seize the disputed Ogaden region by force.

The invasion of the Ogaden was not well-received by the Soviet Union. Ethiopia had recently experienced a Marxist revolution, and was considered by many in the Soviet leadership to be an increasingly important ally in the region. After the Somalis refused to accept Soviet demands to withdraw, the Soviets decided to back Ethiopia in the conflict. They quickly terminated the flow of aid to Somalia and redirected many of these resources to Ethiopia. Bolstered by the sudden inflow of Soviet military equipment and the support of roughly 15,000 Cuban ground troops, Ethiopian forces succeeded in retaking the Ogaden the following year, and inflicted devastating losses on the Somali
military in the process. By one count, the Somali military lost as much as one third of its 35,000 combat troops and nearly half of its aircraft during the Ethiopian counter-offensive (Watson 1986). Yet, although Ethiopian forces succeeded in forcing the Somali army to retreat they were restrained from advancing into Somalia by pressure from the Soviets, who feared that an occupation of Somalia would increase tensions with the Americans, who had recently stepped in as Somalia’s new patron. The Americans then began to supply Somalia with large amounts of military equipment, including advanced anti-aircraft missiles designed specially to counter the types of Soviet fighters employed by the Ethiopians. In return for helping Barre to rebuild the Somali military, the Americans received access to the same naval facilities that Soviets had built in Berbera four years earlier. Thus, although the Ogaden War ended in a decisive Somali defeat, the Somalis were able to maintain their rivalry with the Ethiopians for another 11 years, until US and Soviet aid to both sides finally dried up after the end of the Cold War.

The connections that formed between Somalia and Ethiopia and their respective superpower patrons provide a striking example of the process of rivalry linkage, whereby two distinct dyad rivalries become linked to one another through ties such alliances, common borders or shared disputes. Although these two conflicts began over very different sets of issues, they nevertheless became quite closely linked, with the Somalis and Ethiopians coming to rely heavily on superpower support to maintain their rivalry, and the Americans and Soviets each devoting substantial resources to their clients, and at times risking the possibility that the contest might escalate into a direct confrontation between them. These ties also probably helped to encourage the Cubans to join the Ogaden War in 1978, thereby linking the Somali-Ethiopian conflict to the US-Cuban
rivalry, and placing it in the middle of an extensive network of rivalry linkages that developed during the Cold War.

Yet while students of rivalry have long been aware that these kinds of linkages exist, and that they are quite common\(^\text{10}\), we still know very little about them. There are only a handful of studies that have examined how the presence of linkages might influence rivalry dynamics, and these have generally produced inconsistent findings. For example, while Diehl and Goertz (2000) find that higher numbers of rivalry linkages are associated with greater volatility and higher levels of conflict, others find that linkages have no significant impact on rivalry development or on the frequency of militarized disputes (Stinnett and Diehl 2001). In addition, findings concerning the effects linkages often vary depending on which types of linkages are examined, making it difficult to determine exactly how the linkage process affects rivalry dynamics.

Moving forward, one of the biggest challenges for research on rivalry linkages is that scholars have yet to develop a theoretical understanding of the processes by which rivalry linkages form. Instead, most studies have tended to approach rivalry linkages from the perspective of punctuated equilibrium models, which treat linkages primarily as an attribute of the external environment in which rivalries develop, rather than as relationships which rival states may choose to form for themselves. Thus, studies typically assume that most linkages are in place before rivalries begin and they tend to treat linkage formation as something which is largely exogenous to the interactions between rival states.

\(^{10}\)Diehl and Goertz (2000) observe that only one rivalry (between Nicaragua and Honduras) has developed without becoming linked to another rivalry at some point in its duration, and the average rivalry develops 18 such connections.
This approach is problematic because, empirically, we know that most rivalry linkages form between six and seven years after rivalry onset\textsuperscript{11}, and that, in most cases, rivalry linkages continue to form throughout the life of the rivalry (Diehl and Goertz 2000, 255). Rather than being born into linkages, most rivalries appear to develop them gradually, after security competition has already been underway for some time. Furthermore, the tendency by previous studies to treat linkages as exogenous environmental conditions obscures the fact that the most common and direct forms of linkage, alliance ties and shared disputes, usually form as the result of conscious choices by decision-makers in at least one rival state. When linkages form, it is often because policymakers have decided to create them, and it seems likely that these actors have some understanding of the implications of their actions for the future of the rivalry relationship. For example, when Soviet leaders decided to adopt Somalia as a client state, they probably knew that this decision might lead to their involvement in future conflicts between Somalia and its rivals, and that their ties to Somalia might also come to have an impact on their own rivalry with the United States. Likewise, the United States’ decision to begin supporting Somalia during the final stages of the Ogaden War was probably part of an effort to weaken the Soviet Union by raising the costs of its involvement in the Horn of Africa. By developing a better understanding of why states choose to establish rivalry linkages in the first place, we may be able to gain new insights into the ways in which these external relationships may affect rivalry dynamics, and ultimately, how they might contribute to the outbreak of war.

\textsuperscript{11}The onset of rivalry is very difficult to measure, but the most common practice is to mark the beginning of the rivalry at the time of the first militarized dispute.
In this chapter, I develop and test a novel explanation for the formation of rivalry linkages. In doing so, I treat linkages as a dependent variable, and argue that, rather than being part of the external environment in which rivalries develop, most linkages are consciously created by rivals as part of the processes by which they compete with one another. In making these claims, I build on recent work which has sought to integrate Vasquez’s steps-to-war theory into the rivalry literature (Colaresi, Rasler and Thompson 2007, Valeriano 2008). My argument rests on the idea that the same “power politics” foreign policy practices which rivals often employ in their dealings with another also make it more likely that these conflicts will become connected to rivalries in other dyads. Thus, it is no surprise that rivalry linkages are widespread, as linkage formation is integral to the process by which rivals compete.

In the next section, I briefly review existing work on steps-to-war theory and international rivalry. The third section then introduces my arguments linking power politics practices to the formation of rivalry linkages. Here, I develop four hypotheses about the ways that involvement in enduring rivalries is likely to affect the formation of alliances and the expansion of disputes. In the fourth section, I describe the data and methods that I use to test these hypotheses, while the fifth section presents the results. Finally, I conclude with a discussion of the implications of my findings for research on rivalry, as well for policymakers seeking to manage conflict between rivals.

**Steps-to-War Theory**

The empirical literature on the causes of war is vast. Researchers have compiled large bodies of evidence linking the outbreak of war to a host of different factors, such as
the distribution of power (Bremer 1992), the presence of territorial disputes (Hensel 1996, 2001) or the occurrence of arms races (Richardson 1960). Yet, while much has been learned, the insights provided by this work have been limited by the fact that individual studies have tended to focus on the relationship between particular causal factors and the outbreak of war (usually subject to some set of control variables) without asking how these factors interact, or how their effects may change at different points in the processes that lead states into military conflict. Thus, while we know that a large number of purported causes are individually related to the risk of war, we still know relatively little about the complex processes by which these conflicts develop over time. Vasquez’s (1993) steps-to-war theory offers an attempt to address this problem and interpret how these various “pieces of the war puzzle” fit together. His work has become influential because it succeeds in integrating many of hypothesized causes of war into a single multivariate theory about how wars begin.

At the core of Vasquez’s argument is the idea that the factors associated with the onset of war can be divided into underlying and proximate causes (1996). Underlying causes are the fundamental factors that set off a sequence of events (the proximate causes) that leads to war. For Vasquez, the most common underlying cause of war is a dispute over territory. Territorial issues tend to be highly salient and are amenable to being settled through the use of force, because soldiers can be used to physically occupy disputed territory. Yet whether or not territorial disputes ultimately result in war depends on how they are handled by states. Vasquez suggests that when states lack effective means for settling their disagreements peacefully (through arbitration, for example), they are likely to resort to the use of more coercive, “power politics” tactics (which entail the
pursuit of military power and the threat or use of military force) in an attempt to resolve their disputes unilaterally (Senese and Vasquez 2008: 20). The use of these tactics increases the probability of war in future interactions because they tend to produce a security dilemma which heightens mutual perceptions of threat and hostility. Thus, for Vasquez, the foreign policy practices that states employ in their attempts to settle their territorial disputes serve as the most important proximate causes of war.

In addition, Vasquez suggests that the use of power politics practices also tends to strengthen the domestic political position of hawkish elites, making it more difficult for leaders to deescalate crises or negotiate with perceived national enemies once they have begun to employ these tactics. When leaders use force successfully, this often enhances the domestic political clout of hardliners who believe that force is the best foreign policy tool for dealing with the rival. Likewise, when adversaries respond in kind, it tends to reinforce perceptions of threat and encourages the formation of “cognitive rigidities”, or preconceived notions about how rivals are likely to behave (Colaresi, Rasler and Thompson 2007, 226). In the context of an enduring rivalry, these domestic political processes can create conditions which encourage elites to compete with one another to take more and more hawkish positions when dealing with rivals (Colaresi 2005), and in which elites who attempt to cooperate with rivals are more likely to lose office (Colaresi 2004). As a result, steps-to-war theory, and much of the recent research on rivalry suggests that the use of power politics practices tends to produce a syndrome of domestic and international interactions that work together to escalate tensions between rivals.

Why do states choose to employ power politics practices then, given that they increase hostility and the risk of war? One answer concerns the availability of
alternatives. When international norms and institutions fail to provide a context in which states can resolve their disputes peacefully, and when the disputed issues are highly salient, then states may feel that they have no choice but to resort to the use of force. In addition, steps-to-war theory also suggests that states’ foreign policy decisions are strongly influenced by diplomatic cultures or “folklores” (Senese and Vasquez 2008: 13). These folklores provide a body of shared wisdom which informs policymakers about when it is appropriate or necessary to use force, and which influences the way that they perceive the intentions of others. At least in the West, diplomatic culture has historically been dominated by realist thinking which portrays the acquisition of power as the primary means by which states can hope to increase their security, press their claims, or defend their positions in disputes over security issues. Realist folklore suggests to leaders that other states are unlikely to cooperate with them in matters of national security, and that the best response in these situations is for leaders to employ power politics tactics. In the short term, this means the use of coercive threats or military faits accomplis to compel an adversary into backing down. In the long term, it is also likely to entail the pursuit of alliances and military buildups in order to increase the state's military power.

In sum, Vasquez’s steps-to-war theory suggests that most wars result from the repeated use of power politics foreign policy practices. When states use these practices they tend to produce a security dilemma which, over time, is likely to escalate to war. This process is exacerbated by the rise of hawkish elites in domestic politics and motivated by a realist diplomatic culture which portrays military power as a diplomatic asset and coercion as a necessary foreign policy tool. Empirically, steps-to-war theory has received substantial support. A number of studies have found that when states with
contentious issues attempt to increase their power through arms build-ups or the pursuit of external alliances, this substantially increases the risk of future disputes and wars (Vasquez 1993, Vasquez 2009, Senese and Vasquez 2008). In addition, these factors also appear interact to interact with rivalry, so that their effects are greater when they occur in the context of a rivalry relationship (Colaresi, Rasler and Thompson 2007).

Steps-to-War Theory and Rivalry Research

Work on steps-to-war theory has made two important contributions to scholarly understanding of international rivalries. First, it has helped to shed light on the processes by which rivalries form and develop over time. For example, Valeriano (2008) has recast Vasquez’s original argument as a steps-to-rivalry theory, in which the use of power politics tactics serves as an important cause for the onset of rivalry. He finds that when disputants engage in power politics practices their disputes are more likely to recur and develop into rivalries. In a similar vein, Vasquez and Leskiw (2001) have shown that rivalries are more likely to develop over territorial disputes than over disagreements about other kinds of issues. Likewise, Colaresi (2005) has also demonstrated that the kinds of domestic and international interactions envisioned by steps-to-war play an important role in influencing levels of hostility between rivals. He finds that hostility levels tend to increase when domestic conditions (such as high levels of public suspicion of rivals and the presence of information asymmetries between the public and foreign policy elites) encourage domestic challengers to attempt to “outbid” the leader by taking hardline stance on rivalry-related issues.

Second, steps-to-war theory has also helped to provide new insights into the
processes by which rivalries escalate to war. For example, Vasquez (1996) has used steps-to-war theory to provide a parsimonious explanation for the occurrence of war among rivals. He argues that most wars between contiguous rivals occur as a result of the escalation of disputes over territory through the processes identified by steps-to-war theory. However, wars can also occur between non-contiguous rivals when these states join the wars that begin between contiguous rivals. Thus, he intriguingly suggests that the wars which non-contiguous rivals experience are primarily the result of the diffusion of conflicts across different dyadic rivalries. Rasler and Thompson (2000, 508) develop this idea further, and suggest that wars are especially likely to spread when they begin between rivals fighting over “positional” issues, which entail questions about states’ relative positions in the international hierarchy. The kinds of conflicts often present important implications for third parties because states which assume a higher position in the international hierarchy tend to become more active in international affairs and are more likely to intervene in other countries’ disputes. Unfortunately, since most rivalries are related to multiple issues, and these issues are often intertwined, it is possible for conflicts that begin over territory (or in Rasler and Thompson's terminology, spatial issues) to grow to have positional implications and then spread to other rivalries. As a result, these studies suggest that conflict diffusion is likely to play an important role in the processes by which rivalries escalate to war.

My explanation for the causes of rivalry linkage builds on this work. Following Valeriano (2008), I begin with the assumption that power politics practices are an integral part of the process by which rivalries form, and that all rivalries entail the use of power politics practices to some degree. However, I depart from previous research by focusing
on the ways in which these practices affect relations with states other than the primary adversary. Here, my argument builds on those studies which emphasize the diffusion of conflicts across rivalries. I argue that the use of power politics practices increases the likelihood that other states will be drawn into, or affected by, the militarized disputes that occur between rivals. When these other states are also involved in rivalries of their own, it can result in the formation of rivalry linkages. In the next section, I present a set of arguments linking power politics practices to the formation of two types of rivalry linkage—alliance ties and shared disputes.

**Power Politics and the Formation of Rivalry Linkages**

Power politics practices play an integral role in the security competition that takes place between international rivals. Each time that rivals engage in a militarized dispute, they are essentially choosing to employ power politics in an attempt to settle their grievances, and by doing so repeatedly, rivals show that they remain committed to a conflict management strategy rooted in the dictates of realpolitik. Of course, rivals do sometimes cooperate with one another and can experience periods of relative détente. However, rivalries can be distinguished from other international relationships by the fact that their participants continue to see military force as a valuable and necessary tool for managing the relationship, even when relations are relatively peaceful (Goertz and Diehl 1993). In rivalry, the threat of conflict is always on the horizon, and decision makers act accordingly by maintaining military arsenals and defensive postures oriented towards

12Although it is not a part of the literature on the steps to war, one interesting study which does take this approach is Prins (2005). He finds that states involved in rivalry tend to have a more militarized foreign policy and are more likely to use force, even in their dealings with states that are not their rivals.
potential conflicts with their rival. Thus, the cooperation that occurs between rivals is likely to be seen as the means for rivals to achieve better outcomes for themselves in regards to their disputes, or perhaps to reduce the costs of rivalry maintenance.

Throughout the rivalry, rivals are likely to remain committed to a long-term strategy of militarized competition with their adversaries.

In these efforts, rivals are usually guided by some sort of “grand strategy” which is designed to weaken their adversary and produce victory in the long-term (Valeriano 2008, 72). Grand strategies encompass a set of military, economic and political goals whose fulfillment is believed to be necessary for the survival of the state. In most cases, grand strategies suggest that states should find ways to increase their own military power while weakening that of their rivals, usually through some combination of internal and external balancing (Waltz 1979). Internally, the logic of realpolitik suggests that states should find ways to increase the military resources that could be brought to bear against their rivals in a fight. In this regard, states may engage in efforts to enlarge and modernize their militaries, increase their state’s capacity to mobilize resources from society (Thies 2004), or adopt new policies or institutions designed to facilitate security competition (Goertz, Jones and Diehl 2006). Externally, realpolitik suggests that states should try to find ways to shift the international balance of power against their rivals. This typically entails two basic tactics. First, states can pursue external alliances which commit other states to fight with them against their rivals. Second, when disputes occur, states can attempt to broaden these conflicts by encouraging others who share a grievance against their rival to intervene. By getting others to join in the fray, states can hope to weaken the relative position of their adversaries.
In this section, I focus on these two tactics for external balancing against rivals. I suggest that while the formation of alliances and the expansion of disputes may help states to gain an upper hand over their rivals, these efforts can also result in the formation of linkages to other ongoing rivalries. Thus, I argue that linkages form as a result of practices encouraged by the same realist logic which guides security competition between rivals more generally. In the subsections below, I explain in greater detail how realist thinking and the use of power politics practices encourages the formation of each type of linkage.

**Forming Alliances**

Realist thought suggests that states are more likely to be successful in coercive bargaining when they are militarily more powerful than their adversaries. For classical realists, military power translates directly into foreign policy influence and provides a source of leverage in international bargaining. Realists typically argue that states should try to increase their military power when possible because power is fungible, and because it provides the primary means by which states achieve their goals and ensure their survival in international relations (Waltz 1979). Thus, when engaged in a dispute, states are believed to have strong incentives to find ways to increase their own military power and reduce the power of their adversaries.

Steps-to-war theory suggests that one of the primary means by which states do this is through the formation of external alliances (Vasquez 1996). Alliances can provide states with many potential advantages in security competition. First, they establish formal commitments by third parties to intervene (or in some cases, to abstain from intervening)
in a potential conflict. Consequently, alliances can alter the balance of military capabilities, and when these agreements are made public, they can also provide a means for states to gain greater leverage in diplomatic bargaining, since states with allies can threaten to impose greater costs on their adversaries should war occur. In addition, alliances can also serve as a framework to facilitate cooperation between states in matters of security. Historically, allies have often shared intelligence and have permitted each other’s troops to move through their territory. In the modern era, allies have also frequently provided each other with access to military technology, training and other forms of support. Consequently, for states involved in protracted security competition, the support of external allies is likely to offer significant competitive advantages.

However, the benefits of alliances do come with certain costs. When states form public alliances they reveal information about their foreign policy preferences which can harm relations with other states and even lead to war (Bueno de Mesquita 1983). They also commit themselves to fight alongside their allies. This can draw them into costly conflicts, or if they renege on their alliances, potentially damage their international reputation. For these reasons, realist folklore has typically suggests that states should be wary of becoming entangled in alliances unless they are necessary for survival, and that these partnerships should be abandoned once they are no longer needed (Mearsheimer 2003).

Consequently, realist folklore suggests that states should be most likely to form alliances when they face significant, enduring threats to their national survival. In the international system, few states face threats as severe or as enduring as those involved in rivalries. Furthermore, since rivals are engaged in ongoing security competition, they are
likely to be under considerable pressure to find ways to compete more effectively against their adversaries. External allies offer significant advantages in this regard, which for rivals, are likely to be worth the costs and risks that alliances entail. Conversely, states without rivals should have much less incentive to form alliances, since they are unlikely to be engaged in security competition or face significant security threats that endure for long periods of time.

**H1:** *States involved in rivalries should be more likely to form alliances than other states.*

Yet while states involved in rivalries have strong incentives to acquire alliances, not all third parties are equally desirable as alliance partners. Some states are simply too weak military or too far away geographically to help states compete against their rivals. Conversely, other potential alliance partners may be capable of offering assistance but are either unwilling to do so, or demand too great a price for their support. Furthermore, even when prospective allies are both willing and capable of helping, states must still worry about whether others will believe them to be so, and perceive the alliance to be credible. If a state's rivals doubt the credibility of its alliances, then they may be more reluctant to make concessions in bargaining and more willing to use force (Maoz et al. 2007). Furthermore, a state’s allies may renege on their agreement and abandon them at the moment when alliance commitments are tested. Thus, states involved in rivalries face a dilemma. They must pursue alliances in order to compete militarily and deter potential attacks, but they must also be wary of the possibility that their enemies will doubt the credibility of these agreements, or that they will be exploited by potential
alliance partners who could abandon them in their moments of need.

Realist theory suggests that one of the ways that states deal with this problem is by forming alliances with other states with which they already share objective strategic interests. If alliances appear to reinforce states’ common interests then these agreements should more likely to be seen as credible. States can also be expected to be more confident that their partners will not defect when their alliances appear to provide clear benefits to both parties. In this regard, realist theory suggests that the presence of common enemies provides one of the best indicators of whether states have mutual security interests. States have a strong incentive to work together in the face of common threats because, despite their differences, all states place great value on their security (Walt 1987). This basis for cooperation should be especially strong in regards to states who share common rivals. Rivals pose consistent, enduring threats to states’ security and provide a stable basis for cooperation. Furthermore, since rivalry relationships are usually highly visible, others are likely to recognize the salience of these common security interests. Thus, one should expect that states who are involved in rivalries with a common enemy should be especially likely to form alliances.

H2: States involved in rivalries should be more likely to form alliances with states with which they share a common enemy than with other states.

**Expanding Disputes**

Shared dispute linkages are formed when a militarized dispute that begins in one dyadic rivalry is joined by one or more states that are involved in another dyadic rivalry (Diehl and Goertz 2000, 241). There are two general ways in which the use of power
politics practices can result in the formation of shared dispute linkages. First, much of the realist literature on foreign policy suggests that states can benefit by encouraging others to fight with them against their rivals, or by intervening themselves in other disputes between their rival and third parties. This behavior is based on the assumption that the bargaining position of an adversary is likely to be diminished when they face larger numbers of opponents. For example, Mearsheimer suggests that states can benefit by engaging in a strategy of “bloodletting”, whereby they encourage their rivals to fight one another (2003, 144). As a result, the logic of realpolitik provides states with an incentive to expand their disputes and to join others that involve their rivals.

However, as with the pursuit of alliances, dispute expansion can be a costly strategy for states to employ. Intervention by third parties tends to increase the hostility level of disputes and makes them more difficult to resolve (Vasquez, Petersen and Wang, 2004). In addition, third parties who offer to join ongoing conflicts may ask for something in return, or demand their share of the spoils when the conflict is over. Furthermore, there is nothing to prevent one’s adversary from using the same tactic, and enticing additional states to join the conflict on its behalf. Consequently, it is unlikely that deliberate dispute expansion will be the first step that most states will take in their efforts to resolve contentious issues. Most states should be expected to try first to settle things unilaterally, or through more peaceful multilateral efforts, like diplomatic summits or conferences (Hensel 2001). Yet in the context of enduring rivalries, in which disputes recur and tend to end in stalemates, states are likely to become more willing to employ riskier tactics in an attempt to gain the upper hand over their adversaries. As the costs of rivalry maintenance increase, states should be more likely to try to encourage others to
fight alongside them in hopes that this will force their rivals to concede.

A second potential source of dispute linkage arises from the inadvertent effects that the use of power politics practices often have on other nearby states. When rivals engage in recurrent crises or wars, these activities often produce spillover effects, such as economic dislocations or the creation of refugee populations, which may reduce the security of neighboring countries. These problems can put pressure on other countries to enter into these disputes in order to put an end to the conflict or protect their own interests. In addition, as rivalries drag on and competition intensifies, rivals may feel compelled to employ more extreme or riskier tactics that may antagonize others. For instance, they may raid enemy safe havens in neutral countries, implement naval blockades, or utilize of weapons of mass destruction. The use of these kinds of tactics can result in what Lebow (1984, 41) describes as “spillover crises”, in which third parties decide to intervene in a dispute because it has affected their interests. For example, during WWI, German leaders had initially been reluctant to permit unrestricted U-boat warfare in the seas around the British Isles because they feared antagonizing neutral powers, especially the United States. However, as the costs of the war increased, it was decided that the potential gains from unrestricted U-boat warfare were worth the risk. On February 15\textsuperscript{th}, 1915, Germany declared the waters around Britain to be a war zone, and just three months later, German U-boats sank the \textit{RMS Lusitania}, an ocean liner carrying a large number of civilian passengers. This event helped to turn American public opinion against Germany and served to catalyze the United States’ entry into the war.

Thus, even when rivals do not intend to expand their disputes, their involvement in protracted security competition tends to increase the risk that this will happen.
inadvertently, and that others will become involved in disputes on their own accord. Consequently, one should expect that states involved in rivalries will be more likely to experience complex MIDs, and that the probability of dispute expansion should increase as the rivalry wears on.

H3: Disputes that occur within the context of an ongoing rivalry should be more likely to become complex than other disputes.

H4: Disputes should be more likely to become complex when they occur in more advanced phases of the rivalry relationship.

**Data and Methods**

The theoretical arguments presented above suggest that states involved in rivalries are more likely than other states to form alliances and experience complex militarized disputes. I test these claims with two sets of empirical analyses. First, I test hypotheses H1 and H2 by examining the ways in which participation in rivalries affects rates of alliance formation between pairs of states. For this purpose, I employ a dataset containing information about all politically relevant dyads for the years 1816-2000, with the dyad-year serving as the unit of analysis. The dependent variable in these analyses is *alliance formation*, which is coded as 1 in dyad-years in which a new alliance is formed and 0 otherwise. Following Kimball (2006), an alliance is considered to be new when there was no alliance of any kind during the previous year or when the alliance that was in place was of a different type (for example, when a non-aggression pact is replaced by a defense pact). When new alliances are of the same type as the alliance that was in place the previous year, the old alliances is considered to have been renewed rather than replaced.
with a new alliance. Data on alliance formation are taken from the Correlates of War (COW) Alliance dataset (Gibler and Sarkees 2004)

In the second set of analyses, I test hypotheses H3 and H4 by examining whether disputes are more likely to become complex when they occur between rivals, and when they occur in more advanced phases of the rivalry relationship. Here, individual militarized disputes serve as the unit of analysis. I examine all 2,332 militarized disputes included in COW Project’s MID dataset (Ghosn et al. 2004). The dependent variable in this second set of analyses is complex mid, which is a binary variable that is coded as 1 whenever a dispute becomes complex and 0 otherwise. Disputes usually become complex because other states join the dispute after it has begun, but in some cases, disputes begin with multiple participants. Both kinds of kinds of disputes are considered to be complex MIDs.\(^{13}\)

**(Modeling Alliance Formation)**

Since *alliance formation* is a dichotomous variable, I employ logit models to assess the effects of the explanatory variables on the predicted probabilities of alliance formation. Diagnostics\(^{14}\) reveal that the data are subject to both temporal dependence and unit effects. Consequently, I estimate a random effects model\(^{15}\) and use Beck, Katz and Tucker's (1998) method for dealing with autocorrelation. I test hypotheses H1 and H2 by

\(^{13}\)As a robustness check, I also estimated a set of models in which only disputes with joiners were considered to be complex. The results in regards to the primary explanatory variables were largely unchanged.

\(^{14}\)Wooldridge (2002) provides a hypothesis test for assessing whether temporal autocorrelation is present in panel data, the results of which indicated that temporal effects were present in this case.

\(^{15}\)Hausman (Green 2008) provides a test for determining whether a fixed or random effects model would be best for dealing with the problem of panel effects (it examines whether the unique errors are correlated with the regressors). The results indicated that a random effects model would be best in this case.
examining the relationship between *alliance formation* and two primary explanatory variables. *Rivalry involvement* is a binary variable which is coded as 1 if at least one state in the dyad is involved in a rivalry with any other state during a given year. Dyad-years in which neither state is involved in any rivalries are coded as 0. *Common enemy* is also a binary variable, and it is coded as 1 if both states in the dyad are involved in a rivalry with a common enemy during a given year. In other words, it codes whether states A and B in the dyad both have a rivalry with a third state, C, which is outside of the dyad. It is expected that pairs of states will be more likely to form alliances with one another if either state is involved in at least one rivalry, and if both states are involved in rivalries with a common enemy.

I also control for a number of other variables which have been linked to alliance formation by previous studies. First, following Kimball (2006), I control for the *relative capabilities* of the two states in each dyad by taking the ratio of the military capabilities (as measured by COW CINC scores) of the stronger state to the combined capabilities of both. The values of this variable range from 0.5 (parity) to 1 (preponderance). I also control for the distance between states in using two variables. The *log of distance* is calculated by taking the natural log of the distance (in miles) between the capitals of the two states in the dyad. *Contiguity* is dummy variable which indicates whether the states in the dyad shared a land border according to the COW Direct Contiguity data. In order to address the possibility that regime similarity may affect the propensity of states to form alliances, I also control for *joint democracy* and *joint autocracy*. Both of these variables are dummy variables which are coded 1 when both states in the dyad are democracies (a polity score of 14 or greater on a 0 to 20 scale) or autocracies (a polity score of 7 or less
on a 0 to 20 scale). Data for these variables are taken form the POLITY IV dataset. However, since Lai and Reiter (2000) find that this relationship changes across different historical periods, with democracies being more likely to “flock together” after 1945, I also include a dummy for the period 1945-2001 and interact it with both regime variables. I expect that jointly democratic dyads should be more likely to form alliances after 1945, although they may not be more likely to so before then. Jointly autocratic dyads are expected to be more likely to form alliances in both periods. Finally, I also control for whether there is an ongoing militarized dispute in the dyad using the COW MID data. This variable is coded as 1 for all years in which a dispute is ongoing and 0 otherwise.

**Modeling Dispute Expansion**

In the second set of analyses I employ logit models to estimate the effects of three primary explanatory variables on the probability that dispute will expand and become complex. The first explanatory variable is rivalry MID, which is a dummy variable that indicates whether or not the MID occurred as part of a rivalry. This variable is as coded as 1 if the two of the original participants in the MID were rivals and were one opposite sides of the dispute. Disputes in which the original participants were non-rivals were coded as 0. Rivals were identified using Diehl and Goertz’s (2000) list of interstate rivalries.

I test hypothesis H4 by disaggregating rivalry MID into two dummy variables that indicate whether the disputes occurred during proto-rivalry or enduring rivalry phases of the rivalry relationship. Following Diehl and Goertz, I consider disputants to be enduring
rivals if they have had six or more MID\textsubscript{S} over a period lasting at least 20 years, with no more than 10 years separating each individual dispute. Disputants are considered to be proto-rivals when they have had three or more disputes, but lack the requisite number of MID\textsubscript{S} or the duration to be considered enduring rivals. Disputes that occurred between states that have had less than three disputes are considered to be part of isolated conflicts serve and as the reference category in these analyses. It is expected that disputes which occur in more advanced phases of the rivalry relationship will be more likely to be complex.

I also control for several dispute characteristics which are likely to be related to dispute expansion. First, I examine the possible that the propensity for dispute expansion may vary across disputes related to different kinds of issues. Following the approach employed by Senese and Vasquez (2008, 90), I create three dummy variables—\textit{territory MID}, \textit{policy MID}, and \textit{regime MID}—that indicate whether or not the disputes involved these types of issues. Data for this variable are taken from the COW MID dataset, and disputes related to issues coded as “other” serve as the reference category. Second, I control for the involvement of states that are major powers using two binary variables. \textit{Major-major dispute} is coded as 1 if the dispute’s original participants included two major powers on opposite sides; while \textit{mixed dispute} is coded as 1 if the original participants included a major power on one side but not on the other. Here, disputes between minor powers serve as the reference category. It is expected that disputes will be more likely to expand when they involve major powers because these states are more likely to have the capability of fighting multiple states at once, and more likely to become involved in conflicts over broader, multilateral issues.
**Empirical Results**

*Alliance Formation*

I begin my analyses by examining the relationship between states' participation in rivalry and their propensity to form alliances. Table 3.1 presents logit estimates of the likelihood of alliance formation produced by three random effects logit models. In the first model, I test hypotheses H1 and H2 by examining whether dyads which contained states involved in rivalries or states involved in rivals with the same common enemy were more likely to form alliances. The results in Model 1 provide support for both hypotheses. On average, dyads in which at least one state was involved in an enduring rivalry were about 25% more likely (see Table 3.2) to form alliances than dyads in which neither state was involved in a rivalry. When both states in a dyad were involved in rivalries against a common enemy, the predicted probability of alliance formation increased by about 150%. Substantively, this means that while the average dyad has only about a 0.04 probability of forming an alliance in a given year, this probability increase to about a 0.05 probability if either state becomes involved in a rivalry. If both states in a rivalry with the same enemy, then the probability of alliance formation increases to 0.10. Both of these effects were statistically significant at the 99.9% confidence level, suggesting that it is highly unlikely that these patterns are due to chance. Consequently, states involved in rivalry do appear to be more likely to form alliances than other states, and it seems that they are especially likely to form alliances with their adversary’s other rivals. When this occurs, these alliances establish rivalry linkages.
Table 3.1: Logit Estimates of Alliance Formation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivalry involvement</td>
<td>0.284***</td>
<td>___</td>
<td>0.321***</td>
</tr>
<tr>
<td></td>
<td>(0.072)</td>
<td>(0.072)</td>
<td></td>
</tr>
<tr>
<td>Common enemy</td>
<td>0.990***</td>
<td>1.006***</td>
<td>___</td>
</tr>
<tr>
<td></td>
<td>(0.099)</td>
<td>(0.099)</td>
<td>(0.072)</td>
</tr>
<tr>
<td>Relative capabilities</td>
<td>-1.402***</td>
<td>-1.326***</td>
<td>-1.46***</td>
</tr>
<tr>
<td></td>
<td>(0.310)</td>
<td>(0.309)</td>
<td>(0.309)</td>
</tr>
<tr>
<td>Log of distance</td>
<td>-0.195***</td>
<td>-0.187***</td>
<td>-0.199***</td>
</tr>
<tr>
<td></td>
<td>(0.020)</td>
<td>(0.020)</td>
<td>(0.020)</td>
</tr>
<tr>
<td>Contiguity</td>
<td>0.688***</td>
<td>0.692***</td>
<td>0.691***</td>
</tr>
<tr>
<td></td>
<td>(0.160)</td>
<td>(0.160)</td>
<td>(0.161)</td>
</tr>
<tr>
<td>Joint democracy</td>
<td>-0.026</td>
<td>-0.017</td>
<td>0.022</td>
</tr>
<tr>
<td></td>
<td>(0.162)</td>
<td>(0.161)</td>
<td>(0.161)</td>
</tr>
<tr>
<td>Joint autocracy</td>
<td>0.531***</td>
<td>0.477***</td>
<td>0.488**</td>
</tr>
<tr>
<td></td>
<td>(0.106)</td>
<td>(0.105)</td>
<td>(0.105)</td>
</tr>
<tr>
<td>Post 1944</td>
<td>-0.951***</td>
<td>-0.970***</td>
<td>-1.02***</td>
</tr>
<tr>
<td></td>
<td>(0.076)</td>
<td>(0.076)</td>
<td>(0.076)</td>
</tr>
<tr>
<td>Joint democracy*Post 1944</td>
<td>0.503**</td>
<td>0.480**</td>
<td>0.422**</td>
</tr>
<tr>
<td></td>
<td>(0.189)</td>
<td>(0.189)</td>
<td>(0.188)</td>
</tr>
<tr>
<td>Joint autocracy*Post 1944</td>
<td>-1.021***</td>
<td>-0.945***</td>
<td>-0.983***</td>
</tr>
<tr>
<td></td>
<td>(0.174)</td>
<td>(0.173)</td>
<td>(0.174)</td>
</tr>
<tr>
<td>Ongoing MID</td>
<td>-1.001***</td>
<td>-0.978***</td>
<td>-0.843***</td>
</tr>
<tr>
<td></td>
<td>(0.180)</td>
<td>(0.180)</td>
<td>(0.178)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.655**</td>
<td>-0.572*</td>
<td>-0.577*</td>
</tr>
<tr>
<td></td>
<td>(0.301)</td>
<td>(0.300)</td>
<td>(0.301)</td>
</tr>
<tr>
<td>N</td>
<td>92,079</td>
<td>92,079</td>
<td>92,079</td>
</tr>
<tr>
<td>Units</td>
<td>2,067</td>
<td>2,067</td>
<td>2,067</td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-7273.335</td>
<td>-7281.167</td>
<td>-7321.900</td>
</tr>
</tbody>
</table>

Note: *p<.10, **p<.05, ***p<.01. Robust standard errors are reported in parenthesis. All models are estimated with Beck, Katz and Tucker (1998) controls for temporal dependence. Coefficients for splines are not reported.
### Table 3.2: Changes in Predicted Probabilities of Alliance Formation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1 ( % change )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline</strong></td>
<td>0.04</td>
</tr>
<tr>
<td>Dyad involved in rivalries</td>
<td>+0.010 (+25%)</td>
</tr>
<tr>
<td>( \Delta \text{No} \rightarrow \text{Yes} )</td>
<td></td>
</tr>
<tr>
<td>Dyad shares common enemies</td>
<td>+0.060 (+150%)</td>
</tr>
<tr>
<td>( \Delta \text{No} \rightarrow \text{Yes} )</td>
<td></td>
</tr>
<tr>
<td>Relative Capabilities</td>
<td>- 0.009 (-22%)</td>
</tr>
<tr>
<td>( \Delta \text{Mean} \rightarrow \text{Max} )</td>
<td></td>
</tr>
<tr>
<td>Log of Distance</td>
<td>-0.021 (-52%)</td>
</tr>
<tr>
<td>( \Delta \text{Mean} \rightarrow \text{Max} )</td>
<td></td>
</tr>
<tr>
<td>Contiguity</td>
<td>+0.032 (+80%)</td>
</tr>
<tr>
<td>( \Delta \text{No} \rightarrow \text{Yes} )</td>
<td></td>
</tr>
<tr>
<td>Joint autocracy before 1945</td>
<td>+0.025 (+62%)</td>
</tr>
<tr>
<td>( \Delta \text{No} \rightarrow \text{Yes} )</td>
<td></td>
</tr>
<tr>
<td>Joint autocracy after 1944</td>
<td>-0.027 (-67%)</td>
</tr>
<tr>
<td>( \Delta \text{No} \rightarrow \text{Yes} )</td>
<td></td>
</tr>
<tr>
<td>Joint democracy after 1944</td>
<td>+0.024 (+60%)</td>
</tr>
<tr>
<td>( \Delta \text{No} \rightarrow \text{Yes} )</td>
<td></td>
</tr>
<tr>
<td>Ongoing militarized dispute</td>
<td>-0.025 (-62%)</td>
</tr>
<tr>
<td>( \Delta \text{No} \rightarrow \text{Yes} )</td>
<td></td>
</tr>
</tbody>
</table>

Note: Predicted probabilities for the onset of strategic rivalry are calculated using the coefficients from Models 1 and 2. Baseline probabilities are calculated using the means or modes for each variable.
In Models 2 and 3, I also estimate the effects of *rivalry involvement* and *common enemy* separately from one another in order to account for the possibility that collinearity between these variables may have influenced the coefficient estimates in Model 1. Rivalry involvement and common enemies are weakly correlated (correlation = 0.031), but since all dyads that share common enemies are also dyads that contain states involved in rivalry, collinearity is a potential concern. The results of these models are generally similar to those produced by Model 1. Both rivalry participation and the possession of common enemies continue to have a significant, positive effect on the likelihood of alliance formation.

In all three models, the control variables behaved mostly as expected. Dyads with ongoing militarized disputes, with a greater distance between their capitals, and with a more equal distribution of military capabilities were significantly less likely to form alliances with one another, while dyads which shared a land border were more likely to form alliances. In regards to the regime variables, the results were consistent with the findings of Lai and Reiter (2000) and Kimball (2005). Jointly democratic dyads were significantly more likely to form alliances, but only after 1944. During the period between 1816 and 1943, joint democracy had no significant impact on the likelihood of alliance formation. Conversely, jointly autocratic dyads were significantly less likely to form alliances in the period after 1994, and significantly more likely to form alliances in the period between 1816 and 1943.
Dispute Expansion

Before proceeding to the second set of analyses, I first examine the distribution of complex and dyadic militarized disputes in light of the expectations of hypotheses H3 and H4, which posit that disputes should be more likely to become complex when they occur between rivals, and in more advanced phases of rivalry relationship. Table 3.3 presents the observed frequency of dyadic and complex MIDs across different phases of the rivalry relationship, as well the frequency of complex MIDs that would be expected to occur in each phase by chance.
Table 3.3: Observed and Expected Frequencies of Complex MIDs by Rivalry Phase

<table>
<thead>
<tr>
<th>Rivalry Phase</th>
<th>Dyadic MIDs</th>
<th>Exp. Dyadic</th>
<th>Complex MIDs</th>
<th>Exp. Complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolated dispute</td>
<td>866</td>
<td>831.1</td>
<td>125</td>
<td>159.9</td>
</tr>
<tr>
<td>Proto-rivalry</td>
<td>416</td>
<td>416</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Enduring rivalry</td>
<td>673</td>
<td>707.9</td>
<td>171</td>
<td>136.1</td>
</tr>
<tr>
<td>Total</td>
<td>1,955</td>
<td></td>
<td>376</td>
<td></td>
</tr>
</tbody>
</table>

Note: Exp. = Expected, Pearson Chi2 = 19.7028, Pr = 0.000.
Table 3.3 provides some suggestive evidence in favor of both hypotheses. While only 131 militarized disputes between enduring rivals would have been expected to become complex by chance, the observed number of complex MIDs was 171. Thus, almost half of all complex MIDs began as disputes between enduring rivals, despite the fact that disputes between enduring rivalries accounted for only about a third of the entire pool of disputes. In contrast, isolated disputes, which occurred outside of the context of rivalry, experienced only 125 complex MIDs, 35 fewer than would have been expected by chance. This suggests that disputes are more likely to expand when they occur in more advanced stages of rivalry.

I provide a more rigorous test of hypotheses H3 and H4 in Table 3.4 which presents the estimates of the likelihood of dispute expansion presented by two logit models. In the first model, I examine whether the presence of rivalry relationship between disputants influences the risk of conflict expansion. Here, the results indicate that, on average, disputes between rivals are about 35% more likely (see Table 3.5) to become complex than disputes between non-rivals. In the second model, I disaggregate enduring rivalry to examine how the propensity for expansion varies across disputes at different stages in the rivalry relationship. These results indicate that disputes between rivals at the proto stage were about 28% more likely to be complex, while those at the enduring stage were about 42% more likely. This suggests that, consistent with hypothesis H4, disputes which begin between states in more advanced forms of rivalry are more likely to be joined by third parties.
Table 3.4: Logit Estimates of Dispute Expansion

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivalry MID</td>
<td>0.436***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.125)</td>
<td></td>
</tr>
<tr>
<td>Proto-rivalry phase</td>
<td></td>
<td>0.302*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.159)</td>
</tr>
<tr>
<td>Enduring rivalry</td>
<td></td>
<td>0.517***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.138)</td>
</tr>
<tr>
<td>Major power on one side</td>
<td>0.943***</td>
<td>0.944***</td>
</tr>
<tr>
<td></td>
<td>(0.134)</td>
<td>(0.134)</td>
</tr>
<tr>
<td>Major power on both sides</td>
<td>0.913***</td>
<td>0.876***</td>
</tr>
<tr>
<td></td>
<td>(0.169)</td>
<td>(0.171)</td>
</tr>
<tr>
<td>Territory MID</td>
<td>0.174</td>
<td>0.162</td>
</tr>
<tr>
<td></td>
<td>(0.171)</td>
<td>(0.171)</td>
</tr>
<tr>
<td>Policy MID</td>
<td>0.035</td>
<td>0.033</td>
</tr>
<tr>
<td></td>
<td>(0.153)</td>
<td>(0.153)</td>
</tr>
<tr>
<td>Regime MID</td>
<td>1.483***</td>
<td>1.474***</td>
</tr>
<tr>
<td></td>
<td>(0.225)</td>
<td>(0.225)</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.625***</td>
<td>-2.619***</td>
</tr>
<tr>
<td></td>
<td>(0.170)</td>
<td>(0.170)</td>
</tr>
<tr>
<td>N</td>
<td>2,331</td>
<td>2,331</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-969.696</td>
<td>-968.732</td>
</tr>
</tbody>
</table>

Note: *p<.10, **p<.05, ***p<.01.
### Table 3.5: Changes in Predicted Probabilities of Dispute Expansion

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>Dispute part of a rivalry ( \Delta No \to Yes )</td>
<td>+ 0.05 (+35%)</td>
<td>___</td>
</tr>
<tr>
<td>Dispute occurred during proto-rivalry phase</td>
<td>___</td>
<td>+ 0.04 (+28%)</td>
</tr>
<tr>
<td>Dispute occurred during enduring rivalry phase</td>
<td>___</td>
<td>+ 0.06 (+42%)</td>
</tr>
<tr>
<td>Major power on one side only ( \Delta No \to Yes )</td>
<td>+ 0.13 (+92%)</td>
<td>+ 0.13 (+92%)</td>
</tr>
<tr>
<td>Major powers on both sides ( \Delta No \to Yes )</td>
<td>+ 0.14 (+100%)</td>
<td>+ 0.13 (+92%)</td>
</tr>
<tr>
<td>Dispute over regime issues ( \Delta No \to Yes )</td>
<td>+ 0.27 (+192%)</td>
<td>+ 0.27 (+192%)</td>
</tr>
</tbody>
</table>

Note: Baseline probabilities are calculated using the means or modes for each variable in the model.
In regards to the control variables, the results indicate that disputes were about twice as likely to become complex when they included a major power on one or both sides. This suggests that. While disputes over regime issues were highly prone to expansion, disputes over territory or policy were not significantly more likely to expand, at least relative to the reference category (disputes over “other” issues).

In sum, the findings from both sets of analyses provide substantial support for all four hypotheses. Dyads which contain states involved in rivalry relationships were more likely to form alliances, especially when both states are involved in a rivalry with the same enemy. Likewise, disputes that occur between rivals were more likely to be joined by other states, and this propensity for expansion increases as rivalries mature and their conflict history lengthens. Consequently, these findings suggest that states involved in rivalries are prone to engage in behavior which leads to the creation of rivalry linkages through the formation of alliances and expansion of disputes.

However, before making too much of these findings, it is important to point out that these analyses simply assess the probability that states involved in rivalry will form alliance or shared dispute linkages with other states. These analyses do not distinguish between linkages that are formed with third parties that are involved in rivalries and linkages that are formed with third parties that are not involved in rivalries. Consequently, in themselves, these analyses do not provide estimates of the probability that linkages will form between rivalry dyads. They simply show that states involved in rivalry tend to pursue linkages with third parties, and it is assumed that process helps to explain the accumulation of linkages between rivalry dyads (presumably, linkages also

\[\text{I am grateful to Wonjae Hwang for this point.}\]

88
accumulate between rivalry dyads and non-rivalry dyads as well). While this appears to be a reasonable assumption, it is still possible that although rivals are prone to form external linkages, they may be averse to forming linkages with other states involved in rivalry for some unknown reason. If this were the case, then the results presented here would not provide an explanation for the formation of rivalry linkages.

In order to investigate this possibility, I estimated three additional models which examined the likelihood of the formation of linkages between pairs of states that were both involved in at least one rivalry. These models provide a means of assessing the robustness of the results produced by the analyses above and provide an additional source of leverage for my arguments about the origins of rivalry linkages. In Model 6 (which is presented in Table 3.6), I disaggregated the rivalry involvement variable included in Models 1, 2 and 3 into two separate dummy variables in order to distinguish between dyads in which only one state was involved in a rivalry and dyads in which both states were involved in rivalries. These results indicate that dyads in which both states were involved in rivalry were significantly more likely to form alliances with one another. In addition, the size of the coefficient is greater for this variable is greater than for the variable which captures the effect when only one state in the dyad is involved in rivalry, indicating that states involved in rivalries are more likely to form alliances with other states involved in rivalry. This suggests that rivalry dyads are most likely to form linkages with other rivalry dyads.
Table 3.6: Logit Estimates of Alliance Formation Between States Involved in Rivalry

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivalry involvement (one state in dyad)</td>
<td>0.219***</td>
</tr>
<tr>
<td></td>
<td>(0.073)</td>
</tr>
<tr>
<td>Rivalry involvement (both states in dyad)</td>
<td>0.539***</td>
</tr>
<tr>
<td></td>
<td>(0.095)</td>
</tr>
<tr>
<td>Common enemy</td>
<td>0.949***</td>
</tr>
<tr>
<td></td>
<td>(0.100)</td>
</tr>
<tr>
<td>Relative capabilities</td>
<td>-1.245***</td>
</tr>
<tr>
<td></td>
<td>(0.312)</td>
</tr>
<tr>
<td>Log of distance</td>
<td>-0.202***</td>
</tr>
<tr>
<td></td>
<td>(0.020)</td>
</tr>
<tr>
<td>Contiguity</td>
<td>0.697***</td>
</tr>
<tr>
<td></td>
<td>(0.159)</td>
</tr>
<tr>
<td>Joint democracy</td>
<td>-0.059</td>
</tr>
<tr>
<td></td>
<td>(0.163)</td>
</tr>
<tr>
<td>Joint autocracy</td>
<td>0.564***</td>
</tr>
<tr>
<td></td>
<td>(0.106)</td>
</tr>
<tr>
<td>Post 1944</td>
<td>-0.948***</td>
</tr>
<tr>
<td></td>
<td>(0.076)</td>
</tr>
<tr>
<td>Joint democracy*Post 1944</td>
<td>0.578***</td>
</tr>
<tr>
<td></td>
<td>(0.191)</td>
</tr>
<tr>
<td>Joint autocracy*Post 1944</td>
<td>-1.076***</td>
</tr>
<tr>
<td></td>
<td>(0.174)</td>
</tr>
<tr>
<td>Ongoing MID</td>
<td>-0.993***</td>
</tr>
<tr>
<td></td>
<td>(0.180)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.782**</td>
</tr>
<tr>
<td></td>
<td>(0.303)</td>
</tr>
<tr>
<td>N</td>
<td>92079</td>
</tr>
<tr>
<td>Units</td>
<td>2067</td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>-7257.67</td>
</tr>
</tbody>
</table>

Note: *p<.10, **p<.05, ***p<.01. Robust standard errors are reported in parenthesis. All models are estimated with Beck, Katz and Tucker (1998) controls for temporal dependence. Coefficients for splines are not reported.
In regards to shared dispute linkages, Table 3.7 presents the results of two models which are identical to Models 4 and 5 except that the dependent variable has been modified so that incidents of dispute expansion are only coded as such when the dispute joiners are involved in rivalry. Consequently, these models directly estimate the probability that disputes between rivals will be joined by third parties that are also involved in rivalries of their own. The results of these models indicate that disputes between rivals and disputes which occur in later phases of rivalry are significantly more likely to be joined by third parties involved in rivalry. As a result, it seems that disputes which occur within the context of a rivalry relationship tend to attract the attention of others who are also involved in third party conflicts.
Table 3.7: Logit Estimates of Dispute Joining by Rivals

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 7</th>
<th>Model 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivalry MID</td>
<td>1.219***</td>
<td>___</td>
</tr>
<tr>
<td></td>
<td>(0.194)</td>
<td>(0.244)</td>
</tr>
<tr>
<td>Proto-rivalry phase</td>
<td>___</td>
<td>0.715**</td>
</tr>
<tr>
<td></td>
<td>___</td>
<td>(0.244)</td>
</tr>
<tr>
<td>Enduring rivalry</td>
<td>___</td>
<td>1.462***</td>
</tr>
<tr>
<td></td>
<td>___</td>
<td>(0.202)</td>
</tr>
<tr>
<td>Major power on one side</td>
<td>0.917***</td>
<td>0.922**</td>
</tr>
<tr>
<td></td>
<td>(0.183)</td>
<td>(0.185)</td>
</tr>
<tr>
<td>Major power on both sides</td>
<td>1.254***</td>
<td>1.139***</td>
</tr>
<tr>
<td></td>
<td>(0.204)</td>
<td>(0.208)</td>
</tr>
<tr>
<td>Territory MID</td>
<td>0.837***</td>
<td>0.797***</td>
</tr>
<tr>
<td></td>
<td>(0.242)</td>
<td>(0.243)</td>
</tr>
<tr>
<td>Policy MID</td>
<td>0.664***</td>
<td>0.657**</td>
</tr>
<tr>
<td></td>
<td>(0.227)</td>
<td>(0.227)</td>
</tr>
<tr>
<td>Regime MID</td>
<td>1.884***</td>
<td>1.852***</td>
</tr>
<tr>
<td></td>
<td>(0.295)</td>
<td>(0.297)</td>
</tr>
<tr>
<td>Constant</td>
<td>-4.522***</td>
<td>-4.496***</td>
</tr>
<tr>
<td></td>
<td>(0.282)</td>
<td>(0.281)</td>
</tr>
<tr>
<td>N</td>
<td>2331</td>
<td>2331</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-625.98</td>
<td>-618.45</td>
</tr>
</tbody>
</table>

Note: *p<.10, **p<.05, ***p<.01.
Conclusion

This chapter makes two important contributions to scholarly understanding of rivalry linkages. First, it offers an explanation for why rivals form linkages. Whereas previous studies have tended to treat rivalry linkages as neutral characteristics of the external environment in which rivalries develop, this chapter suggests that they are often consciously established by rivals in attempt to gain advantages in security competition. Thus, this chapter helps to explain why rivalry linkages are so common, something which had been seen as an anomalous finding by previous research (Diehl and Goertz 2000).

Second, this chapter examines rivalry linkage as a dependent variable. This is something which has not yet been done by studies in the rivalry research program. The findings presented here therefore make a novel contribution to scholarly understanding of the process by which involvement in rivalry influences the way that states behave in their dealings with third parties. This is an important implication of rivalry for conflict behavior which has not yet received adequate attention from rivalry researchers.

Future research could build on this work in several ways. One possibility would be to examine how the availability of linkage opportunities influences rivalry development and escalation. While the analyses conducted in this chapter have shown that states involved in rivalries’ are more likely than non-rivals to form alliance ties and to experience complex disputes, it remains to be seen how rivalries are affected by the opportunities for linkage. It is possible that rivalries tend to form more easily or last longer in regions where there are more ongoing rivalries that can be linked to, or in times when there are more great-power rivalries in the international system. The existence of these kinds of dangerous linkage environments has been alluded to by work on conflict
diffusion (Maoz et al 2007, Thompson 2003), and it may be possible to expand the approach employed here in order to elucidate how these environmental conditions influence rivalry development.

Another area for inquiry concerns the potential interactions between the two kinds of linkages examined here, and the presence of contiguity or common enemy linkages. This possibility has been examined to some extent by the analyses of alliance formation, which include measures of contiguity and common enemy linkages in the model. However, it remains to be seen whether these kinds of connections interact to encourage the formation of additional linkages. That is, it is unclear whether dyads which form one type of rivalry linkage are then at greater risk of forming others. If this is the case, then it may help to explain the tendency for linkages to overlap and to occur in clusters, something which Chapters 5 and 6 reveal to have important implications for rivalries’ intensity and duration.

The results of the analyses conducted here also suggest several policy implications for those seeking ways to manage and mitigate hostility between rival states. First and foremost, it suggests that policymakers should pay greater attention to the way that rivalries are embedded in other, secondary relationships. If there are third parties that routinely become involved in rivals’ disputes then they may be a good first target for mediation efforts and other forms of diplomatic intervention. By persuading these states to disconnect themselves from enduring rivalries, it may facilitate subsequent efforts to mediate directly between the rivals. Along these lines, policymakers should also work to prevent linkage formation in the first place. One of the most practical ways of doing this would be to address the inadvertent sources of dispute expansion. While a great deal of
international attention is already devoted to addressing problems like famine or population displacement in conflict areas, this chapter suggests that it may worthwhile to work towards enhancing the security of other nearby states who may not yet be directly affected. This may prevent subsequent interventions by these states which could complicate militarized disputes and contribute to the development of new interstate rivalries.

Finally, this chapter suggests that great powers, such as the United States, should work to ensure that their own efforts to compete against their rivals do not exacerbate other unrelated conflicts. While great powers may hope to gain in the short term by forming alliances or joining in disputes with other disputants who could benefit from their assistance, these activities may pose serious long-term consequences for international order and stability. For example, while the decision by US policymakers to extend support to the Barre regime may have temporarily increased the costs of Soviet activities in Ethiopia, it resulted in a protracted conflict that consumed considerable resources and ultimately resulted in state failure in Somalia. Today, Somalia continues to be source of transnational security problems and the US remains active in the region, despite the end of the US-Soviet rivalry more than 20 years ago.
CHAPTER IV
THE CONSEQUENCES OF RIVALRY LINKAGE

Introduction

Most of the research on rivalry linkages has been focused on their effects on rivals' conflict behavior. This is partly because much of the scholarly interest in rivalry stems from concerns about the sources of international conflict, but it also reflects the fact that there are many instances where rivalry linkages appear to have increased tensions between rivals and contributed to the spread of conflicts from one rivalry to another. For example, Thompson (2003, 457) suggests that the emergence of a “ripe rivalry structure” in Europe in the years prior to 1914 was crucial to the outbreak and spread of World War I. By his count, 15 of the 21 international rivalries in Europe were connected to one another at the start of the war. These ties served to raise the strategic stakes of confrontations within individual rivalries, and in turn, this helped to escalate dyadic tensions across Europe. Thus, for Thompson, it is no surprise that hostilities between Austria and Serbia escalated so quickly after the assassination of Archduke Franz Ferdinand in Sarajevo, or that the resulting war spread to involve so many states. In his view, the proliferation of rivalry linkages had turned Europe into a geopolitical powder keg that was ripe for the outbreak of a major multilateral war.

The case of World War I illustrates well the concerns that many scholars have about rivalry linkages. If ties like alliances or common borders can help to transform a relatively minor confrontation between Serbia and Austria into “the global war that no one really wanted” (Thompson 2003, 459), then it seems that plausible that they might
have similar effect on other conflicts. In this regard, one might wonder whether the structure of rivalry linkages today is also ripe for a major international conflict, and where the next Sarejevo might be located. It is only by developing an understanding of how linkages connect different rivalries together and how these ties influence rivals’ behavior that scholars can begin to make progress in answering these questions.

Recent studies in the rivalry literature do offer some insights into how rivalry linkages might affect rivals’ conflict behavior. Diehl and Goertz (2000), in particular, provide a framework for identifying and classifying rivalry linkages, and suggest that they increase rivalries’ severity and duration. Yet while their empirical analyses, along with those of several other scholars (Valeriano 2008), does provide some evidence in favor of these claims, others produce conflicting findings (Stinnett and Diehl 2001), and no study has yet to produce a well-developed theory of how or why linkages might produce these effects. Thus, we still know relatively little about the ways in which linkages actually affect rivalry dynamics, or the processes by which linkages might contribute to the outbreak of war.

The goal of this chapter is to address this gap by developing a theory about how the accumulation of rivalry linkages influences the expansion and escalation of disputes between rivals. This theory argues linkages have two main effects on rivals' conflict behavior. First, they increase the risk that rivals will be drawn into disputes that begin in other linked dyads and that third parties from these dyads will intervene in their disputes. Thus, as rivalries accumulate larger numbers of linkages it becomes more likely that they will “catch” others’ disputes, and that their own disputes will become complex. Second, I also argue that the formation of rivalry linkages increases the risk that disputes will
escalate to war. Building on previous work by Gochman and Maoz (1984) and Diehl and Goertz (2001), I suggest that this is because complex disputes are more likely to result in war than disputes that remain dyadic. However, I also argue that disputes that occur within the context of rivalry linkages are more likely to escalate to war even when they do not become complex, because linkages affect rivals decision making processes in ways which increase the attractiveness of militarized means of dispute resolution. Thus, rivalry linkages have both a direct effect on the risk of war, and an indirect effect, which is expressed through their tendency to produce complex MIDs. Together, these two mechanisms suggest that as linkages accumulate rivalries should tend to experience more disputes, and that when these disputes occur, they should be more likely to become complex and to escalate to war.

I test these arguments using a series of bivariate probit models. This approach allows me to estimate the direct and indirect effects of rivalry linkage, and to control for the potential problem of selection bias, which may arise because linkages influence the risk of both dispute onset and dispute escalation to war. The results of these analyses provide considerable support for my arguments and indicate that linkages have an important impact on rivals’ conflict behavior. The implications of these findings are discussed in the conclusion of this chapter.

**Extant Work on the Effects of Rivalry Linkage**

Work within the rivalry literature have primarily been concerned with uncovering the connections between conflicts that occur within a single dyad over time rather than exploring the possible connections between conflicts that occur in different dyads.
However, there are a number of empirical studies which point to the significance of third-party conflicts for rivalry dynamics. Several scholars have found evidence that during the Cold War changes in US-Soviet relations had an impact on rivalries between client states in the Middle East (Kinsella 1994, 1997) and the Horn of Africa (Colaresi 2003) as well as on the superpowers’ rivalries with China (Goldstein and Freeman 1991). These studies suggest that changes in the dynamics of great power rivalries can have a trickle-down effect on the dynamics of minor power clients because they bring about changes in alliance ties or in the provision of military aid. Conversely, Ingram (in Thompson 1999) suggests that events in minor power rivalries can also affect relations between their great power patrons. He finds that one of the reasons why the Anglo-Russian rivalry endured throughout the 1800s was because it was “enforced” by relatively minor powers like the Ottoman Empire, Persia, and China, which often attempted to play Britain and Russia off of one another, and at times deliberately sought to escalate Anglo-Russian tensions in order to gain an advantage in their own conflicts (Ingram in Thompson 1999, 291-295). Likewise, Schroeder (in Thompson 1999) argues that the Franco-Austrian rivalry was sustained in part by its connections to other ongoing conflicts between minor powers in Europe.

Thus, there is considerable evidence to suggest that rivalries are often strongly influenced by events that occur in other dyads. These relationships have helped to inspire several recent efforts by researchers to identify the connections that may exist between rivalries and uncover their effects on rivalry dynamics. For example, Valeriano and Powers (2010) have used existing data on rivalries to identify 48 complex rivalries comprised of at least two dyadic rivalries which share common issues, MIDs or alliances.
They find that rivalries which were part of these complex rivalry clusters experienced more wars and were more likely to experience multilateral wars than would be expected by chance. In a similar vein, Maoz, Terris, Kuperman and Talmud (2009) have used social network analysis to identify the indirect relationships which connect pairs of states. Indirect relations are based on the direct relationships, like alliances or rivalries, which states have with third parties. So for example, a pair of states might be indirectly related because they are both involved in a rivalry with the same state (they share a common enemy), or are both allied with the same state (they share a common friend). Maoz, Terris, Kuperman and Talmud (2009) find that states are more likely fight against their friends’ enemies and their enemies’ friends, suggesting that relations with third parties can have an important impact on dyadic conflict behavior.

Within the context of the rivalry literature, Diehl and Goertz (2001) provide what is probably the most influential investigation of rivalry linkages. They identify four different kinds of rivalry linkages based on the whether the participants in different rivalries are connected to one another by contiguity, alliances, shared disputes or common enemies. Working from the perspective of punctuated equilibrium models of rivalry, they consider rivalry linkages to be an important feature of the systemic environment in which rivalries develop. They argue that rivalries which develop in dyads that possess linkages should tend to be longer and more severe because linkages serve to create a “favorable international rivalry environment” that makes it easier for states to sustain security competition (Diehl and Goertz 2001, 241).

Yet while most studies agree with Diehl and Goertz’s expectations regarding the effects of rivalry linkages, attempts to test these claims have produced surprisingly
inconsistent findings. In their own analyses, Diehl and Goertz find that only shared
dispute linkages had a statistically significant effect on rivals’ hostility levels and the
frequency of war. As a result of these findings, subsequent studies which have examined
the effects of rivalry linkages have generally ignored the effects of contiguity, alliance
ties and common enemy linkages, and have focused solely on the impact of shared
disputes. Some of this work has provided support for Diehl and Goertz’s initial
expectations. For example, using a slightly different research design, Valeriano (2008)
finds that as dyads accumulated larger numbers of disputes with third parties, they were
more likely to develop more advanced forms of rivalry and to have higher hostility levels
(Valeriano considers each new dispute to be instance of rivalry linkage, regardless of
whether the third party was involved in an enduring rivalry at the time). However,
Stinnett and Diehl (2001) find that shared dispute linkages have no significant effect on
rivalry development when one controls for other factors like the occurrence of military
stalemates or systemic shocks.

There are several potential reasons why previous empirical analyses may have
produced inconsistent results concerning the link between rivalry linkages and conflict.
First, Diehl and Goertz’s (2000) work, while path-breaking, employed a relatively
unsophisticated method of assessing the impact of rivalry linkages. They used individual
rivalries as the unit of analysis and regressed the basic rivalry level on the number of
linkages that the rivalry accrued over the course of its entire duration. This approach
makes sense from the perspective of the punctuate-equilibrium model of rivalry
employed by Diehl and Goertz, which assumes that rivalry dynamics are relatively stable
over time, and that most rivalry linkages form early in the life of the rivalry and remain in
place until the rivalry ends. However, Diehl and Goertz's own data reveal that these assumptions are likely to be inaccurate. The first instances of rivalry linkage typically occur between 7 and 10 years after rivalry onset, and in most cases, linkages continue to be created and destroyed throughout the life of rivalry. Furthermore, almost all rivalries develop linkages at some point in their duration, with the average rivalry developing connections to 17 other rivalries.

Consequently, rather than being simply a feature of the external environment in which some rivals happen to find themselves, linkage formation appears to be an important part of the process by which most rivalries develop over time. Instead of asking how linked rivalries differ from un-linked rivalries, it seems that a better approach would be to examine how the linking and de-linking of rivalries affects their development over time. Thus, one would be interested not only in the total number of linkages that a rivalry develops, but also in timing of when these linkages form in relation to the occurrence of military conflict. One might also expect that the effects of rivalry linkages would dissipate once these ties were severed. To some extent, this is the kind of approach employed by Stinnett and Diehl (2001), as they use time-series data and code linkages as beginning at the moment when the first shared dispute occurs. This approach is more sophisticated than the one employed by Diehl and Goertz because it permits the comparison of rivals’ conflict behavior before and after the linkage formed, and enables them to control for other variables. However, the utility of Stinnett and Diehl's approach is limited by the fact that they treat rivalry linkage as a dummy variable, and stop

---

17 Given that the duration of the average enduring rivalry is about 30 years (Diehl and Goertz 2000), this would place the first instances of linkage at about one third of the way through the life-cycle of the average rivalry.
counting new instances of rivalry linkage after the first one is created. Consequently, one reason that Stinnet and Diehl failed to observe a significant relationship between shared dispute linkages and conflict is that they may have underestimated the number of rivalry linkages that some dyads possessed. Ideally, efforts examine the impact of rivalry linkages should utilize a measure which captures changes in the total number of rivalry linkages over time.

A second reason why previous studies may have failed to uncover a clear link between linkages and conflict is that they lack a clear theory about how linkages affect rivalry dynamics. Most studies follow Diehl and Goertz in assuming that linkages intensify conflict, but they generally do not specify the processes or mechanisms by which this effect occurs. Linkages are simply included as one of many variables believed to influence rivalry dynamics. For their part, Diehl and Goertz do offer an explanation for the effects of rivalry linkage which is based on the finding by Gochman and Maoz (1984) that complex militarized disputes (which involve more than two disputants) are more likely to escalate to war than disputes which are dyadic. Diehl and Goertz assume rivalry linkages should serve to increase the risk that disputes between rivals will become complex, and based on this finding, assert that the MIDs which occur in linked rivalries should generally be more severe MIDs and be at greater risk of escalating to war. This is an important contribution, but it still leaves several questions unanswered. For one thing, it is not clear whether linked rivalries are actually more likely to have complex MIDs. While this would seem to be a plausible assumption, it has not yet been tested empirically. In addition, studies of rivalry linkage have generally not paid much attention to the processes by which complex MIDs are believed escalate to war. Here, recent
research on multiparty disputes provides some important insights into the ways in which rivalry linkages may affect rivals’ conflict behavior. Many of these are consistent with Diehl and Goertz’s claims, but there are also some which yield novel expectations about the likely effects of linkage formation on rivalry dynamics.

In sum, while a number of studies have acknowledged the likely importance of rivalry linkages and some have begun to incorporate them into models of rivals’ interactions, the results of empirical analyses have been inconsistent and no study has yet produced a fully developed theory of how the formation of rivalry linkages affects rivals’ conflict behavior. I undertake these tasks in the next two sections of this chapter.

A Theory of the Consequences of Rivalry Linkage

In this section, I develop a theory about how rivalry linkages affect rivals' conflict behavior. This theory suggests that linkages have two primary effects. First, linkages serve to facilitate the diffusion of conflicts from one rivalry to another. Second, since linkages increase the likelihood that others will intervene, their presence may also complicate negotiations and influence leaders’ decision-making processes in ways which increase the attractiveness of militarized means of dispute settlement. In the subsections that follow, I discuss each of these effects in greater detail.

Conflict Diffusion

The literature on the diffusion of war provides an important theoretical and empirical foundation for efforts to understand the connections between rivalries. It posits that conflicts can sometimes spread from one group of countries to another, and seeks to
identify the mechanisms or linkages that facilitate this process. In this regard, most
studies suggest that conflicts can spread in two general ways (Vasquez et al. 2011). First,
conflicts can grow through a process of conflict expansion, whereby the original dyadic
dispute or war is joined by additional states. Second, conflicts can also diffuse through a
process of conflict generation, in which a dispute in one dyad helps to encourage the
onset of a second dispute in another dyad.

Conflicts have been found to be most likely to spread to states that share common
borders (Most and Starr 1980) or alliance ties (Siverson and King 1980) with one or more
of the belligerents. The most influential theoretical framework for analyzing this
diffusion process has been that of opportunity and willingness (Siverson and Starr 1991).
According this perspective, shared borders or geographical proximity to belligerents are
believed to provide states with an opportunity to become involved in conflicts, while
alliance ties serve as an indication of whether states are likely to have an interest in
intervening. Together, these factors are typically considered to be a set of necessary, but
not sufficient, conditions for conflict diffusion to occur.

The empirical literature has built upon this opportunity and willingness
framework in several different ways. One branch of research has sought to examine how
the propensity for conflict diffusion is affected by geographical conditions. For example,
Thomas and Starr (2005) find that conflict is most likely to diffuse across “vital” borders,
which are both economically or politically salient and relatively easy to cross.
Braithewaite (2006) takes this emphasis on geographical factors one step further and
examines the factors which influence the physical scope of militarized disputes (MIDs).
He finds that the combination of vital borders with passable terrain and territorial
disputes provides a powerful explanation for the size of the area that is likely to be affected by the MID. Another set of studies has looked for alternative indicators of willingness. Gledistch (2002), for instance, suggests that the presence of common domestic institutions or high levels of interdependence can encourage states to intervene in conflicts even when they are not formally allied with any of the participants. Conversely, Kadera (1998) argues that some alliances, such as non-aggression or non-intervention agreements, may act as “transmission barriers” that discourage diffusion between contiguous states. Together these two strands of research have revealed new insights into the factors that draw nearby countries into ongoing conflicts and has helped to propel a growing literature on the effects of regional factors on the risk of war.

Most recently, scholars have begun to explore the possibility that conflict might spread through social networks as well as through geographical space (Maoz 2011, Vasquez et al. 2011, Maoz 2006, Hammerstrom and Heldt 2002). These studies are particularly notable in that they introduce international rivalries as an additional channel through which conflicts might spread. Most studies argue that the presence of rivalry relationships between states in the dyad and third parties can serve as an indicator that third parties possess both the opportunity and willingness to intervene in the dyad's disputes. It is typically assumed that states have a vested interest in the outcomes of disputes which involve their rivals, and many studies suggested that they may be tempted to intervene in order to weaken their adversary.

The conflict diffusion literature therefore suggests that conflict should be more likely to spread across rivalries which are linked to one another by alliance ties, shared borders or common enemies (Maoz 2011, Vasquez et al. 2011, Maoz 2006, Hammerstrom
and Birger 2002). While the conflict diffusion literature has not paid much attention to shared dispute linkages, it seems likely that they should also serve to increase the likelihood of conflict diffusion. For one thing, shared dispute linkages are formed by conflict diffusion. They arise when disputes that began in the context of one rivalry spread to involve third parties that are participants in another rivalry. Thus, the formation of a shared dispute linkage between two dyads provides evidence that the diffusion of conflict is possible between them. In addition, Diehl and Goertz (2000) assert that the occurrence of a shared dispute provides a good indication that the states involved in the two rivalries have interdependent security interests. They suggest that rivalries by linked by shared disputes are also likely to share common grievances and contentious issues, and that it is likely that additional complex disputes involving states form both dyads will continue to arise. For this reason, they assume that once shared dispute linkages are established, they remain in place until one of the two rivalries has come to an end. Following this reasoning, one would expect that disputes should be prone to spread between rivalries that are linked by shared dispute linkages.

In sum, the conflict diffusion literature proves an important insight into the ways in which rivalry linkages are likely to affect rivals’ conflict behavior. It suggests that these ties should serve to facilitate the spread of conflict across rivalries, thereby increasing the risk that rivalries will “catch” disputes that begin in other dyads, and that third parties will be drawn into their conflicts. These possibilities are examined empirically, by testing the following two hypotheses:

\textbf{H1:} \textit{Rivalries with larger numbers of rivalry linkages are more likely to experience militarized disputes.}
H2: Rivalries with larger numbers of rivalry linkages are more likely to experience complex militarized disputes.

Dispute Escalation

The arguments presented above, as well as those developed in the previous chapter, suggest that rivalries should become more likely to experience complex militarized disputes as they accumulate larger numbers of rivalry linkages. This consequence of rivalry linkage is potentially very important because a number of studies in the conflict literature have found that multiparty disputes are more difficult to resolve and more likely to escalate to the use of force (Gochman and Maoz 1984, Vasquez, Petersen and Wang 2004). This finding serves as the foundation for Diehl and Goertz’s assertion that linked rivalries should be longer lasting and more severe. Yet beyond citing these findings, Diehl and Goertz provide little in the way of a theoretical rationale for why linkages have these effects. Furthermore, in their empirical work, they do not actually test the assumptions that rivalry linkages lead to more complex disputes, or that complex disputes escalate to higher levels of hostility. Instead, their focus is simply on demonstrating that rivalries with larger numbers of linkages experience higher levels of conflict. This is unfortunate, because the conflict literature does suggest a number of reasons for why multiparty disputes are especially conflict-prone, and these in turn offer important insights into how the accumulation of linkages might influence rivals’ conflict behavior.

First, Gochman and Maoz suggest that one of the reasons why multiparty disputes tend to be more likely to escalate to the use of force is because they typically involve a
greater aggregation of military capabilities. War is often averted, especially in minor-power disputes, simply because the states involved lack the military capabilities necessary to sustain a full-scale war. Potential attackers may lack strong offensive military forces, or are deterred by obstacles like mountains, deserts, or rivers which limit their ability to project military against their adversary. However, since dispute joiners tend to be great powers or states which border one of the disputants, they often bring with them military resources—such as ships, transport aircraft or military access rights through nearby territory—that can make large-scale military conflicts easier to sustain. For this reason, Gochman and Maoz suggest that the more parties involved in a dispute, the more likely it is that the dispute will result in war. This argument is particularly relevant for disputes which expand because of rivalry linkages because linkages tend to connect minor power rivalries to those involving great power patrons.

Second, there are also many studies which suggest that conflict resolution is likely to become more difficult as the number of parties increases (Wagner 2000, Leeds 2003). Each new disputant enters a conflict with their own goals and objectives, and may object to agreements which would have satisfied the original parties. Since the peaceful settlement of disputes often requires at least the tacit support of all militarized parties, this means dispute joiners can act as veto players, and delay conflict resolution until their own goals are obtained. In doing so, they effectively reduce the “issue space” available for a peaceful settlement. This dynamic is summarized nicely by Vasquez, Petersen and Wang (2010, 89):

In multiparty disputes, all are held hostage to the actor that is most intransigent or least able to sign an agreement, so long as all seek to remain within this coalition.
Therefore, disputes involving more than two states might be less likely to be resolved prior to the escalation to war (if in fact the addition of third parties reduces the common ground) and thus more likely to lead to war than disputes between two parties.

Consequently, one would expect that disputes which occur within rivalries that possess linkages to other ongoing conflicts should generally be more difficult to resolve because they are more likely to become complex.

Finally, the involvement of third parties also tends to increase decision-makers’ uncertainty about the future (Gochman and Maoz 1984). When states become involved in militarized disputes, their leaders must make calculations about their adversary’s capabilities and objectives, and try to anticipate how others will react to different conflict trajectories. For example, policymakers must try to determine whether their opponents will back down in the face of coercive threats or whether alliance partners will honor their commitments and join the dispute should it escalate to war. These tasks are likely become much more difficult as the number of disputants grows, and this results in greater uncertainty about where the dispute will lead. Many studies in the literature on multiparty disputes assert that the increase uncertainty associated with dispute expansion results in greater risk that the dispute will escalate to war, because it becomes more likely that disputants will make mistakes and arrive at incorrect assessments of others’ intentions, capabilities or resolve (Vasquez, Petersen and Wang 2011).

In addition, this uncertainty is likely to be especially dangerous in the context of international rivalries because rivals tend to respond to uncertainty with hyper-vigilance (Colaresi, Rasler and Thompson 2007). The history of past conflicts with the rival often lead policymakers to assume the worst about their adversary’s intentions, and to develop “enduring enemy images” of suspicion and mistrust (Aggestam 1997, 778). Furthermore,
when states become involved in rivalries, they tend to adopt new institutions and policies designed to facilitate a more militarized approach to foreign policy. These changes tend to strengthen the domestic political position of hawkish elites and make it more likely that force will be used in subsequent confrontations (Colaresi 2005). Consequently, involvement in rivalry tends to create a policymaking environment in which leaders are more likely to interpret ambiguous situations in a more threatening manner, and to respond to anticipated threats with the use of force.

The literature on multiparty disputes therefore provides a number of reasons why complex disputes should be more likely to escalate to war than disputes which remain dyadic. Provided that rivalry linkages increase the risk that rivals will experience complex MID$s$, as suggested in the previous section, these arguments support Diehl and Goertz's (2000) claim that rivalries which accumulate larger number of linkages should tend to experience higher levels of conflict and hostility. However, given that rivalry linkages are believed to establish enduring patterns of third party involvement, it also seems plausible that the formation of linkages may have an effect on rivals’ interactions in the periods between disputes and in subsequent disputes which do not become complex. In other words, it seems reasonable to expect that rivals probably do not forget about dispute joining by third parties once the complex MID has come to an end. As long as the linkages remain in place, rivals are likely to expect that third parties may become involved in future disputes and should take this possibility into account in their foreign policy. Thus, even though some disputes that occur within linked rivalries may remain dyadic in nature (that is, they are not joined), the presence of rivalry linkages (and the memory of past dispute joining) may still have important effects on dispute behavior.
In particular, I argue that the expectation that MIDs may be joined by third parties should serve to promote dispute escalation, for several reasons. First, if a rival state believes that third party would be likely to intervene if the dispute were to escalate, and that this intervention would increase their odds of resolving the dispute in a favorable way (as would be the case if it had a powerful ally or a patron), then one would expect that they would be more likely to behave aggressively or escalate the conflict, because they could be more confident that their adversaries would back down. Thus, rivals may behave more aggressively in dyadic disputes because they believe that it will be joined by their allies in the future. Conversely, Valeriano (2008) also suggests that rivalry linkages may provide rival states with an incentive to escalate disputes in order to discourage third parties from intervening. When states have several different rivals, and when these rivalries are linked by alliance ties or shared disputes, they fear that their other enemies will attempt to join a dispute in order to take advantage of their perceived weakness. In these situations, Valeriano argues that states may have an incentive behave aggressively while the dispute is still dyadic in order to demonstrate their military capabilities or resolve. Thus, states may also escalate a dispute in to order to discourage their enemies from joining. Finally, the literature on multiparty disputes suggests that, in the context of rivalry, the uncertainty which linkages create for policymakers may encourage them to react more quickly and aggressively to ambiguous situations. Consequently, linkages may promote escalation because both sides fear that the dispute is going to be joined by others, even if those fears are never ultimately realized.

These processes can be seen at work in the disputes which occurred as part for the rivalries between Israel and its Arab neighbors. During the 1948 Arab-
Israeli War, Egypt, Jordan, Iraq, and Syria, fought together against Israel, thereby establishing a shared dispute linkage between four different dyadic rivalries.

Within the context of this initial dispute, the involvement of multiple states helped to increase the level of hostility and promoted the escalation of the conflict. However, since war also established a set enduring rivalry linkages, the prospect of third party involvement remained an important concern for Israel in subsequent disputes with its Arab rivals. For example, when Israel became involved in dyadic disputes with Egypt in the 1970s or with Iraq in the early 1980s, Israeli policymakers were deeply concerned about the possibility that the dispute would be joined by their other Arab rivals. For this reason, they underwent extensive military mobilizations during both series of disputes in preparation for a multilateral war, and also issued deterrent threats to other Arab states in order to discourage them from getting involved (Dror 2011). In the dispute that later become known as the Six Day War, Israel even attacked potential Arab joiners preemptively, and chose to begin what they believed was an inevitable multilateral war on their own terms. Conversely, Arab states, like Syria and Egypt, often behaved more aggressively towards Israel (which was generally much more powerful than them militarily), because they believed that support from third parties would enable to them to win a military conflict.

The experiences of Israel suggest rivalry linkages may be dangerous for at least two reasons. First, as proposed by Diehl and Goertz (2000), they may encourage the occurrence of complex MIDs, which tend to be more prone to escalate to war than dyadic MIDs. However, the formation of linkages also creates expectations about likelihood that
third party involvement in dyadic disputes. Even when these disputes do not actually expand, rivalry linkages may still contribute to the risk of escalation because they create uncertainty about the future and provide incentives for states to behave aggressively. As a result, linkages can be expected to exert indirect effect on the risk of war, which is expressed through their tendency to produce multiparty disputes, as well as a direct effect, which should be observable even when one controls for conflict expansion. These expectations are investigated empirically by testing the following two hypotheses:

H3: Complex militarized disputes are more likely to escalate to war.

H4: As the number of rivalry linkages increases, the risk that militarized disputes will escalate to war will increase.

Data and Methods

This chapter contains two sets of empirical analyses. In the first set of analyses, I test hypotheses H1 and H2 by examining the effects of rivalry linkages on the probability of MID onset and MID expansion. In the second set of analyses, I test hypotheses H3 and H4 by examining how dispute expansion and the number rivalry linkages affect the probability of a MID eventually escalating to war. In both sets of analyses, I employ two-stage bivariate probit models in which dispute onset serves as the dependent variable in the first stage.

I use a two-stage model because of the possibility of selection bias, which arises when one attempts to estimate a model using a non-random sample. Selection bias is a potential problem in my analyses because dyads can only experience dispute expansion or escalation while already in the midst of an ongoing militarized dispute. Consequently,
the process by which disputes arise can be said to have selected those dyads years which become at risk of dispute expansion or escalation. If one attempted to estimate a model of either dispute expansion or escalation without also estimating a model of dispute onset, one would essentially be subsuming the unobserved effects of any variables which would be included the dispute onset model into the error term of the dispute expansion or expansion models (Senese and Vasquez 2007, 84). Furthermore, if the error terms of these models were significantly correlated with one another (which is likely, given that rivalry linkages are expected to play an important role in both stages), then the coefficient estimates of the latter could be biased (Heckman 1979, Greene 2000). For these reasons, I estimate the effects of rivalry linkages on dispute onset and expansion, as well as on dispute onset and escalation using bivariate probit models. Bivariate probit models have been used by a number of studies in the conflict literature (Senese and Vasquez 2007, Kimball 2006, Reed 2000) to account for selection when both stages of the equation entail dichotomous dependent variables.

The unit of analysis is the rivalry dyad-year, and the sample includes all rivalry dyad-years for the period 1816-2001. I focus on rivalry dyads for two reasons. First, many of the theoretical arguments above are developed with the assumption that states are engaged in an ongoing rivalry, and treat the presence of rivalry relationship as a background condition that is always assumed to be present. In this regard, there are good reasons to expect patterns of dispute expansion and escalation are likely to be different outside of the rivalry context, and so it would likely be inappropriate to generalize many of these claims to apply to dyads outside of the population of international rivalries. Second, I am also constrained by data limitations that result from the way rivalry linkages
are coded. By definition, a dyad can only possess rivalry linkages while it is in a state of rivalry and a part of the larger rivalry system. If a rivalry ends, then that dyad exits the rivalry system and the linkages are severed. Since rivalry linkages are my primary explanatory variable and present in every model, this limits the study to the consideration of only rivalry dyads. The data used for these analyses are drawn from a variety of sources. The dependent variables—dispute onset, dispute expansion and escalation to war—are all dichotomous. Dispute onset is coded as 1 during all dyad-years in which a MID is ongoing while escalation to war is coded as 1 during all dyad-years in which hostility levels for a dispute have reached the level of war. Dispute expansion is coded as 1 when a MID s joined is joined by a third-party and lasts until the dispute ends or all third party joiners have stopped participating in the MID. All of the dependent variables are created using the COW MID data (version 3.10) (Ghosn, Palmer and Bremer 2004).

Dispute onset is the dependent variable in the first stage of both sets of analyses. There are seven independent variables in this stage of the model. Rivalry linkages is the primary variable of interest for my hypotheses. It records the number of active linkages between the dyad and other ongoing rivalries. It sums the number of four types of linkages based on the presence of contiguity, alliances, common enemies and shared disputes between rivalry dyads. The number of rivalry linkages increases whenever two rivalries form a connection, such as through the creation of an alliance, or when a new rivalry forms in a dyad that is already linked to an ongoing rivalry, such as through contiguity. The number of linkages decreases whenever these ties are severed, such as when an alliance is terminated, or when one of the linked rivalries comes to an end. I also control for six control variables commonly included in models of international conflict.
Joint democracy and allies are dichotomous variables which are coded 1 when both states in the dyad are democracies (a polity score of 14 or greater on a 0 to 20 scale) and when both states in the alliance have an active military alliance according to the COW formal alliance data (Small and Singer 1969, Gibler and Sarkees 2004), respectively. I do not distinguish between different types of alliances. Following Senese and Vasquez (2008, 91), I measure economic development as the natural log of energy production per capita as recorded by the COW national capabilities data, and use the values from the less-developed state in the dyad. Contiguity is a dummy variable which indicates whether states in the dyad share a land border according to the COW direct contiguity data. Major-major is coded as 1 when the dyad-year contains two major powers, while minor-minor is coded as 1 when the dyad-year contains two minor powers. Mixed dyads, which contain one major power and one minor power, serve as the reference category. Finally, I also control for temporal dependence by using the cubic spline technique developed by Beck, Katz and Tucker (1998), and include the variable peace years in the first stage of the model. Peace years records the number of years since the end of the most recent militarized dispute between the two states in the dyad. It was created using Bennett and Stam’s (2000) EUGene software (version 3.204).

For the first set of analyses, the dependent variable in the second stage of the model is dispute expansion. Here, I include rivalry linkages as well as all six of the control variables from the first stage of the model, as well as three dichotomous variables—territory, policy, and regime—which are coded as 1 if the dispute involved those particular issues. If a dispute involved multiple issues, or if there were multiple disputes about different issues during the same year, each of the relevant issue variables
was coded as 1 for the dyad-year. Data for these variables are taken from the COW MID data, and disputes over issues labeled as “other” serve as the reference category.

In the second set of analyses, *escalation to war* serves as the dependent variable in the second stage. This stage of the model includes the *rivalry linkages* variable as well as the six conflict variables from the first stage. However, in order to test hypothesis H4, I also include dispute expansion as an independent variable, which is included as a control alongside dispute characteristics. Dispute expansion is dichotomous and is coded 1 for all dyad-years in which there is an ongoing MID that involves more than two participants and 0 otherwise. In some cases disputes become complex during the same year that the dispute began. It is expected that disputes which become complex will be more likely to escalate to war. Descriptive statistics for all of the variables included in both models are presented in Table 4.1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observatio</th>
<th>Mean</th>
<th>Std.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
</table>

Table 4.1: Summary Statistics (Rivalry Dyad-Years, 1816-2001)
<table>
<thead>
<tr>
<th></th>
<th>ns</th>
<th>Deviation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispute Ongoing</td>
<td>3,761</td>
<td>0.15</td>
<td>0.27</td>
<td>0</td>
</tr>
<tr>
<td>Dispute Expansion</td>
<td>3,761</td>
<td>0.0</td>
<td>0.33</td>
<td>0</td>
</tr>
<tr>
<td>War Onset</td>
<td>3,761</td>
<td>0.06</td>
<td>2.27</td>
<td>0</td>
</tr>
<tr>
<td>Rivalry Linages</td>
<td>3,761</td>
<td>3.30</td>
<td>1.39</td>
<td>0.002</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>3,761</td>
<td>3.65</td>
<td>2.25</td>
<td>0</td>
</tr>
<tr>
<td>Allies</td>
<td>3,761</td>
<td>10.50</td>
<td>7.34</td>
<td>0</td>
</tr>
<tr>
<td>Economic Development</td>
<td>3,761</td>
<td>7.87</td>
<td>0.98</td>
<td>5.04</td>
</tr>
<tr>
<td>Contiguity</td>
<td>3,761</td>
<td>0.03</td>
<td>89</td>
<td>-0.98</td>
</tr>
<tr>
<td>Major-Major Status</td>
<td>3,761</td>
<td>-0.04</td>
<td>6.86</td>
<td>-10</td>
</tr>
<tr>
<td>Minor-Minor Status</td>
<td>3,761</td>
<td>1.45</td>
<td>4.20</td>
<td>0</td>
</tr>
<tr>
<td>Territory MID</td>
<td>3,761</td>
<td>6.81</td>
<td>2.55</td>
<td>0</td>
</tr>
<tr>
<td>Regime MID</td>
<td>3,761</td>
<td>0.50</td>
<td>0.50</td>
<td>0</td>
</tr>
<tr>
<td>Policy MID</td>
<td>3,761</td>
<td>3.48</td>
<td>3.70</td>
<td>0</td>
</tr>
</tbody>
</table>

**Empirical Results**

I begin by providing a test of hypotheses H1 and H2 in Table 4.2, which reports
the results of a bivariate probit model. The marginal effects of changes in the number of rivalry linkages on the probability of dispute onset and dispute expansion are presented in Table 4. The results of Model 1 provide strong support for both hypotheses, as the number of rivalry linkages has a significant and positive effect on the probability that new disputes will occur and that they will be joined by other states. On average, for each additional linkage that a rivalry forms with another rivalrous dyad, the probability of a new dispute occurring during that year increases by about 0.01 which translates to about a 3% increase in the baseline probability of a dispute. This effect may seem small, but given that linkage formation tends to occur in clusters with rivalries often forming two or three linkages at the same time, the impact of linkage on conflict propensity can be quite substantial. For a rivalry with 40 linkages, the highest number of linkages observed in the sample, the probability of a dispute in a given year is 0.58, which is nearly twice the baseline probability. Or in other words, while the average rivalry can expect to experience about 3 militarized disputes every 10 years, the most densely linked rivalries can expect to experience about 6.

Table 4.2: Bivariate Probit Estimates of Dispute Onset and Expansion

<table>
<thead>
<tr>
<th>Variables in Model</th>
<th>Bivariate Probit 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

120
### $Y_1$: MID Onset

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivalry Linkages</td>
<td>0.026***</td>
<td>(0.007)</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>0.454**</td>
<td>(0.186)</td>
</tr>
<tr>
<td>Allies</td>
<td>-0.360***</td>
<td>(0.138)</td>
</tr>
<tr>
<td>Economic Development</td>
<td>-0.081***</td>
<td>(0.020)</td>
</tr>
<tr>
<td>Contiguity</td>
<td>0.201</td>
<td>(0.124)</td>
</tr>
<tr>
<td>Major-Major Status</td>
<td>0.058</td>
<td>(0.176)</td>
</tr>
<tr>
<td>Minor-Minor Status</td>
<td>-0.215*</td>
<td>(0.122)</td>
</tr>
<tr>
<td>Peace Years$^a$</td>
<td>-1.883***</td>
<td>(0.485)</td>
</tr>
</tbody>
</table>

### $Y_2$: MID Expansion

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivalry Linkages</td>
<td>0.043***</td>
<td>(0.007)</td>
</tr>
<tr>
<td>Territory MID$^b$</td>
<td>0.558***</td>
<td>(0.165)</td>
</tr>
<tr>
<td>Policy MID$^b$</td>
<td>0.319**</td>
<td>(0.147)</td>
</tr>
<tr>
<td>Regime MID$^b$</td>
<td>0.867***</td>
<td>(0.187)</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>0.173</td>
<td>(0.255)</td>
</tr>
<tr>
<td>Allies</td>
<td>-0.160</td>
<td>(0.190)</td>
</tr>
<tr>
<td>Economic Development</td>
<td>-0.088***</td>
<td>(0.027)</td>
</tr>
<tr>
<td>Contiguity</td>
<td>-0.358</td>
<td>(0.226)</td>
</tr>
<tr>
<td>Major-Major Status</td>
<td>0.382*</td>
<td>(0.230)</td>
</tr>
<tr>
<td>Minor-Minor Status</td>
<td>-0.328</td>
<td>(0.254)</td>
</tr>
</tbody>
</table>

| ρ                   | 0.999 (0.0003) |
| Wald $\chi^2$       | 288.26***     |
| N                   | 3,615         |

Note: *p<.10, **p<.05, ***p<.01. Robust standard errors in parentheses.

$^a$ The spline coefficients are not reported.

$^b$ As compared to the reference category of MIDs regarding “other” issues.

The results from the second stage of Model 1 indicate that rivalry linkages have
an even greater effect on dispute expansion. When disputes occur, each additional rivalry linkages increase probability of dispute expansion by about 1.3% on average. While the disputes that occur within rivalries that have an average number of linkages have about 0.32 probability of being joined by other states, this increases to about an 0.82 probability when the number of linkages is increased to its maximum. Thus, it appears that the more external linkages that rivalries develop, the more likely they are to experience new militarized disputes, and when these disputes occur, they are much more likely to become complex.

I provide a test of hypotheses H3 and H4 in Table 4.3, which presents the results of a second bivariate probit model. In this model, the outbreak of war serves as the dependent variable, while dispute expansion serves an independent variable, in the second stage of the model. Once again, dispute onset serves as the dependent variable in the first stage of the model in order to control for the possibility of selection effects. In the first stage of the model, the results indicate that the number of linkages has a significant positive effect on the probability of dispute onset, with each additional linkage again increasing the probability of a new MID occurring by about 0.01 during a given year. This is consistent with the results of Model 1 and supportive of hypothesis H1. The results from the second stage of the model provide support for hypotheses H3 and H4, finding that both rivalry linkages and complex MID have significant positive impacts on the probability that disputes will escalate to war. Consistent with the arguments of Diehl and Goertz (2000), and the findings of Gochman and Maoz (1984), disputes which become complex appear to be much more likely to escalate to war than disputes which remain dyadic. On average, when dispute participation expands beyond two disputants,
the risk of war increases by about 138% relative to the baseline. The results of Model 2 also indicate that rivalry linkages increase the risk of war, even when one controls for the effects of dispute expansion. On average, each additional rivalry linkage increases the risk that disputes will escalate to war by about 5.6%. This effect is particularly significant when one considers that this increase in the risk of war is observed in each new dispute that occurs in the rivalry for as long as the linkages remain in place.

<table>
<thead>
<tr>
<th>Variables in Model</th>
<th>Bivariate Probit 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>( Y_{1} ): MID Onset</td>
<td>Bivariate Probit 2</td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Rivalry Linkages</td>
<td>0.032***</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>0.392**</td>
</tr>
<tr>
<td>Allies</td>
<td>-0.203</td>
</tr>
<tr>
<td>Economic Development</td>
<td>-0.103***</td>
</tr>
<tr>
<td>Contiguity</td>
<td>-0.028</td>
</tr>
<tr>
<td>Major-Major Status</td>
<td>0.192</td>
</tr>
<tr>
<td>Minor-Minor Status</td>
<td>-0.216</td>
</tr>
<tr>
<td>Peace Years^a</td>
<td>-0.600***</td>
</tr>
</tbody>
</table>

**Y_2:** War Onset

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivalry Linkages</td>
<td>0.038***</td>
<td>(0.010)</td>
</tr>
<tr>
<td>Dispute Expansion</td>
<td>1.205***</td>
<td>(0.212)</td>
</tr>
<tr>
<td>Territory MID^b</td>
<td>0.835***</td>
<td>(0.158)</td>
</tr>
<tr>
<td>Policy MID^b</td>
<td>0.337*</td>
<td>(0.190)</td>
</tr>
<tr>
<td>Regime MID^b</td>
<td>0.095</td>
<td>(0.469)</td>
</tr>
<tr>
<td>Joint Democracy</td>
<td>0.302</td>
<td>(0.436)</td>
</tr>
<tr>
<td>Allies</td>
<td>-0.212</td>
<td>(0.176)</td>
</tr>
<tr>
<td>Economic Development</td>
<td>-0.316***</td>
<td>(0.091)</td>
</tr>
<tr>
<td>Contiguity</td>
<td>-0.014</td>
<td>(0.159)</td>
</tr>
<tr>
<td>Major-Major Status</td>
<td>0.552**</td>
<td>(0.183)</td>
</tr>
<tr>
<td>Minor-Minor Status</td>
<td>-0.482**</td>
<td>(0.287)</td>
</tr>
</tbody>
</table>

| ρ                               | 0.276 (0.107)|
| Wald $\chi^2$                  | 7623.95***   |
| N                               | 3,615        |

Note: *p<.10, **p<.05, ***p<.01. Robust standard errors in parentheses.
^a The spline coefficients are not reported. ^b As compared to the reference category of MIDs regarding “other” issues.

The effects of most of the control variables in Models 1 and 2 are consistent with those observed in other empirical models in the conflict literature. In regards to the
dispute onset stage, both models indicate that disputes are less likely to occur between rivals that are allied with one another or less developed economically, and when there has been longer period of peaceful interactions. These findings fit well with the results of previous studies of dispute onset. In regards to the dispute expansion stage of Model 1, the results indicate that disputes are more likely to be joined by others when they dealt with regime issues, or when they involved major powers or states that possessed a higher level of economic development. This is consistent with the findings of Gochman and Maoz (1984) and Mousseau (1997) as well as with the results produced by the analyses conducted in Chapter 3. In regards to the dispute escalation stage of Model 2, disputes were found to be more likely to escalate to war when they dealt with territorial issues, or involved states that were major powers or that were more economically developed. These findings accord with those produced by research on the steps-to-war (Vasquez 1993; Senese and Vasquez 2008) as well as with many other studies in the conflict literature which suggest that territory and power play prominent roles in the dispute escalation process (Bremer 1992).

However, there were two control variables—contiguity and joint democracy—which did not perform as expected. First, the results of both models indicate that contiguity did not have a significant effect on the probability of dispute onset, escalation or expansion. This is surprising because territorial contiguity is generally seen as being one of the most important factors influencing the risk of militarized conflict between pairs of states, as it provides a measure whether two states have the opportunity or ability to fight one another. Second, the results both models also suggest that jointly democratic dyads were more likely to experience militarized disputes, although there was no
relationship between *joint democracy* and the risk of dispute expansion or escalation to war. This finding runs contrary to the expectations of the democratic peace literature, which argues the relations between jointly democratic dyads should generally be more peaceful than the relations between mixed or jointly autocratic dyads (Bremer 1992; Maoz and Russett 1993; Rousseau et al. 1996).

What accounts for these strange findings? At this point any potential explanations would necessarily be tentative and post-hoc, but it plausible that these results are driven largely by the fact that the sample employed by this study is comprised solely of rivalry dyads. Rivalry dyads are likely to differ from the general population of dyads in a number of ways. For one thing, most rivalries (approximately 60% of the dyads in the sample) involve states that are contiguous, a much higher rate of contiguity than found in the general population. In addition, it seems plausible that most non-contiguous states that become rivals do so because they already possess the capacity to fight one another. Thus, contiguity may not be as effective as a means of controlling for states’ opportunity to fight when using a sample comprised of rivalry dyads. Likewise, the sample contains relatively few jointly democratic dyads, and most of these arise because of the occurrence of a democratic transition in a rivalry that began between states that were not jointly democratic. In most cases, it appears that democratic transitions tend to shorten rivalries and help to them to an end (Prins and Daxecker 2005). However, in those cases where rivalries endure after a democratic transition, it is often because the democratic regime fails to become consolidated and the state eventually reverts back to autocracy. So, for example, in the Indo-Pakistani rivalry, India has consistently been classified by the Polity IV data as being democratic throughout the duration of the rivalry. Pakistan began the
rivalry as an autocratic state, but has experienced two democratic transitions, which led Polity to classify it as democratic for much of the 1970s and 1990s. During these periods, the Pakistani military continued to wield considerable political power, and Pakistan continued to have frequent militarized disputes with India, including one war\(^\text{18}\). Both periods of democracy came to an end because of military coups. Thus, it is possible that the greater dispute propensity for jointly democratic rivalries really reflects the effects of recent regime changes and domestic political instability, both of which have been linked to the onset of MIDs.

Ultimately, however, the questions of how changes in domestic political institutions affect relations between rivals, and how the effects of conflict determinants may change in the context of rivalry relationships, remain important areas for future research. I have included them in the models here in order to facilitate comparisons with the results of other conflict studies, and because I believe the counterintuitive results are important and worth reporting. In addition, it is also important to point out that other studies have produced similarly null or weak findings in regards to contiguity and joint democracy. For example, Diehl and Goertz (2001, 121) find that the development of joint democracy has no significant effect on rivals’ conflict behavior until the final stages of the rivalry. Likewise, Rasler and Thompson (2006) find that while contiguity greatly increased the risk of war among dyads in general, among rivals, contiguity had a much smaller effect, unless the rivals also shared a territorial dispute.

\(^{18}\) It is sometimes debated whether or not the Kargil War, which occurred in 1994, constitutes an example of a war between two democracies. Many scholars contend that it is not, either because democratic regime had not yet been consolidated or because it did not truly control Pakistani combatants (Ganguly 2001). However, the fact remains that according to the Polity data, the Indo-Pakistani dyad was jointly democratic during this time.
Future studies would do well to examine why the effects associated with these two important determinants of conflict appear to change when one examines them within the context for rivalry relationships.

In sum, the results of Models 1 and 2 provide support for all four hypotheses, although they also raise additional questions about how to best model conflict processes between rivals. The results indicate that as rivalries accumulate greater numbers of rivalry linkages, they face greater risk of experiencing new militarized disputes, and that when these disputes occur, they are more likely to be joined by other states and to escalate to war. Thus, these results suggest that formation of rivalry linkages has a substantial impact conflict behavior between rivals. The substantive effects of linkage formation are illustrated in Table 4.4, which presents the changes in the predicted probabilities of dispute onset, escalation and expansion to war at different values for different values of the explanatory variables.

### Table 4.4: Changes in Predicted Probabilities of Dispute Onset, Expansion and Escalation to War

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dispute Onset</th>
<th>Dispute Expansion</th>
<th>Dispute Onset</th>
<th>Dispute Escalation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td></td>
<td>Model 2</td>
<td></td>
</tr>
</tbody>
</table>

128
The effects of linkage formation are also further illustrated in Table 4.5, which displays the distribution of militarized disputes and wars observed across rivalries with varying numbers of rivalry linkages as well as the number that one would have expected.
to observe by chance. This table shows that rivalries with low numbers of linkages experienced fewer MIDs, and that fewer of these MIDs became complex or escalated to war, than would have been expected by chance. Conversely, rivalries with a large number of active linkages generally experienced more conflict than would have been expected if linkages had no effect on rivals' behavior. For example, while rivalries with 0 linkages would have been expected by chance to experience about 30 dyad-years which included MIDs, they experienced only 18. Likewise, they would have been expected by chance to have experienced about 16 dyad-years of with complex MIDs and about 14 dyad-years of war, but experienced only 3 and 6 dyad years of each, respectively. Thus, isolated rivalries appear to be less dispute-prone, have fewer complex MIDs and experience fewer wars. Conversely, the most highly linked rivalries experience about twice as many dyad-years of disputes as would be expected by chance and almost four times as many dyad-years of war.

<table>
<thead>
<tr>
<th>Number of Rivalry Linkages (Number of dyad-years)</th>
<th>MID (Expected)</th>
<th>Complex MID (Expected)</th>
<th>War (Expected)</th>
</tr>
</thead>
</table>

Table 4.5: Observed and Expected Frequencies of Dyad-Years with MIDs, Complex MIDs and War by the Number of Rivalry Linkages
<table>
<thead>
<tr>
<th>Linkages Range</th>
<th>N</th>
<th>Cases</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 linkages</td>
<td>201</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>1 to 10 linkages</td>
<td>2,295</td>
<td>267</td>
<td>141</td>
</tr>
<tr>
<td>11 to 20 linkages</td>
<td>786</td>
<td>172</td>
<td>96</td>
</tr>
<tr>
<td>21 to 30 linkages</td>
<td>396</td>
<td>89</td>
<td>46</td>
</tr>
<tr>
<td>31 to 40 linkages</td>
<td>83</td>
<td>23</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>3,761</td>
<td>569</td>
<td>292</td>
</tr>
</tbody>
</table>

Pearson Chi-Squared: 82.597*** 49.424*** 68.488***

**Conclusion**

In this chapter, I sought to accomplish three major goals. First, I endeavored to test several common assumptions about the impact of rivalry linkages on rivals' dispute
behavior. While previous studies proceeded on the basis of the assumption that rivalry linkages encouraged dispute expansion and that complex MIDs were more likely than other disputes between rivals to escalate to war, these studies had not tested these claims. This chapter provides strong evidence that linkages do actually promote dispute expansion and that dispute expansion does have an effect on the risk of war. It therefore suggests that, despite inconsistent empirical results, previous studies were on the right track in regards to the connection between linkages and conflict. Second, I also sought to construct a more fully developed explanation of the effects of the accumulation of rivalry linkages on rivals’ conflict behavior. This explanation fleshed out the mechanisms linking third party conflicts to rivalry dynamics, and yielded a novel set of testable propositions about the impact of linkages on the risk of mid onset, and on the risk that dyadic (or in other words, non-complex) MIDs would escalate to war. Finally, I also sought to test my arguments about the effects of rivalry linkages, and those of previous studies, in a more methodologically sophisticated way. I constructed my measure of rivalry linkages in such a fashion that it took into account changes in the number of linkages over time, and my analyses made use of bivariate probit models in order to address the possibility of selection bias.

The results produced by my analyses lend strong support to my arguments about the effects of rivalry linkages. As rivalries accumulate larger numbers of ties to other conflicts, they face a greater probability of MID onset, expansion and escalation to war. The consistency of the effects associated with rivalry linkages suggests that they deserve an important place in models of rivalry development and of conflict processes more generally. To some extent, these results vindicate the claims of Diehl and Goertz (2000)
and show that many of their expectations about the effects of rivalry linkages were correct. They also demonstrate that these relationships hold for all forms of rivalry linkage, not just shared dispute linkages. However, these results suggest that scholars need to pay greater attention to the ways in which the number of active rivalry linkages changes over time and incorporate these dynamics into their theoretical arguments. Rather than being static features of the external environment which distinguish some rivalries from others, linkage formation can be better thought as a byproduct of the process by which all rivals compete with one another. As illustrated in this chapter, the extent to which this security competition results in the formation of rivalry linkages is likely to have important implications for the frequency and severity of the conflicts that rivals experience.

Future research could build on these findings in several ways. One possibility would be to examine how rivalry linkages affect other aspects of dispute behavior, such as the duration of disputes. Following the arguments developed here, it seems plausible that linkages should make MIDs more protracted and difficult to resolve since linkages reduce the issue-space available for negotiated settlements. Likewise, it may also be worthwhile to examine how the effects of rivalry linkages vary across different phases of the rivalry life-cycle. If conflict between rivals does tend to follow an escalatory pattern as several recent studies suggest, then one might expect that linkage formation would be especially dangerous when it links together older, more intense rivalries. Conversely, if the punctuated equilibrium models are correct, linkage would be most important during the early stages of rivalry when conditions are still uncertain and patterns of behavior have not yet been locked into place. It is also possible that the
formation of linkages might influence the process by which rivalries evolve, with densely-linked rivalries perhaps escalating more quickly than more isolated rivalries.

Further exploration of these extra-dyadic aspects of rivalry is likely to contribute significantly to our understanding of the processes that drive rivalry development. While rivalry research has made a significant advance in identifying and isolating the small number of dyads which account for most of the world's militarized conflict, we are only just now beginning to learn what it is that these dyads have in common and what ties them together. In demonstrating and the explaining the relationship between rivalry linkages and conflict, this chapter makes small but meaningful contribution to this task. With further work, scholars may gain insights necessary to begin to map these linkages, so that future Sarejevos can be identified and addressed before new conflicts emerge and spread.

CHAPTER V
DE-LINKING INTERNATIONAL RIVALRIES

Introduction
In 1989, following a series of meetings off the coast of Malta, President George H.W. Bush and Communist Party Secretary Mikhail Gorbachev made a public declaration announcing that the Cold War was over. In doing so, they brought a symbolic end to nearly fifty years of intense security competition between the United States and Soviet Union. Over the previous decades, both states had established far flung networks of alliances and military bases, supported proxy wars in places like Nicaragua and Angola, and intervened directly in conflicts to support client regimes in Vietnam and Afghanistan. With the Malta declaration, they seemed poised to make a dramatic shift in policy, moving away from a strategy predicated on global competition and rivalry towards one that emphasized cooperation as means of the primary means of dealing with disputes.

The termination of the US-Soviet rivalry had profound consequences for many other longstanding conflicts in the international system. Around the world, many American and Soviet clients experienced dramatic decreases in the levels of support that they received from their superpower patrons. Some, like the Barre regime in Somalia or the communist government in Afghanistan, quickly collapsed, as this loss of support left them unable to fend off domestic challengers. Others, like the Castro regime in Cuba, we were able to hold on to power, but were forced to severely limit their foreign policy endeavors. As a result, many of these client states were left unable or unwilling to continue participating in rivalries that they had maintained during the Cold War. Of the 26 enduring rivalries in which at least one participant had an alliance with the US or Soviet Union in 1989, 12 had come to an end by 1995.

The wave of rivalry terminations that followed the end of the Cold War provides a dramatic example of the potential effects of rivalry de-linking. If rivalry linkages serve to
facilitate security competition and exacerbate rivalry conflict, as the previous two chapters suggest, then it seems plausible that the termination of these linkages may help to shorten rivalry. As in the case of the Cold War, the de-linking of great power rivalries from those of their minor power clients can interrupt the flow of aid and support to these conflicts, and remove a potential point of confrontation between great powers. In addition, de-linking may make also it easier to resolve regional security issues or prevent the spread of conflicts across rivalries. Consequently, the study of de-linking points to one of the most important policy implications of research on rivalry linkages, as it suggests that by finding ways to disconnect rivalries, policymakers may be able to bring some of them to an end.

In this chapter, I examine the effects of de-linking on the duration of international rivalries. In doing so, I turn my attention to a new dependent variable, rivalry termination, which has yet to be examined by linkage research. In the next section, I begin by briefly reviewing the expectations of past research in regards to the likely effects of rivalry de-linking. Most of this research suggests that de-linking should tend to lengthen rivalry because it frees up foreign policy resources which states can redirect towards competition with their primary enemies. I then present my own set of arguments drawn from the theoretical claims about the causes and consequences of rivalry linkages that were developed in the previous two chapters. These arguments suggest that de-linking should shorten rivalry because it removes avenue for the diffusion of militarized disputes across rivalries and facilitates the diplomatic resolution of disputes. In addition, these arguments are also consistent with those of Diehl and Goertz (2000), who assert that de-linking should tend to shorten rivalry because it provides an exogenous shock which should serve
to disrupt the stability of rivalry relationships. In the third section of this paper, I discuss the data and methods that I use to assess the impact of de-linking on rivalry duration, while the fourth section presents the results of my analyses. In the fifth section, I conclude with a short discussion of the implications of these findings for rivalry research and for policymakers seeking ways to help bring rivalries to an end.

The Effects of De-Linking on Rivalry Duration

In regards to the effects of de-linking, most studies in the rivalry literature emphasize some variation of what Valeriano (2003, 163) describes as the “rivalry weariness” argument. According to this view, states are believed to possess a finite amount of foreign policy resources, some of which must be distributed across all of the conflicts in which the state is involved. Thus, these studies typically assume that the resources of states which are involved in multiple rivalries, or whose rivalries entail connections to many other ongoing conflicts, will be spread more thinly than those who can focus their attention on a smaller number of issues or enemies (Colaresi 2007).

From this perspective, de-linking essentially reduces the number of issues or enemies with which a state must be concerned. This is believed to help free up resources which states can then redirect towards security competition with their primary rivals. Consequently, de-linkage may make it easier for states to sustain their remaining rivalries, and thus increase rivalry duration. In this regard, states may even have an incentive to try to terminate rivalries or rivalry linkages in order to free up military or political resources for use against other enemies. For example, during the late 1800s, the British Empire sought to peacefully resolve outstanding colonial rivalries with minor
powers like China and the United States in order to better focus its attention on what was believed to be a much more serious major-power rivalry with Germany (Friedburg 1988). Had the British been unable to terminate these rivalries, it seems plausible that they might have found it more difficult to compete with Germany, and perhaps might have even been forced to drop out of the rivalry before the onset of World War I.

In addition, some studies working within the rivalry weariness perspective also argue that rivalry termination should become more likely as the number of linkages increases. This argument is based on the assumption that all states possess some sort of limit on the number of conflicts that they can be involved in at any given time. When states acquire new rivalries or when their rivalries become linked to other conflicts, this places additional demands on states' resources. As these demands accumulate they can force states to make tough decisions about their security priorities, perhaps even leading states to make concessions in order to terminate rivalries that they consider to be an unnecessary drain on their resources. Bennett (1996, 1998) casts this argument in terms of the security benefits of rivalry termination, which he suggests are greater for states that are involved in other ongoing rivalries and which face a greater number of external threats. He argues that rivalries are more likely to terminate when their participants are under greater levels of external threat and would therefore benefit more by ending their competition and shifting their resources elsewhere.

Thompson (1995, 201) makes a similar claim as part of his efforts to encourage to scholars to identify rivalries primarily in terms of decision makers’ perceptions rather than the occurrence of militarized disputes. He asserts that policymakers that are involved in ongoing conflicts with multiple enemies cannot take them all equally seriously.
Instead, they prioritize and rank their opponents, and devote greater attention to those that they consider the most important. Consequently, as states accumulate larger numbers of rivals, the less important rivalries are likely to deescalate or even lay dormant because policymakers have focused their attention elsewhere. For Thompson, this means that most approaches to identifying rivalry probably overestimate the number of conflicts that are active at any one time. Instead, he suggests researchers would be better off focusing only on those conflicts that policymakers consider to be their principal rivalries.

In sum, the rivalry weariness argument suggests that de-linking may increase rivalry duration because it frees up resources and reduces the costs of rivalry maintenance. Likewise, it also suggests that rivalries which accumulate more linkages should be at greater risk of termination because the states involved face greater demands on their resources.

However, there are some reasons to be skeptical of the claim that de-linking should tend to lengthen rivalry. For one thing, this argument has never been tested empirically, and the question of how rivalries are affected by changes in relationships with third party conflicts remains an open one. Furthermore, while many studies suggest that states can eventually become overwhelmed as they accumulate rivalries and become involved in greater numbers of conflict, few specify precisely what this state of rivalry weariness looks like, and there are no measures in place for assessing how many conflicts states are capable of managing at any one time. Thus, while there are few examples of states that seem to have grown weary of rivalry, such as Britain in the late nineteenth century or the Soviet Union in the late twentieth century, it is unclear just how pervasive the phenomenon of rivalry weariness is, or the extent to which these concerns influence
decision-makers. Indeed, one of the primary lessons of rivalry research is that these relationships tend to take on a life of their own, and that policymakers often pursue competition with rivals even when the costs of that competition appear to be unsustainable.\footnote{For example, Colaresi (2005) argues that high, or even seemingly unbearable, rivalry maintenance costs are not a sufficient cause for rivalry deescalation. Instead, he suggests that rivalry deescalation is likely only when high maintenance costs are combined with domestic political changes which create opportunities for dovish political elites to wrest control over foreign policy away from hardliners.}

In addition, there are also some studies which suggest that de-linking should increase the risk of rivalry termination. Goertz and Diehl (1995), for instance, argue that de-linking is a form of external political shock. External shocks are typically conceptualized as highly visible events which have an immediate impact on states that cannot be easily ignored by policymakers (Hermann 1990, 12). When external shocks occur, they force states to reconsider existing policies and can serve as the impetus for the making a major changes. For example, the onset of shocks like outbreak of the World War I, the collapse of the Soviet Union, or President Nixon’s visit to China, all brought about significant foreign policy adjustments in the states that they affected. Along these lines, rivalry de-linking is a shock which disconnects a rivalry from a third-party conflict. De-linking can result in the severing patron-client relationships, alter the balance of capabilities between rivals, or simply disrupt existing patterns of international interactions. Diehl and Goertz (1995) suggest these changes may potentially lead to either the de-escalation of the rivalry or to an increase in conflict, but in either case, de-linking is believed to increase volatility of rivals’ relations and make it more likely that the rivalry will terminate.

At the domestic level, de-linking, like other external shocks, is also believed to
open up windows of opportunity for policy-makers to make major changes in foreign policy. Here, Goertz and Diehl draw on work of policy-making scholars, such as Kingdon (1984) and Tucker (1982), who have argued that major policy changes are only possible during brief periods when the interests of major actors align in favor of change. Diehl and Goertz (2001) argue that external shocks help to facilitate changes in the rivalry relationship because they create uncertainty about the future and can disrupt the political coalitions which maintain the status quo. Consequently, domestic actors who seek to make major changes in foreign policy are expected to find it easier to do so in the aftermath of external political shocks. These arguments are also supported by Colaresi (2005, 23), who asserts that changes in third party relations frequently alter policymakers' expectations about the future costs of rivalry maintenance. He argues that when policymakers come to believe that the costs of rivalry will increase in the future, they are much more likely to seek ways of terminating the rivalry. Thus, de-linking may increase the risk of rivalry termination because it can remove some of the barriers which prevent domestic actors from making major shifts in their states’ foreign policies.

The arguments developed in the previous two chapters of this dissertation also suggest that de-linking should tend to shorten rivalry. Chapter 4 asserts that rivalry linkages serve to facilitate security competition between rival states by connecting them with allies and patrons who can provide them with competitive advantages, and perhaps even fight alongside them in militarized disputes. Consequently, it suggests that the disconnecting of rivalry linkages should generally tend to increase the costs of rivalry maintenance and make large-scale conflicts more difficult to sustain. If these increases in the costs of rivalry maintenance are great enough, then states should have an incentive to
pursue rivalry termination.

In a similar vein, Chapter 5 argues that, once in place, linkages contribute to the spread of militarized disputes across rivalries and increase the risk that third parties will become involved in rivals’ interactions. Linked rivalries are therefore expected to experience more conflict because they are prone to catch disputes which begin in other dyads. These disputes are also believed to be more likely to escalate because the involvement of third parties tends to make it easier to use force while also making it more difficult for states to achieve a negotiated resolution to the conflict. The empirical analyses conducted in Chapter 5 lend support to these claims, finding that the number of active rivalry linkages is significantly related to the risk of dispute onset, expansion and escalation. Given these findings, one would expect that de-linking should tend to reduce rivalry conflict and facilitate the peaceful resolution of disputes. Over time, these changes should result in an increased likelihood of rivalry termination, as rivals find it easier to cooperate and the use of force becomes less common.

As a result, there are strong reasons to suspect that de-linking should tend to shorten rivalry. De-linking creates an external shock that disrupts extant patterns of international interactions and can create opportunities for domestic actors to make major changes to the rivalry relationship. Thus, one would expect that risk of rivalry termination would be greater in the period shortly after de-linking than at other times. Furthermore, if, as chapters 4 and 5 suggest, rivalry linkages serve to facilitate security competition and make negotiated settlements more difficult to achieve, then one would also expect that

---

20 Here, my arguments draw on number of studies (such as Bueno de Mesquita 1983 or Gochman and Maoz 1984) linking the involvement of third parties to conflict escalation. For a more complete review of this literature, see Chapter 4.
rivalry termination should be less likely when there are more linkages in place. Or in other words, one would expect that rivalries which accumulate larger numbers of linkages should tend to last longer than rivalries which remain relatively isolated. I investigate these claims by testing the following two hypotheses:

H1: De-linking increases the risk of rivalry termination.

H2: As the number of rivalry linkages increases, the risk of rivalry termination will decrease.

**Data and Methods**

In order to test the four hypotheses presented above, I employ a dataset containing information about all 63 dyads identified by Diehl and Goertz (2000) as “enduring rivalries” for the period 1816-2000. For each rivalry, I include an observation for each year that the dyad remained in the rivalry. So, for example, France and Germany are considered by Goertz and Diehl to have been rivals between 1830 and 1940. I include an observation for each of those 110 years. Doing this for all enduring rivals results in a sample of approximately 3,761 observations, with the rivalry-dyad year serving as the unit of analysis.

I employ Cox proportional hazard models in order to investigate the relationship between de-linking and rivalry termination. This approach offers advantages over other methods, such as the use of logit, probit or grouped duration models, because it allows corrections for censoring, heterogeneity\(^{21}\) and the presence of multiple failures \(^{22}\).

---

\(^{21}\)In order to account for heterogeneity across panels, I estimate all models with robust standard errors clustered on the dyad.

\(^{22}\)There are some instances of multiple failures in the sample, in which a single dyad experiences more
Katz and Tucker 1998). It is also more flexible than other types of hazard models, such as Weibull models, because it is not specify a baseline hazard function before estimating the coefficients. Consequently, it does not make any a priori assumptions about the nature or shape of the hazard function. This is desirable because existing theory is not detailed enough to justify the specification of a particular hazard function in advance.

The dependent variable in Cox proportional hazard models is the hazard rate, or the risk of event failure at a given point in time. In all of the models estimated in this chapter, event failure is rivalry termination. Following the procedures developed by Diehl and Goertz (2000), rivalries are considered to have terminated during the same year as their last militarized dispute, provided that that dispute was not followed by another dispute during the next 10 years.

Rivalries that are still ongoing in the year 2000 are coded as continuing until the year of observation, but are not considered to have experienced event failure.

I measure the effects of rivalry linkages on the risk of rivalry termination using several different variables. As in previous chapters, rivalry linkages sums the number of four types of linkages based on the presence of contiguity, alliances, common enemies and shared disputes between rivalry dyads. I also include five dummy variables which capture the effects of particular de-linkage episodes. Rivalry de-linkage is coded as 1 for all dyad years in which at least one rivalry linkage is terminated. So for example, if two rivalries were linked by an alliance, then de-linking would occur during the year that the alliance expired. In many cases, de-linking occurs because one of the two rivalries has

---

than one rivalry and more than one instance of rivalry termination. For example, the Anglo-Russian dyad experiences a rivalry between 1876 and 1923, and again between 1940 and 1999.
been terminated. In these cases, all of the linkages which connected the two rivalries would be considered to have been de-linked during the year of termination. So, for instance, if two rivalries were linked by an alliance and a common border, and one of these rivalries was terminated, the other would have been considered to have experienced a de-linkage during that year.

In each of the models I also control for several factors identified by previous studies as likely predictors of rivalry duration. First, I control for five dyadic variables associated with rivalry characteristics. *Minimum democracy* records the composite democracy scores (taken from the Polity IV data) for the lower-scoring state in the dyad. It is created by subtracting the autocracy score values from the democracy score values and ranges from -10 to 10, with higher scores indicating higher levels of democracy. *Minimum development* is created in a similar fashion, by taking the level of economic development of the less developed state in the dyad. Since reliable gross domestic product data are not available for many countries for the period before 1950, economic development is measured as per capita energy consumption using Correlates of War (COW) project’s data on national material capabilities. Based on the findings of Prins and Daxecker (2007), it is expected that rivalries will be more likely to terminate as dyads become more democratic and more economically developed. *War* is simply a variable that records whether or not the two states in the rivalry dyad were at war with one another in a given year, according to the (COW) data set. Although there is some disagreement about whether wars should shorten or lengthen rivalry, most studies follow Goertz and Diehl (1995) in treating wars as a dyadic shock which should increase the risk of rivalry termination. I also control for *joint alliance* membership, with the expectation that rivals
which form alliances with one another are likely to experience a higher level of cooperation (at least while the alliance is in place) and should therefore be more likely to terminate their rivalries. Joint alliance is a dummy variable which is coded as 1 for years in which the two states in the rivalry dyad have an active defense pact with one another. Finally, many studies suggest that rivalries should be more likely to terminate when the distribution of power between adversaries becomes imbalanced, because stronger states will be more likely to succeed in their efforts to dominate weaker rivals. I therefore control for changes in the balance of power by first taking the COW Composite Index of National Capabilities (CINC) score of the weaker state and dividing it by the score of the stronger state (Stinnett and Diehl 2001). This produces a ratio that ranges from 0 (preponderance) to 1 (parity). To capture changes from one year to the next, I take the difference between this ratio in the current year and this ratio in the previous year. Rivalries are anticipated to be more likely to end when adversaries become more unequal in power.

Second, using procedures described by Stinnett and Diehl (2001), I also create three dummy variables which capture the effects of three different kinds of systemic shocks—world wars, shifts in the distribution of power, and dramatic territorial changes—that could increase the risk of rivalry termination. The first variable, world war, captures the effects of an ongoing world war. It is coded as 1 for all dyads during the years of World War I and World War II (1914-1918 and 1939-1945) and 0 otherwise. Both world wars were major international conflicts which disrupted international relationships and contributed to the termination of a number of rivalries (such as the Anglo-German and Franco-Turkish rivalries). The second variable, power shift, is a
dummy variable that indicates when there has “a pronounced and sustained shift in the
distribution of military capabilities” according to Stinnett and Diehl (2001, 730). This
variable is coded by Stinnett and Diehl as affecting all dyads for the years 1890-1901 and
1989-1992. It is expected that rivalries will be more likely to terminate during periods
when the distribution of power is shifting, because these changes alter the strategic
environment in which rivalries operate, and can disrupt patterns of alliances or change
states’ perceptions of who they consider to be threats. Finally, the variable territory shock
captures major changes in the distribution of territory. These changes often coincide with
the end of rivalries because they settle territorial disputes or create buffer states which
stand in between rivals that were once contiguous. According to Stinnett and Diehl
(2001, 730), territory shocks are considered to take place whenever “eight or more major
territorial changes occur, totaling at least five million square kilometers”. They code
territory shocks as affecting all dyads for the years 1884-1894 and 1956-1962.

**Empirical Results**

Table 5.1 presents the results of two Cox proportional hazard models in which
rivalry termination represents event failure. The results from Model 1 indicate, first of all,
that rivalry de-linkage has a significant impact on rivalry duration. On average, rivalry
termination is about three times more likely in years in which rivalry-delinking occurs.
This effect is quite substantial and is larger than that of any other variable in the model.
Model 2 assesses the effects of the number of active rivalry linkages on rivalry duration.
Here, the results indicate that the number of linkages also has a significant effect on
rivalry termination, with each additional linkage reducing the risk of termination by about
5%. Thus, rivalries are less likely to end when they accumulate larger numbers of rivalry linkages. Furthermore, this effect is expressed for as long the linkages remain in place, so that if a rivalry forms a link to another conflict, it faces 5% greater chance of survival each year until the linkage is removed. Given that the average rivalry has 10 such connections in place at any one time, and that many connections last throughout the life of the rivalry, this effect is potentially quite substantial.

Table 5.1: Cox Proportional Hazard Model Estimates of the Effects of Rivalry Linkages on the Risk of Rivalry Termination

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rivalry Linkages</td>
<td>0.963**</td>
<td>__</td>
</tr>
<tr>
<td>Model</td>
<td>Coefficient</td>
<td>Standard Error</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Rivalry De-linkage</td>
<td>3.398***</td>
<td>(0.891)</td>
</tr>
<tr>
<td>Minimum Democracy</td>
<td>1.055**</td>
<td>(0.027)</td>
</tr>
<tr>
<td>Minimum Development</td>
<td>1.029</td>
<td>(0.045)</td>
</tr>
<tr>
<td>War</td>
<td>1.720</td>
<td>(0.721)</td>
</tr>
<tr>
<td>Change in Relative Power</td>
<td>0.037***</td>
<td>(0.057)</td>
</tr>
<tr>
<td>World War Shock</td>
<td>0.265*</td>
<td>(0.201)</td>
</tr>
<tr>
<td>Territory Shock</td>
<td>0.681</td>
<td>(0.535)</td>
</tr>
<tr>
<td>Power Shock</td>
<td>0.531</td>
<td>(0.227)</td>
</tr>
</tbody>
</table>

*N* = 3,536

Wald $\chi^2$ = 23.63

Wald p-value <0.01

Note: *p<.10, **p<.05, ***p<.01. Results reported are hazard ratios, robust standard errors in parentheses.

Figures 1 and 2 graph the survival functions for rivalries produced by Models 1 and 2, respectively, and both figures illustrate the dramatic effects that rivalry linkages have on the risk of rivalry termination over time. In Figure 5.1, one can see that rivalries
which experienced de-linking had a much lower rate of survival than rivalries which did not experience de-linking. While all rivalries in the sample had a 100% chance of survival during their first 20 years in existence\(^{23}\), only about 20% of the rivalries which experienced delinking were still in place after 50 years, and virtually none lasted longer than 60 years. In contrast, more than 60% of the rivalries which did not experience de-linking were still in place after 50 years and many lasted 100 years or more. Thus, de-linking appears to have a substantial impact on rivalry duration, as reduced the number of rivalries which survive to 50 years of age by nearly two-thirds.

---

\(^{23}\) This is a result of the way in which enduring rivalries are identified by Diehl and Goertz (2000) which requires a minimum duration of 20 years before a rivalry is considered to be “enduring”.

Figure 5.1: Plot of the survival function of rivalry, varying rivalry de-linkage
Figure 5.2 plots the survival functions for three groups of rivalries with varying numbers of rivalry linkages. The first group of rivalries, whose survival function is illustrated by the blue line, accumulated a low number of rivalry linkages (five linkages). This group experienced a relatively low probability of survival, with most of them coming to an end before they reached 50 years of age. The second group, which is illustrated by the red line, accumulated 10 linkages, which is close to mean for the sample. This group experienced a slightly higher probability of survival with most rivalries lasting a little longer than 50 years. Finally, the green line illustrates the third group, which accumulated 30 linkages, a number which place it at around the 95th percentile and just 10 linkages short of the maximum in the sample. This group had a very high probability of survival, with a majority of rivalries lasting at least 75 years and many lasting a hundred years or more. Consequently, this figure suggests that, consistent with hypothesis H2, rivalry duration is influenced by the number of linkages which
rivalries accumulate in their early years.

Figure 4.2: Plot of the survival function of rivalry, varying the number of rivalry linkages
As for the control variables, Models 1 and 2 produced fairly similar results. In both models, rivalries were greater risk of termination in dyads that were more democratic and where the distribution of power became more unequal. This is consistent with previous studies which suggest that dyadic levels of democracy and the distribution of power are among the most important predictors of rivalry duration. Rivalries were also less likely to terminate in the aftermath of a world war in Model 1. This is somewhat unexpected, as Goertz and Diehl (1995) argue that systemic shocks disrupt rivalry relationships and generally increase the risk of termination. However, they also note that the precise impact of any given shock is to some extent ambiguous, with shocks serving to shorten some rivalries while lengthening others. In the case of world war shocks, the positive effect on rivalry duration may reflect the fact that while World Wars I and II may have contributed to the termination of some rivalries, they also coincided with the onset of many of the most enduring rivalries in the international system, such as the US-Soviet rivalry (1946-1990), the Indo-Pakistani rivalry (1945-Present) and the rivalry between North and South Korea (1948-Present).

In sum, the results of the analyses conducted in this chapter appear to confirm both hypotheses H1 and H2. De-linkage seems to dramatically increase the risk of rivalry termination while the accumulation of rivalry linkages appears to lengthen rivalry.

Consequently, these results lend support to the theory of the causes and consequences of rivalry.

---

24 One of the problems with the external shock variables identified by Goertz and Diehl (1995) is that they are expected to both terminate old rivalries and create new ones. Thus, if the number of new rivalries is greater than the number of rivalries that were terminated, it is possible that shocks may appear to lengthen rivalry.
rivalry linkage developed in Chapters 4 and 5 and cast doubt on the claims of proponents of the rivalry weariness argument. Yet it is perhaps too hasty to consider the rivalry weariness argument as having been refuted altogether, for it remains quite plausible that states do grow weary of participation in multiple rivalries, and that the accumulation of rivalry linkages does place considerable strain on states' foreign policy resources. However, the lesson of these analyses appears to be that even under conditions of great weariness, states rarely succeed in terminating their rivalries, however much they may want to. Instead, it seems as though rivalry linkages tie different conflicts together in ways which make it more difficult to resolve them individually. Consequently, the rivalry linkages which states may have formed originally as a means for gaining the upper hand over their adversaries eventually come to stand in the way of peace, even after the costs of security competition have increased to undesirable levels.

**Conclusion**

The analyses conducted in this chapter reveal evidence of a strong relationship between rivalry linkages and rivalry duration. Rivalries which accumulated greater numbers of linkages tended to last longer, and the severing of these linkages increased the risk of rivalry termination. These findings provide support for hypotheses H1 and H2 and are consistent with the theory of the causes and consequence of rivalry linkage developed in Chapters 4 and 5. Thus, it appears that while states may originally form rivalry linkages in attempt to gain competitive advantages over their adversaries, these connections also serve to make the rivalry relationship more enduring and difficult to terminate.
As a result, this chapter makes a significant empirical contribution to rivalry research. It offers an additional source of support for this dissertation’s theoretical arguments about the effects of rivalry linkage, and confirms the expectations of previous work, which had speculated that de-linking might shorten rivalry, but had not tested these claims. In addition, the findings generated here also cast doubt on the claim that states tend to be more likely to terminate rivalries as they accumulate greater numbers of rivalry linkages.

Future research could build on this chapter by further investigating the process by which rivals respond to linkage and de-linkage. In particular, it would interesting to explore the ways in which de-linking, as an external shock, may interact with domestic conditions. For example, one might expect that de-linking would be more likely to result in rivalry termination when it also coincided with changes in domestic political leadership or institutions. Since rivalry relationships often deeply entrenched both internationally and domestically, domestically political change of some sort may also be necessary in order for successful rivalry termination to occur. Likewise, one might wonder whether there are certain domestic political environments in which it is easier for opponents to take advantage of the windows of opportunity provided by external shocks. Regimes vary greatly in regards to the opportunities they provide for the domestic opposition to criticize the leadership’s foreign policy choices, and in regards to the information asymmetries that exist between political elites and the mass public (Colaresi 2005). These factors are likely to have an important effect on the extent to which changes in international relationships are translated into changes in foreign policy.

The relationship that has been observed between linkages and rivalry termination
also suggests several fairly obvious, but important, policy implications. First, these findings reiterate the importance of preventing emerging rivalries from becoming linked to other conflicts. While states in the early stages of rivalry are likely to find it attractive to pursue support from third parties in their contests with their rivals, these efforts appear likely to have unforeseen consequences which may complicate conflict resolution efforts in later years. Second, this chapter also suggests that policymakers seeking to deescalate rivalries would do well to focus some of their attention on rivals’ relations with third parties, since de-linking can substantially shorten rivalry.

Unfortunately, the other implication of this finding that bilateral mediation may not be very successful as long third parties’ conflicts persist, and that in many cases policymakers may have to address larger regional security issues for before much progress can be made. However, if policymakers do succeed in bringing particular dyadic rivalries to an end, this chapter points to the possibility that this may help to shorten other rivalries as well. Indeed, the termination of a single densely linked rivalry, such as the cold war rivalry between the United States and Soviet Union, may produce ripple effects which could spread through much of the international system and be felt for years to come.
CHAPTER VI
CONCLUSION

Introduction

“Mr. President, we and you ought not now pull on the ends of the rope in which you have tied the knot of war, because the more the two of us pull, the tighter that knot will be tied. And a moment may come when that knot will be tied so tight that even he who tied it will not have the strength to untie it, and then it will be necessary to cut that knot, and what that would mean is not for me to explain to you, because you yourself understand perfectly what terrible forces our countries dispose”—Letter From Chairman Khrushchev to President Kennedy, October 26, 1962 (Chang, Laurence, Kornbluh and McNamara 1998, 365).

This passage is an excerpt from a telegram sent from Soviet leader Nikita Khrushchev to President John F. Kennedy on the eleventh day of the Cuban Missile Crisis. Sometimes described as the “soft” telegram, it showed clear signs of the psychological toll that the crisis had taken on the Soviet leader. It arrived in the middle of the night, appeared to have been personally dictated by Khrushchev without consultation with other Soviet leaders, and in Robert Kennedy's words, was “very long and emotional” (Chang, Laurence, Kornbluh and McNamara 1998, 374). One of the prevailing themes of the telegram and of other communiques between Khrushchev and Kennedy was that while both leaders greatly wished to avoid war, they were each constrained by the consequences of the others’ actions. In Khrushchev’s view, the United States’ decision to support an invasion of Cuba at the Bay of Pigs and its apparent willingness to do so again, left him with no choice but to provide Cuba with a nuclear deterrent. Conversely, Kennedy saw the deployment of missiles to Cuba as an event which dangerously
destabilized the nuclear status quo, and which left him with no choice but to try and find a way to remove them, by any means necessary. While each leader had initially made the policy decisions that led up to the crisis for their own reasons, their actions ultimately served to constrain their adversaries, and acted like knots which tied both leaders to a course of events which they soon realized could lead to war. Their challenge, then, was to find a way to loosen these knots and change course before they arrived at disaster.

Fortunately, Kennedy and Khrushchev were eventually able to reach an agreement, and therefore avert what would likely have been the most costly military conflict in human history. Yet the fact that they were only able to so after another two days of intense negotiations, and after thirteen days of crisis altogether, speaks to just how difficult it was to untie these knots of war. Throughout the crisis, both leaders found themselves confronted with considerable pressure to escalate hostilities. It is now well-known, thanks to the work of Graham Allison (1978), that many of these pressures were internal in nature, arising from the organizational processes and standard operating procedures associated with foreign policymaking. Yet it also worth pointing out that there were considerable external pressures as well. For Kennedy, the Cuban Missile Crisis was not merely about Cuba. It was also believed to have implications for the credibility of US deterrent threats and defensive promises in general, and for domestic stability of many US allies in Latin America who faced potential communist insurrections. Likewise, for the Soviets, the defense of the Castro regime in Cuba was believed to be crucial to their efforts to support other communist governments in the third world (Welch and Munton 2012). Thus, to some extent, the origins of the Cuban Missile Crisis can be said to lie in the fact that US-Soviet rivalry had become connected to other conflicts and relationships
involving third parties. While these connections were initially formed for a variety of reasons, many ultimately came to have unintended consequences, raising the costs and risks of US-Soviet competition and limiting the perceived freedom of action for both sides.

This dissertation sought to investigate the causes and consequences of these kinds of linkages between rivalries and third party conflicts. It has argued that while states often form these connections as part of efforts to gain the upper hand over their adversaries, these linkages produce long term consequences that ultimately increase the duration of the rivalry and increase the risk of war. Tragically, the empirical evidence suggests that these kinds of linkages between dyadic conflicts are quite common and that they have continued to form in the post-Cold War era. Thus, today, many states continue to be bound by these knots of war.

In the next section of this concluding chapter, I begin briefly reviewing the findings and contributions of this study. I then discuss in greater the greater detail the implications of this work: First for researchers seeking to gain new insights into the causes of international conflict, and then for policymakers who may be able to use this knowledge to help mitigate or even prevent rivalry conflict. It is hoped that this dissertation will provide some insights that are useful for both communities in their efforts to understand the sources of international violence.

**What Have We Learned About Rivalry Linkage?**

This dissertation seeks to fill an important gap in rivalry research. While students of rivalry had often observed that events in many rivalries appeared to be connected to
other conflicts involving third parties, these extra-dyadic relationships had yet to receive much attention from the rivalry literature. There was no theory that explained how or why these linkages formed, and only a handful of studies had examined the effects of rivalry linkage, with this work generally producing mixed empirical findings. Thus, when this dissertation was begun, scholars knew very little about rivalry linkage.

The goal of this dissertation is to make progress towards addressing this gap by developing and testing a theory of the causes and consequences of rivalry linkage. Each of the three primary chapters presents a part of this theory and tests some of its implications. When considered together, these chapters provide a coherent story about the ways in which rival states become entangled in others’ conflicts, and the consequences that this involvement has for the rivalry relationship. In addition, each chapter generates new findings that shed light on important aspects of rivalry behavior. In the pages below, I consider the contribution of each of these chapters in turn.

First, in Chapter 3, I begin by arguing that many rivalry linkages form as a byproduct of the coercive foreign policy practices that rivals often employ in their dealings with one another. Security competition between rivals is often guided by the logic of realpolitik, which suggests that states can gain advantages over their adversaries by forming alliances with others or by encouraging third parties to fight alongside them in militarized disputes. When rival states employ these tactics successfully, they form linkages between their rivalries and other dyads. This argument therefore suggests that the formation of linkages is likely to be integral to the processes by which most rivalries are developed and maintained. Consequently, it helps to explain why nearly all rivalries form linkages at some point in their duration and why most rivalries form large number
numbers of linkages; findings which had been considered anomalous by Diehl and Goertz (2000). In addition, this argument helps to fill an important gap in the literature, which had yet to provide any explanation for why linkages formed, and had instead tended to treat linkages as a feature of the external environment.

In regards to its empirical findings, Chapter 3 helps to reveal some of the ways in which states' involvement in rivalries can affect their relations with third parties. This is a consequence of rivalry about which very little is known, and one which poses important implications for the security of other states outside of the rivalry dyad. The analyses conducted in Chapter 3 find that states involved in rivalry are more likely than other states to form alliances and experience complex militarized disputes. These findings contribute to the recent efforts by scholars such Colaresi, Rasler and Thompson (2007) and Valeriano (2008), who have sought to integrate steps-to-war theory into rivalry research and elucidate the connections between rivalry involvement and other forms of conflict behavior. In addition, these findings also contribute to extant but separate research literatures on the determinants of alliance formation and dispute expansion, and suggest that work in these areas could benefit from a greater consideration of the consequences of rivalry involvement.

In Chapter 4, I develop a theory of the consequences of rivalry linkage. It argues that linkages serve to facilitate the diffusion of conflict across rivalries and promote the escalation of militarized disputes. While similar claims have been made by previous studies, they did not fully explain the mechanisms connecting the formation of rivalry linkages to states' behavior in militarized disputes and relied on some untested assumptions about the relationship between linkages and dispute expansion. Furthermore,
the results of previous attempts to test of these arguments had been mixed. This chapter provides a more fully developed theory that explains why linkages promote the expansion of militarized disputes, and why the involvement of third parties increases the likelihood of dispute onset and escalation.

The empirical analyses in Chapter 4 provide substantial support for these theoretical arguments, finding that greater numbers of linkages were associated with dispute onset, expansion and escalation to war. Consequently, these findings make a significant contribution to rivalry research. They vindicate the theoretical claims of previous studies which argued that linkages resulted in higher levels of rivalry conflict, but also lend support to several new arguments about the consequences of third party involvement for rivals’ conflict behavior. Thus, these results suggest that linkages are an important influence on the risk of conflict between rivals. Furthermore, since most international conflict occurs within the context of rivalry, this suggests that rivalry linkages deserve a place within research on international conflict more broadly.

Methodologically, the analyses in this chapter also improve on the techniques that have been employed in previous studies of rivalry linkage. Unlike past research, this chapter uses a measure of rivalry linkages which takes all forms of linkage into account and which accommodates changes in the number of linkages over time. The chapter also addresses the problem of selection bias, which could arise because linkages affect both the onset and escalation of disputes. Future studies investigating rivalry linkages could follow the approach employed by this chapter to uncover new findings about the role that linkages play in rivals’ conflict processes.

Finally, in Chapter 5, I examine the effects of rivalry linkages on rivalry duration.
Here, the literature had been divided between studies that asserted the accumulation of rivalry linkages tended to lengthen rivalry and others which suggested that it might have the opposite effect. The analyses in this chapter provide the first direct test of both arguments by using hazard models to assess the impact of changes in the number of rivalry linkages on the risk of rivalry termination. The results of this analysis indicate that rivalries which acquire greater numbers of linkages tend to last longer and that the de-linking of international rivalries substantially increases the risk of rivalry termination. These results are therefore supportive of the first view and of the theory of the causes and consequences of rivalry linkage developed in the previous two chapters. Consequently, they suggest that a greater consideration of rivalry linkages can contribute to scholarly understanding of the determinants of rivalry duration, one of the least developed areas of rivalry research.

**Future Research**

Future research could build on contributions of this dissertation in two general ways. First, this dissertation suggests that many studies of interstate conflict processes could potentially benefit from the incorporation of variables that measure rivalry linkages. Since rivalry linkages have been shown here to have an effect on many aspects of rivalry behavior, it seems likely that they can contribute to the explanatory power of many existing empirical models by serving as control variables. For example, Goertz Jones and Diehl (2005) have developed an influential model of rivalry maintenance which links the occurrence of new disputes between rivals to the failure of these states to achieve a decisive resolution to their conflicts in previous confrontations. In this regard,
they find that disputes are more likely to recur when they end in stalemates and entail the use of higher levels of force. Yet, the overall explanatory power of their model is relatively low and most of their variables become insignificant in the enduring rivalry phase of the rivalry relationship. This may be because Goertz, Jones and Diehl do not include any variables in their model that are related to factors or conditions that lie outside of the rivalry dyad. Given the findings in the Chapters 4 and 5, one would expect that these kinds of variables would play an important role in the maintenance of rivalry. In particular, these chapters seem to suggest that militarized disputes would be more likely to continue to recur in rivalry dyads with larger numbers of active rivalry linkages, since linkages may introduce new conflicts into the rivalry or exacerbate disagreements between rivals. Thus, it seems likely that the explanatory power of this model could be enhanced by incorporating some sort of measure of rivalry linkage. In a similar fashion, many other models of rivalry behavior could likely be improved by incorporating some measure of rivals’ extra-dyadic relationships.

In addition, measures of rivalry linkage may also help to improve the explanatory power of existing models of rivalry by serving as interaction terms which magnify or dampen the effects associated with other variables. For example, because measures of rivalry linkage provide an indication of the nature of a rivalry’s connection to the broader rivalry environment, they may help to explain variation in regards to how different rivalries are affected by systemic conditions and events, such as the “systemic shocks” identified by Diehl and Goertz (2000). Systemic shocks are events such as world wars or dramatic changes in the distribution of territory or power, which disrupt the stability of rivalry relationships. Consequently, they are believed to be a “modest necessary
condition” for the onset and termination of rivalry and are an important part of punctuated equilibrium models of rivalry development (Goertz and Diehl 1995, 30). Yet, in many empirical analyses (including those conducted here), variables related to systemic shocks have generally failed to exhibit statistically significant effects on the probability rivalry onset (Stinnett and Diehl 2001) or termination (Bennett 1996). These null findings have been puzzling because, in terms of descriptive statistics, most rivalries do begin and end shortly after some sort of external shock. The failure of empirical studies to uncover statistically significant relationships linking shocks to changes in rivalry relationships have led some scholars, such as Colaresi (2005), to argue that the punctuated equilibrium model is underspecified, and that some additional variables need to be incorporated into the model in order to explain when and where the effects of shocks will be most likely to be observed.

This dissertation suggests that a measure of rivalry linkage might be one such variable. Given the findings of Chapter 5, one might expect that systemic shocks would be more likely to result in rivalry termination when they coincide with the severing of rivalry linkages. While systemic shocks may have some effect on rivalries throughout the international system these effects should be larger when they disrupt the external environment that is relevant for a particular rivalry. Thus, it seems plausible that World War I, for instance, was a systemic shock that had a larger impact on European rivalries than on rivalries in say, Central America. Thus, by interacting variables related to systemic shocks with measures of rivalry linkage, researchers may be able to see more clearly how these events disrupt rivalry relationships.

A second direction for future research would be to examine some of the new
research questions which are raised by this dissertation. For example, in Chapter 3, I argue that states involved in rivalries were especially likely to form external alliances and to encourage third parties to join their disputes because these behaviors were portrayed by realist foreign policy thinking as providing a source of competitive advantages for states involved in security competition. Yet this argument does not explain how states go about deciding which third parties to pursue alliances with or to invite into their disputes. Future research could build on this chapter by further investigating the motivations for alliance formation and dispute expansion within the context of rivalry. For example, one might investigate whether states are more likely to seek out support from third parties with whom they which share similar values or ideology, or one might explore the extent to which states take extant rivalry linkages into account when selecting potential alliance partners.

One could also take this line of inquiry a step further, and examine whether there are broader patterns in the ways in which linkages connect different groups of rivalries. For instance, during the Cold War, many rivalry linkages connected the US-Soviet conflict with the rivalries of minor power clients. In many cases, regimes tended to ally with or fight alongside the great power with whom they were the most similar ideologically. Furthermore, when one state in a rivalry established an alliance or patron-client relationship with the US or Soviet Union, their rivals often found it much easier to acquire support from the other side of the US-Soviet conflict. One might wonder whether there are also patterns in the structure of rivalry linkages today, and if so, what effects these patterns have on rivalry dynamics. For instance, is conflict between minor power rivals more likely when they are allied with opposite sides of a great power rivalry? Or do
great powers restrain their clients in order to prevent them from increasing the costs and risk associated with their own competition? In addition, it might be worthwhile to investigate whether certain types of distributions of rivalry linkages are associated with higher levels of conflict across the international system. In this regard, one might ask whether wars and militarized disputes were more likely to spread across rivalries prior to World War II, when patterns of rivalry linkages tended to be complex with many different overlapping systems of alliances and multiparty conflicts, or in the period during the Cold War, when rivalries tended to have higher numbers of linkages but with clearer patterns of alignment.

Research along into these kinds of broader relationships involving multiple states would likely require the development of new sources of data and methodological tools. Here, some interesting progress has been made by scholars such as Maoz (2011), who have begun to employ social network analysis to examine the ways in which international interactions are affected by the formation of complex relationships between multiple states. In a similar fashion, the utilization of social network analysis could open new opportunities for rivalry researchers by permitting them to better examine how rivalries are affected by extra-dyadic relationships. While this dissertation has shed light on the effects of extra-dyadic relationships between rivals, it is merely a first step in this direction. Researchers using social network analysis could build on this dissertation by examining whether rivalry linkages exhibit effects at greater degrees of separation or whether rivalry dynamics are influenced by rivalries’ changing positions within the broader network of rivalry linkages. In this regard, one could investigate whether rivalries located near the core of rivalry networks behave differently from rivalries located at the
periphery. Thus, by expanding their focus beyond the rivalry dyad, researchers can potentially open up many promising new agendas for rivalry research.

New research questions are also raised by Chapter 4, which argues that rivalry linkages tend to encourage the spread of conflicts across rivalries and the escalation of disputes to war. Yet while these results of the analyses in this chapter provide support for these claims, they did not directly examine the mechanisms by which linkages contribute to the onset, expansion or escalation of disputes. Future research could build on this chapter by using case studies to examine in greater detail the role of linkages in the dispute escalation process. In particular, it would be interesting to investigate the ways in which rivalry linkages affect how leaders behave during disputes or interpret external threats. For example, to what extent are leaders aware of linkages during confrontations with their rivals, and how do they go about trying to predict how third parties will respond to different conflict trajectories? Furthermore, how do these decision-making processes change as the number of rivalry linkages increases? By comparing the dispute escalation process in rivalries with varying numbers of linkages, and perhaps with disputes that occur between non-rivals, scholars could gain valuable insights into how these third-party relationships influence foreign policy decision-making.

Another opportunity for further inquiry suggested by Chapter 4 concerns the process by which rivalries “catch” others’ disputes. This dissertation has generally followed the conflict diffusion literature in treating the diffusion process probabilistically. Linkages increase the risk that disputes may spread across dyads, but the question of what actually causes the diffusion in any particular case is left open. Future research could benefit from examining more closely the factors which influence states' decisions
about whether or not join a dispute in a linked dyad. A greater understanding of the motivations behind dispute-joining could potentially tell us much about the dangers associated with linkage and perhaps help to identify “hot spots” where diffusion is especially likely. In addition, we might also be able to learn whether there are particular factors that mitigate dispute expansion. This knowledge, in turn, could help lead to policy recommendations about how to manage enduring multiparty conflicts.

Finally, in Chapter 5, I observe that rivalries which accumulated larger numbers of linkages tended to last longer, while de-linking substantially increased the risk of rivalry termination. These findings help to highlight the effects that the accumulation of rivalry linkages have on rivalry duration, but they also raise a number of additional questions which could be explored further. For example, drawing on the discussion of social network analysis above, one might wonder whether de-linking has a greater impact on rivalries that are on the periphery of rivalry networks, or whether delinking may have affects that are expressed over several degrees of separation. Another possibility for further inquiry concerns the mechanisms by which de-linking terminates rivalry. Most studies have tended to emphasize the termination of patronage resources like foreign aid or alliances, and this dissertation has also suggested that de-linking can encourage rivalry de-escalation because it removes an avenue for the expansion of militarized disputes. Along these lines, it would interesting to examine the effects of changes in military aid distribution on the duration of rivalry or to explore how dispute joining and escalation processes may change after linkages are severed.

Ultimately, this dissertation points to a number of ways by which greater consideration of rivalry linkages could contribute to the rivalry research program.
Whether this means simply integrating linkage variables into existing models or opening entirely new lines of inquiry, these new research possibilities are united by the fact that they all entail pushing the rivalry research beyond its focus on the rivalry dyad and towards the consideration of how rivalries fit into broader structures of international relationships. While this dissertation has taken only a small step in this direction, and has largely proceeded using the dyadic research designs that are already common in the literature, the apparent significance of external linkages for so many of aspects of rivals' behavior points to the considerable promise associated with this approach. In the future, scholars may come to think of rivalries more as an interconnected network of international relationships than as a set of dangerous dyads. From this perspective, the dyadic conflict processes associated with rivalry are still important, but they are only part of a larger story.

**Policy Implications**

This dissertation's findings raise a number of potential implications for policymakers. Most of these are useful for mediators seeking to mitigate conflicts between rivals, but there are also others which are relevant for policymakers working in the realm of national security. In regards to conflict mediation, the most obvious implication of this study is that mediators may need to address third party conflicts before rivalries can be successfully brought to an end. This may mean that diplomatic interventions need to be multilateral in nature, or that mediators may need to begin by focusing on resolving ancillary disputes involving third parties before moving on to address the key issues underlying the rivalry. This does suggest that rivalry linkages are
likely to make conflict management efforts more difficult in most cases, but it may be possible to use an understanding of rivalry linkages to identify the most important third party relationships for a given rivalry, and thus help meditators decide where to focus their efforts. Furthermore, continued research into rivalry linkages may help to reveal connections between conflicts that are not immediately obvious, and therefore help to elucidate some of the third party relationships that could hinder future negotiations or increase the risk that militarized conflicts might spread.

Another implication of this study is that conflict mediation between rivals, when successful, may produce ripple effects which spread outward through linkages to influence other conflicts. If mediators succeed in their efforts to terminate an ongoing rivalry, then this would effectively de-link that rivalry from all of the other rivalries with which it is connected, something which Chapter 5 suggests would increase the risk that these other rivalries might terminate as well. In addition, rivalry termination would also remove a node from the broader rivalry network and perhaps hinder the spread of conflicts across different rivalry dyads. Thus, research into rivalry linkages suggests that rivalry termination is a worthwhile endeavor and that enduring rivalries, even those that seem to have gone “cold”, should continue to be an important concern for policymakers for as long they are in place. In this regard, future research into rivalry linkages might allow policymakers to identify and target particular rivalries that appear to be important for sustaining the broader rivalry system, and therefore facilitate efforts to reduce the occurrence of international conflict across the entire international system.

Finally, this dissertation also suggests that one of the most important things that mediators can do is to try to prevent states from forming rivalry linkages in the first
place. Once established, most linkages tend to last until near the end of the rivalry and they often contribute to the formation of complex multilateral conflict relationships that can be very difficult to unravel. Consequently, the best option for policymakers is likely to be to try to prevent these linkages from forming while rivalries are still young. For example, in dyads that appear to be in the early stages of rivalry, mediators could work to resolve outstanding disputes between those states and third parties, or try to discourage them from forming alliances with other states that are already involved in rivalries of their own. Of course, these efforts are likely to be very difficult, but they do offer hope that emerging clusters of linked rivalries can be identified, and perhaps disconnected, before conflicts begin to spread between them.

For policymakers working in the area of national security, this dissertation also suggests several recommendations. First of all, the possibility that conflicts may diffuse across rivalry linkages suggests that states involved in rivalries need to be aware that potential conflicts may arise not just from disputes with their own rivals but also from disputes that begin in rivalries between third parties with whom they are linked. Thus, policymakers should be aware of what rivalries they are connected to and of the possibility that actions that they take in regards to their own rivalries may have consequences for others. Given the difficulty of managing multiparty disputes and the danger that they may escalate to war, states may need to consider disconnecting themselves from particularly dangerous rivalries by terminating alliances or patron-client relationships.

In a similar vein, this dissertation also suggests that policymakers need to think more carefully about engaging in foreign policy behaviors that tend to promote the
formation of rivalry linkages. While there are many potential reasons (as described in Chapter 3) why activities such as the pursuit of alliances or deliberate expansion of militarized disputes may seem attractive to rivals in the short term, this dissertation suggests these actions often end up increasing the costs and duration of the rivalry. Thus, states may be better off in the long run if they forgo some of the advantages that might follow from third party involvement and try to keep rivalry conflicts within the dyad.

In sum, this dissertation suggests that international rivalries are about more than just a history of conflict and grievances between a pair of adversaries. They often entail the involvement of third parties who influence the course of rivalry development and who sometimes participate in it by joining in rivals’ militarized disputes. While this dissertation has found that these third party relationships generally tend to exacerbate rivalries, its findings also point to the possibility that third parties may also be able to use their influence to deescalate them as well. By discouraging third party involvement, or by encouraging third parties to intervene in rivalry conflicts as mediators rather than dispute-joiners, policymakers may be able to help manage these conflicts, and ultimately, loosen some of the knots of war.
LIST OF REFERENCES


Vita

Douglas Spence received a Bachelor of Arts degree in Political Science from Ohio University in November of 2006. He received a Doctor of Philosophy degree in Political Science from the University of Tennessee in August of 2012.