

The Impact of Intergovernmental Organizations on the Development and Termination of Interstate Rivalry

Brandon Valeriano
University of Illinois at Chicago
drbvaler@gmail.com

and

Christopher Leskiw
Cumberland College
cleskiw@cumberlandcollege.edu

Abstract:

The literature on interstate rivalry has uncovered many important insights into the causes and consequences of long term, hostile relations between pairs of states. However, the factors that influence the development and termination of rivalries have gone relatively under-explored; particularly the liberal expectation that intergovernmental organizations mitigate occurrences of rivalry. Here, we look at how different types of intergovernmental organizations (IGOs) influence the development and termination of interstate rivalry. This analysis will first establish an IGO typology and offer a rationale as to why these institutions matter for the dynamics of interstate rivalries. We suggest that certain types of IGOs can function as concert systems where differences can be settled between two countries. Other types of IGOs do not lead to the settlement of differences in that the issues covered do not lead to meaningful concerts of action. Our IGO typology is divided between universal and regional institutions and further characterized by type including social, political, economic, and military IGOs. We find that different IGO types have differing impacts on the dynamics of interstate rivalries. Some IGOs (regional and economic) increase the probability for peaceful termination of rivalries and it is these types should be promoted to ameliorate international conflict in the system.

Version 11/28/09

Introduction

The literature on interstate rivalry has uncovered many important insights into the causes and consequences of long term, hostile relations between pairs of states.

However, the factors that influence the development and termination of rivalries have gone relatively unexplored, particularly the liberal expectation that intergovernmental organizations mitigate occurrences of deadly conflict in rivalries. Here, we look at how different types of intergovernmental organizations (IGOs) influence the development and termination of interstate rivalries.

This analysis will first establish an IGO typology and offer a rationale for why these institutions matter in the dynamics of interstate rivalries. IGOs are defined as “those associations established by government or their representatives that are sufficiently institutionalized to require regular meetings, rules governing decision making, a permanent staff, and headquarters.” (Shanks et al. 1996: 593) While the majority of the extant literature and theory concerning IGOs indicates that these institutions ameliorate conflict, the extent to which this goal is accomplished is a function of the type of organization (Leskiw 2002, and see also Boehmer et al. 2004). It may be the case that certain types of IGOs provide the means for reconciliation between two aggrieved parties while others do not. On the negative side, IGOs may be used as arenas of action in which states engage in political conflict in a concert setting thereby exacerbating conflict. We hypothesize that some types of IGOs typically serve as a means to resolve conflict while others have an uncertain impact. Our IGO typology is

divided between universal and regional institutions and further characterized by type including social, political, economic, and military IGOs.

Rivalries serve as a special test case for an IGO's ability to ameliorate conflict. An interstate rivalry is a protracted conflict between a pair of states who disagree on a variety of fundamental issues with deadly consequences. Rivalries are clearly the most dangerous pairs of states in the interstate system since they account for the majority of wars and disputes (Diehl and Goertz 2000, Thompson 2001). It is therefore prudent that we investigate the peacemaking abilities of IGOs in this important context since active rivalries would provide a 'target' for the conflict resolution impulses of these institutions.

Just as there are steps towards war (Vasquez 1993), there are also steps out of war and rivalry. Some IGOs are likely very important steps out of the conflictual situation of interstate rivalry. Consequently, the following analysis will investigate the extent of the ability of the various types of shared memberships in IGOs to have an impact on the length and occurrence of interstate rivalry.

We seek to answer two important questions in this paper. First, how do shared memberships in different types of intergovernmental organizations affect the probability a pair of states will develop into proto and enduring rivals (Diehl and Goertz 2000)? Our theory would suggest that pairs of states that have shared IGO memberships or particular types are less likely to become rivals in the first place. Next, we are interested in whether or not the various types of IGOs have disparate effects on the likelihood of rivalry termination.

This paper will outline the importance of international organizations and demonstrate that some can be foundations for peace while others have an inconsistent

impact on conflict resolution. Empirical literature to date shows that IGOs reduce the amount of conflict between interstate dyads but their impact on rivalries is mixed. We seek to answer how peace is achieved in dyads that are “addicted” to conflict (Maoz 2002). Our study demonstrates that some types of IGOs are important institutions that can contribute to the establishment of peaceful relations between rival dyads while others are unlikely to help foster peace in a dyad.

Rivalry Studies and the Liberal Ideal of Peace (decrease trade)

Interstate rivalries include pairs of recognized states who have formed a long-standing, conflictual relationship with each other. This work will be concerned with the development and termination of interstate rivalries hence we will move past an examination of who the rivals are since this has been well covered elsewhere (see Diehl and Goertz 2000 and Colaresi et al. 2008).

The rivalry research program allows for studying rivalries from their conception to termination so that one may develop hypotheses regarding the process of conflict onset and peaceful resolution for persistent enemies. There have been few studies that examine the relationship between peace and rivalry in a liberal context. Liberalism as a general worldview promotes the idea that reason can help humans overcome the problem of war and holds that peace can be constructed through the development of trade, democracy, international law, education, and institutions such as IGOs.

What becomes important for the development of a rivalry is what type of disputes a pair of states gets involved in and how they handle those disputes once they begin. Handling disputes in a power politics fashion (arms races, alliances, linkages, and forming a grand strategy) can lead states to become interstate rivals (Valeriano 2003).

On the other hand, handling disputes in a fashion recommended by the liberal worldview (utilizing international organizations, developing democracy, and conflict resolution) should result in the absence or termination of rivalry.

The absence of a democratic pair of states appears to be a necessary condition for rivalry (Hensel, Goertz et al. 2000). Democratic pairs of states do not go to war with each other (Maoz and Russett 1993; Ray 1995), and they also rarely participate in rivalries with each other. The one enduring democratic rivalry on record is between the United States and the United Kingdom. This rivalry was born out of a long-standing dispute for independence that constituted the initial issue in the rivalry. Newly independent state status is also an important factor for rivalry development (Goertz and Diehl 1995). Some states are born fighting due to underlying issues that develop during the formation of a state or the instability of boundaries for new states.

We also know that trade is likely to reduce the amount of conflict between dyads (Russett and Oneal 2001).¹ However, contrary to and Oneal (2001), Barbieri and Levy (1997, 1999) have found that war does not impact the ability of states to trade with each other once conflict has begun. This may also be the case in a rivalry, where conflict is almost a constant factor in the relationship and becomes in a sense, normalized.

The extant literature has begun to more fully consider the effect of trade relationships on conflict within rivalry cases. Gasiorowski and Polachek (1982) have examined trade between the United States and the USSR during the Cold War and suggest that trade lead to detente. Liberman (1996) undertakes a study of trade between two rivals prior to war to suggest that trade gains are seen as absolute during a rivalry.

¹ Barbieri (1996) finds that the opposite is true, trade interdependence increases the probability of conflict between a dyad.

Reuveny and Kang (1996) have also examined the effect of trade on conflict/cooperation levels in rival dyads only to find that causality can run in both directions for rivals,

International organizations are first an expression of international law, either through its enforcement or maintenance. IGOs often establish precedent and create stable institutions that can carry out the spirit and will of international agreements. IGOs can be defined for our purposes as a formal, continuous institution established by treaty or other agreement between three or more governments with a long-range purpose.

IGOs have many different roles, primarily as an interactive arena where nations can come together to settle and discuss contentious issues. They also serve as the creator or the center of cooperation. The United Nations is a typical example of this type of role that IGOs can play. Finally, they can act as independent international actor, intervening in disputes when they have the opportunity and means.

Empirically, IGOs can be studied from a few different distinct lines of investigation. One can look at the IGOs and their relationship to conflict on a system wide level. One can also look at the specific actions of IGOs and their ability to mediate or manage conflict. Of concern here are empirical studies examining IGOs from a dyadic perspective and how IGO ties can affect the occurrence of war.

Singer and Wallace (1970) undertake the first large-N investigation of IGOs and incidence of war throughout the system. Of interest here is their initial IGO dataset Wallace and Singer (1970) create, which is extended back to 1816 to 1964.² They find a positive correlation between the termination of war and an increase in the number of IGOs in the system.

² Russett and Oneal's (2001) dataset only extends back to 1887, mainly to keep it comparable to the limited trade statistics available at the time.

Russett and Oneal (2001) study the likelihood of peace from the Kantian tripod perspective. IGOs form one “leg” of the Kantian approach to peace. They find a significant inverse relationship between the average number of shared IGO memberships in the system and the probability of militarized disputes. Shared IGO memberships is used to reflect the common ties between states and a high number of shared IGO memberships suggests a willingness to negotiate and mediate conflict. Those dyads that have shared IGO memberships are less likely to become involved in conflict. Mitchell and Hensel (2007) find that states are also more likely to comply with agreements settling a contentious issue if an international institution is involved in the settlement process.

Hopkins (1974) posits that different types of IGOs will have different affects of the conflict dynamics of states. Hopkins defines his IGO typology in terms of scope and function of each IGO. He finds that regional organizations and political/law organizations have the highest potential to reduce the level of militarized conflict in a dyad (Hopkins, 1974, 316-23). Boehmer et. al. (2004) also provides a typology whereby differing types of IGOs can influence conflict in direct ways. They look at the degree of institutionalization and mandates which are coded as either security, economic, or other. They find that IGOs that have a formal institutional structure or are security institutions reduce the likelihood of a dyad entering a militarized interstate dispute.

There have been a few recent studies that explore the impact of institutions on the termination of rivalries. Confounding expectations, Cornwell and Colaresi (2002) demonstrate that rivalries may actually last longer when they mutually join IGOs. Prins and Daxecker (2007) further develop a rationalist expectations model to account for the persistence of rivalries. Liberal institutions are said to alleviate commitments problems

inherent in rivalry. Prins and Daxecker (2007) find that democracy, economic development and joint membership in international organizations with mechanisms for dispute settlement all reduce the duration of a rivalry. The Prins and Daxecker (2007) study differs from the Cornwell and Colaresi (2002) study in that they use the ICOW data on multilateral treaties and institutions (MTOPI, Hensel 2003) to code the IGOs in their study. Here we use a mutually exclusive and logically exhaustive typology of all IGO types to fully account for their dynamics.

So far, the Kantian tripod (trade, democracy, and IGOs) theory of peaceful relations has shown that democracy can produce peace in the context of a rivalry. Trade relations do not appear to be a factor, but economic development is important. What is left to explore and resolve is the relationship between IGOs and rivalry development/termination. The opposing findings in the Prins and Daxecker (2007) and the Cornwell and Colaresi (2002) study may be explained by the types of IGOs they study. We hope to demonstrate herein that IGO type matters greatly in that some will shorten the duration of rivalries while others will prevent them from developing in the first place. Reliance on a generically interchangeable definition of IGOs is unlikely to fully account for the dynamics of rivalry processes.

Concerts of Action: Rationale for IGO Expectations

This paper seeks to combine recent innovations in the study of IGOs with the analysis of rival dyads. Rivals are the most contentious actors in the international system, frequently fighting wars and engaging in disputes. In the context of rivalry, IGOs can be institutions that build bridges between disputing states and are capable of producing the foundation for peaceful relations. We see some types of IGOs as powerful concerts of

action (Rosecrance 1992) in that the issues important to members can be dealt with in an institutional and cooperative manner. Other IGO types do not serve as foundations for peace because their purpose is not to settle disputes or provide for a forum of conflict resolution, but more likely to settle important social or health problems that have little impact on the termination of rivalries (universal and social IGOs).

In this paper, we follow Leskiw (2002) and posit that IGO type has a significant impact on the prevention and termination of interstate conflict. His dataset includes 434 IGOs from 1816 to 1992. The dataset collection rules conformed to Wallace and Singer's (1970) earlier study with the exception that IGOs are confined to those institutions with three or more members. Most research uses a simple aggregate measure of shared memberships in IGOs meaning that the dynamics and diversity within a network of institutions is completely lacking from examination. Types of IGOs have a direct impact on the ability of a pair of states to settle their differences and establish lasting peace. Herein we utilize Leskiw's (2002) dataset to examine how the context of IGO types can impact the probability of rivalry occurrence and termination.

Table 1a

Typology of Joint Memberships in Intergovernmental Organizations

-
1. Scope of membership
 - a. Regional
 - b. Universal.
 2. Issue area that the IGO is intended to address.
 - a. Military = security concerns, territorial, border questions
 - b. Political = Legal, administrative
 - c. Economic = Trade organizations, customs unions, economic development, banking.
 - d. Social = Natural resource management, health, culture, education, safety, infrastructure, communications, tourism, science and research.
-

Note: Adapted from Leskiw 2002, Table 2.1, page 22

The typology of IGO membership used in this paper, as reflected in Table 1a, is an abbreviated version of the typology developed by Leskiw (2002). The first distinction made in classifying organizations is by the scope of membership. This classification scheme is used to clearly delineate where IGOs are meant to act and potentially their capacity to act. IGOs are coded depending on whether they are regional organizations or universal organizations. We expect that these organizations will have different influences on state behavior. A universal IGO, where membership is not bound to regional states, could have a wider area of interest articulation and therefore little ability to lessen conflict between enduring rivals. The dynamics of huge membership organizations may actually prevent conflict resolution from taking place due to the universal nature of the organization. Universal IGOs beyond the United Nations are not focused on the settlement of disputes but rather the persistence of enduring problems in the system (disease, failed states, economic stability, and the environment). Therefore we expect that universal IGOs will be limited in their ability to reduce or manage conflict.

Regional institutions, on the other hand, may be better able to respond to local conflicts since they have a shared sense of history and identity with the disputants and may have more of a vested interest in seeing the conflict peaceably resolved. The African Union (AU) serves as a good example of this. The AU is focused on ameliorating conflict within the region and seeks in some cases to prevent Great Powers from intervening in African questions. The same can be said of the OAS and its recent tendency to exclude and ignore the United States when pressing regional questions emerge. We therefore expect regional IGOs to be better able to commit to and end conflicts in their regional neighborhoods.

In world politics, the importance of issues is clear. Issues matter in conflict (Hensel 2001) and they should also matter in terms of institutional effectiveness. The second characteristic of the typology is the issue focus of the institution. To categorize different types of issues that can fall under differing categories according to the issue under question we construct four different issue categories: military, political, economic, or social. The distribution of these organization types across the categories of rivalries can be seen in Table 1b.³

³ The cut points used follow closely with the natural distribution of the data, and are meant to depict those dyads without IGO memberships, a low level, mid level, and high level of memberships.

Table 1b
 Cross-tabulation of Rivalry Type and IGO Type

Number of IGO Memberships	Isolated Rivalry	Proto Rivalry	Enduring Rivalry
Regional IGOs			
0	511	382	410
1-5	421	469	407
6-10	83	33	45
>10	66	78	72
Universal IGOs			
0	210	140	72
1-5	249	182	184
6-10	139	111	274
>10	483	529	404
Military IGOs			
0	950	886	834
1	99	41	62
2	24	7	38
3	8	28	0
Economic IGOs			
0	332	228	126
1-5	483	369	444
6-10	233	298	334
>10	33	67	30
Political IGOs			
0	254	194	97
1-5	639	594	628
6-10	178	174	185
>10	10	0	4
Social IGOs			
0	268	164	113
1-5	261	198	184
6-10	197	185	158
>10	355	415	479

Each of these types can affect conflict and rivalry in a different manner. For purposes of brevity the functionalist tools of 'high' versus 'low' politics may be of some

use here in distinguishing among the effects of the different types.⁴ These different types of organizations indicate different levels of integration.

Military organizations clearly fall into the category of high politics. By sharing a membership in this type of organization, a state is opening up its security framework to potential adversaries so they are very selective in whom they choose as their members. The goal of military IGOs is to prevent conflict spillovers from impacting its members and to share resources. NATO is a good example of this process. We may find that the military focus of these organizations includes member states that are more likely to utilize military force to settle disputes. Peaceful states like Sweden or Finland rarely engage in rivalry and are also unlikely to join military IGOs because their membership might require the engagement in disputes that the population disagrees with. On the other hand, the rivalry between Greece and Turkey within NATO has endured for decades.

Political organizations are expected to lower the risk of rivalry and to work toward increasing the chances of rivalry termination in some contexts. These organizations have diverse effects in creating and maintaining peaceful relationships between states. They act as a forum for discussion and they establish common ground among divergent types of states by providing a rule guided environment in which its member states interact. Political IGOs also act as third-party mediators, and provide other conflict resolution techniques that weaken or end the momentum of rivalries.

Economic organizations contribute to peace by binding the futures of states together, and provide incentives for continued peaceful relationships. For instance (Nye

⁴ For a complete discussion of the theory that guided the construction of a larger IGO typology, see Leskiw (2002).

1971, 112) theorizes that “before a conflict has reached a stage of open hostilities, micro-regional economic organizations may indeed act to raise the price of conflict and to foster communications and help restructure values in a way that may have a restraining effect on political leaders... After major fighting has broken out, the role of the regional economic organization will be primarily to symbolize the possibility of upgrading a common interest.” Economic organizations may also be able to rectify trade disputes before they have the chance to transform themselves into militarized confrontation. The importance of economic IGOs makes it clear that trade, by itself, is not able to lessen conflict. Institutions matter and economic organizations are likely to generate positive externalities more readily than simple trading relationships. It seems important that scholars move beyond simple measures of dyadic trade to investigate the peaceful impact of economic relations and this category serves that purpose.

Lastly, we expect that social organizations have a varied impact on the probability of rivalry occurrence and termination. It is in the realm of regional social organizations that we expect to observe a high degree of peaceful relations while universal social organizations will have little impact on the probability of affecting a rivalry because of the generalities in which they operate. Social organizations typically serve some societal function beyond typical political or security concerns. For example, if the two states that are rivals join the World Health Organization (the WHO is not a stand alone institution its part of the UN), it is unlikely that the two would cross paths in the organization, all the while reaping the benefits of membership. Consequently, social organizations can be seen as the beginnings of interaction between states that calls for very little international political investment, since there is little if any pressure to resolve their disputes. Yet, a

regional social organization is more likely to have a pacific impact because of the very regional nature of the institution.

As it has been demonstrated elsewhere (Boehmer et. al. 2004, Leskiw 2002), the type of organization matters in its efficacy in preventing and resolving general international conflicts. It is likely some types of IGOs will provide for peaceful relations in the context of rivalry. We expect to find that regional IGOs are likely to reduce conflict because of their focus on local issues rather than global problems such as climate change or AIDs. We also expect to find that economic IGOs are likely to reduce conflict due to their focus on economic gains while social, political, and military IGOs will have disparate effects on conflict resolution.

Rivalry and the Opportunity to End Conflict

There may be a fundamental flaw with the IGO approach to peace in rival dyads. Rivals fight because they are rivals and see the other as the “enemy” because of a long-standing historical relationship of animosity. If the conflict resolution tendencies in IGOs are focused on solving the issue at stake in a rivalry, they may do little to end the overall conflict since the enemy image is so ingrained in rivalry. A rivalry may go dormant for a few years, but may revive again when another issue comes up between the pair of states. What an IGO needs to do in the context of rivalry is end the enduring image of a zero-sum game in order to decisively terminate a conflict.

This article is organized on the idea that the process of rivalry development is a stepwise procedure whereby each step increases the probability of rivalry occurring. In rivalry, power politics tactics are important steps towards war and enduring rivalry (Vasquez 1993). The use of alliances, arms races, and grand strategic plans are ways to

end up in rivalry, not to avoid conflict. While each step increases the probability of rivalry, this theory is not deterministic. There are ways to divert dyads from becoming rivals. One way is through the construction of and membership in specific types of IGOs, which we hope to uncover here.

IGOs are capable of providing an environment conducive to avoiding scenarios of conflict. Rivals can use IGOs to convey information about intentions. Alliance making and arms races are seen as ways to increase the security of a state. Contrary to expectations, the typical outcome of these realist policies is to produce a security dilemma whereby an increase in one state's security decreases the security of another state. IGOs can prevent this outcome and divert the conflict spiral that usually results in rivalry relationships. By diverting the conflict spiral and security dilemma, states with joint IGO memberships may not end up in rivalry as frequently as other states that have low levels of joint IGO membership.

Hypotheses and Research Design

After laying out the construction of our IGO typology we now move to a discussion of our empirical research design and hypotheses. This paper suggests that regional IGOs may be the optimal institutions for preventing dyads from becoming rivals in the first place. Additionally, regional IGOs may also increase the probability of a rivalry terminating. Subsequently, the first hypothesis tests the notion that as the number of shared IGO memberships between a dyad increases, the probability of that dyad being a proto or enduring rivalry decreases. Conventional IGO studies suggest these cross-cutting relationships become stronger with each additional organization added. To test

the viability of our IGO typology it is first important to test the conventional hypothesis first.

H1: The probability of proto and enduring rivalry decreases as the number of shared memberships within the rival dyad increase.

Regional IGOs have an increased ability to deal with local conflict problems therefore we first suggest that regional IGOs are more likely to decrease the probability of rivalry. In addition, as a dyad adds IGO forms that have higher levels of cooperative integration (moving from political to economic organizations) we would expect the pair to end their rivalry. Thus we posit that differing types of IGOs will have different effects on the probability of peace occurring in a dyad. Some types of social and political IGOs should have a higher likelihood of preventing conflict between a rival dyad. It should be noted that we are only looking at dyads that have experienced at least one militarized interstate dispute (Jones et al 1992). We do not make predictions concerning the relations of states that have never had conflict during their lifetime.

H2a: The scope of the organizational relationship matters. Regional organizations are better able to prevent and end conflict due to their local focus, thus they should decrease the probability of proto and enduring rivalries.

H2b: The probability of proto and enduring rivalry decreases as the degree to which the level of cooperative integration increases via the type of organizations. Thus, economic and political organizations should have a greater impact on reducing the probability than social or military organizations

We expect that as more memberships in IGOs are shared in an enduring rivalry, the more likely it is to terminate. Additionally, hypothesis *H3b* and *H3c* predicts that rivalries will be more likely to terminate if the dyad is involved in certain types of shared IGO memberships. We do not expect that conflict will only decrease, but that conflict will cease completely with the establishment of certain IGO bonds between states.

H3a: Having more shared memberships in IGOs increases the likelihood that the rivalry will terminate.

H3b: Regional organizations are better able to terminate rivalries than are universal organizations

H3c: Establishment of shared membership in certain types of IGOs (economic) makes it likely that the rivalry will terminate.

The unit of analysis here is the rival dyad according to rivalry type as measured by Diehl and Goertz (2000). To test the hypotheses laid out above, a number of methodological approaches will be adopted. First, to investigate the relationships established in the first two hypotheses, a dataset that tracks militarized interstate disputes (MID 2.1) in dyadic form will be utilized.⁵ For the first hypothesis, a multinomial logit model is appropriate for the endogenous variable of rivalry type, since the outcome is constrained to three possibilities: isolated (1-2 disputes), proto (3-5 disputes or more not lasting more than 20 years), or enduring rivalry (6 plus disputes over at least 20 years, see Diehl and Goertz 2000).⁶

Since there are multiple measures of the scope and type of IGO membership, three distinct models will be run to fully capture the dynamics of this indicator. The simplest model will use the variable ‘Shared IGO Membership,’ which is the sum of all IGO memberships in which both states in the dyad are members. The second model distinguishes between IGO memberships that have a regional scope and those that have a

⁵ The Expected Utility Generation and Data Management Program (EUGene), created by Bennett and Stam (2000) is used to produce the foundation of all datasets in this analysis. MID 2.1 is used because our IGO data only extends to 1992 so there is no need to utilize the newer MID 3.0 dataset.

⁶ We prefer to use the older Diehl and Goertz (2000) rivalry dataset because of our need for a three-fold rivalry typology and also the severity variable calculated in the data. Another consideration is goal to reduce the amount of disputes between states and all Diehl and Goertz (2000) rivalries include MIDs which cannot be said of the Thompson (2001) rivalry dataset. We see no problem with the use of the Thompson (2001) data in most cases and believe rivalry scholars should choose the dataset most appropriate for their theory and research design.

universal scope. Finally, the third multinomial logit model includes the full variance of IGO membership, which distinguishes both the scope of the organization and its functional type.

The last hypothesis calls for a set of data of a different structure. Since we are interested in the duration of enduring rivalries, a hazard analysis is in order. This technique is well established in the rivalry literature (Bennett 1996, 1997, 1997, 1998; Cioffi-Revilla 1998; Hewitt 2000; Cornwell and Colaresi 2002). Typical maximum likelihood estimation techniques, such as logistic regression, make the assumption that there is no systematic relationship between time and the object of study. While these methods can be used to estimate duration type data, they can potentially yield extremely biased results (Beck, Katz et al. 1998; Cleves, Gould et al. 2002). Hazard analysis allows one to grasp the underlying process of the duration of the enduring rivalry, as well as the impact of specific variables on that process. The technique produces the hazard rate which “reflects the rate at which a duration or episode ends in the interval ... given that the duration has not terminated prior to the beginning of this interval” (Box-Steffensmeier and Jones 1997, 1419).

A useful attribute of hazard analysis is its ability to control for the difficulties of censored cases that plague other approaches (Box-Steffensmeier and Jones 1997). Observations are considered “right-censored” if there is no event (or failure) before the end of the observed time period.

As is the case in most empirical modeling, the research question is the decisive factor that determines the statistical technique used for analysis; however, once the general approach is identified a myriad of additional choices need to be made. For

instance, is the underlying process of the duration of the rivalry one that becomes stronger over time, or one that decays rather quickly? In other words, is the hazard rate decreasing as a function of time or increasing? The first step is to choose the functional form of the hazard analysis. If the hazard is suspected to remain constant throughout the period under review, an exponential function is necessary. If the rate assumes some sort of curvilinear relationship, a Weibull distribution is in order. A form becoming more popular is the Cox proportional hazard estimation, where no functional form is assumed. This technique has the benefit that it does not run into the problem of “overfitting the data by forcing a particular parameterization” though as a consequence it does not produce a “set of parameters or standard errors concerning the shape of the hazard function” (Bennett, 1999. 261-262).

With general rules-of-thumb to follow, the choice of a given functional form is informed by theory (Box-Steffensmeier and Zorn 2001; Box-Steffensmeier and Zorn 2003). In this case however, there is no clear choice as to the shape of the hazard function. It may well be the case that over time a rivalry becomes self-perpetuating and thereby decreases the hazard rate, or the opposite may occur with rivalry becoming “due” for termination as time progresses. For example, Bennett explains that in a previous work (1997) he chose the Weibull form since he had reason to believe that alliances become institutionalized over time and therefore contributed to their own longevity (Bennett 1999). In this analysis, we are primarily interested in the impact of shared IGO memberships by type on the duration of rivalry, therefore the Cox proportional hazard model may be more appropriate to use here. Following upon Bennett’s (1998) suggestion, only those disputes in which the enduring rivalry could actually end will be

included in our analysis. Including disputes that are labeled post hoc as part of an enduring rivalry, below the threshold of six disputes in twenty years, would otherwise lead to misleading results.

The control variables included in all of the present research have been shown to be relevant in estimating the type of rivalry, its severity, and its termination. First, the status of the dyad is accounted for in terms of its composition of major or minor states. A rivalry that contains two major states, as defined by the Correlates of War project behaves in a different manner than its minor/minor or mixed counterparts (see Bremer 1992 and Vasquez 1993). Second, it is important to take into account the level of military capability in a rivalry. A dyad that exhibits severe capability asymmetry may be unlikely to progress to higher rivalry forms, since it would be improbable that the weaker side of the dyad would win a dispute, thus eliminating much of the motivation for further disputes. The capability symmetry indicator is constructed by taking the log of the ratio of the stronger state to that of the weaker state (Russett and Oneal 2001). In theory, a score of zero would mean that there is complete parity between the two states, while the upper limit reaches toward infinity when capabilities are heavily skewed.

Another factor that has been shown to be a good predictor of rivalry and conflict is contiguity (Vasquez 1993). We code the contiguity variable on a three-point scale, 0 if non-contiguous, 1 if water contiguous, and 2 if land contiguous. The last two control variables complement the IGO membership indicators by rounding out what has been deemed as the Kantian Tripod, democracy and trade. Democracy is measured on an index ranging from -10, the least democratic, to +10, the most democratic, and is taken from the Polity III dataset. Following Russett and Oneal's (2001) weakest link rational,

that the likelihood of conflict in a dyad is largely a function of the least democratically constrained state we use the lower democracy score in the dyad as a control variable.

We expect democracy to have a negative impact on the likelihood of higher order rivalries, as well as having a pacifying effect on the severity of hostilities. Additionally, it is likely that the minimal level of democracy in the dyad influences the duration of the rivalry in that more democratic dyads are thought to terminate sooner (Bennett 1998, Cornwell and Colaresi 2002). However, we do not include a dummy variable for a jointly democratic dyad since if the lowest democracy score in the dyad is +6 as explained above, the dyad can be considered jointly democratic.

Lastly, the level of trade within the dyad is accounted for in all the subsequent empirical models. We use Russett and Oneal's (2001) data on the importance of economic interdependence in the dyad, which they construct by dividing a state's trade within the dyad (exports plus imports) with its gross domestic product. Similar to the weak-link rationale for democracy, we incorporate the measure of the least economically constrained state (the lowest level of interdependence in the dyad). We assume that the state that does not find the economic interdependence with its dyadic partner particularly important, may be more apt to break that trading relationship when considering militarized conflict (Cornwell and Colaresi 2002). Additionally, we theorize that as the importance of trade between two states rises, the less likely it is they will reach higher levels of rivalry, experience severe hostilities, or escalate their rivalry.

Results for Rivalry Development

Table 2 illustrates the relationship between the type of rivalry and the form and degree to which the dyad has shared memberships in international organizations. Model I

considers the simplest form of the IGO variable, the total number of joint IGO memberships. As we have noted previously, developing a general aggregate measure of IGO membership can distort empirical relationships but herein we use the first model as a general starting point.

[Insert Table 2 Here]

The size of the coefficients and their statistical significance in Table 2 are relative to the base category, which in this case is isolated rivalry. Isolated conflict is chosen as the reference category since in essence this is where no rivalry is present, thus it is useful to compare this group to those of the more pronounced rivalry categories. Consequently, relative to its impact on isolated rivalries, shared IGO memberships do not produce statistically significant results supporting our original contention that little can be gained from aggregate studies of IGO memberships.

For the most part, the other exogenous variables in Model I behave as expected. As the number of major states in the dyad increases, so does the likelihood of experiencing higher levels of rivalry. The sign of the coefficient on the capability ratio indicator is statistically significant for enduring rivalries, as they are compared to isolated rivalries. This means that as the level of capability imbalance increases, the less likely the dyad is to move to higher levels of rivalry. While it is not statistically significant in the proto rivalry stage, the indicator of the lowest level of democracy in the dyad is negative and significant in the enduring rivalry stage (see also Reed and Clark 2002). Lastly, the indicator of interdependence within the dyad is strongly negative though only at the enduring rivalry stage does it produce a finding statistically different from the base category. As compared to the base category, as the level of interdependence increases

(trade becomes more important), it is less likely that the dyad will experience an enduring rivalry.

Model II in Table 2 takes the scope of the IGO membership into account. What is striking about the results is that both measures of IGO membership, regional and universal, are statistically significant though in different directions. Shared memberships in regional organizations reduce the probability of a dyad entering a proto or enduring rivalry relative to the reference category. As Table 3 illustrates a one standard deviation increase in the number of memberships in regional organizations increase the probability of experiencing an isolated rivalry by 18% and decreases the probability of having an enduring rivalry by 14%. This supports the notion that regional organizations may provide the context, shared history and identity, for the resolution of disputes and otherwise dissuade states from entering into recurring disputes.

[Insert Table 3 Here]

On the other hand, having more shared memberships in universal organizations increases the chances of experiencing proto and enduring rivalries. A one standard deviation increase (see Table 3) in the number of shared memberships in universal organizations decreases the likelihood of isolated conflict by 13%, while at the same time increasing the chances of an enduring rivalry by an identical percentage.

Why do universal IGOs correlate with rivalry? The answer to this question is two-fold. First, the average universal organization has four-times the number of states included in its membership than does a regional organization. Consequently, a string of conflicts over an extended period of time between just two states in an organization of roughly sixty may not make it onto the policy radar or agenda of the institution. Of

course such conflict may become an issue if it is extreme or affects the stability of the region in question, these cases would typically be found on the visible end of enduring rivalries (India vs. Pakistan). Additionally, as members of a broad organization the disputing parties could easily avoid one another, providing little impetus to address their dispute.

Another answer for the positive and significant sign on indicator of universal IGO membership can be found by employing a more nuanced typology of IGO membership; such an approach can be seen in Model III of Table 2. By including the functional area of the international institution, one gets a more fully developed picture of the relationship between shared memberships in these organizations and interstate rivalry. What immediately stands out in Model III is the diversity of the strength and direction that the different types of organizations have on the various types of rivalry.

Universal social and economic organizations seem to increase the likelihood of proto-rivalries, while universal political organizations have a significant and negative affect on proto rivalry development. Within the enduring rivalry category, regional military and universal social IGOs become statistically significant and are in the positive direction. Regional social IGOs are the lone indicator of shared memberships that have a statistically significant negative impact on the chances of experiencing an enduring rivalry. The control variables in both endogenous categories behave as they have in the past, though the indicator of the least democratic partner of the dyad is no longer statistically significant at the .05 level within the proto rivalry type.

In multinomial logit models, the direction and significance of the variable in question is best interpreted using predicted probabilities, located in Table 3. The crucial

test would be to find a type of IGO that would increase the probability of isolated rivalry while simultaneously decreasing the likelihood of an enduring rivalry. Membership in regional social organizations have the greatest decrease in the probability of enduring rivalries, a change of 12% with a one standard deviation increase in membership of this type. The mean and standard deviation for regional social organizations are by far the largest for any type of regional organization, so by immensely increasing the number of these relationships it further integrates the dyads into a regional context and identity. Universal economic and regional political organizations also reduce the likelihood of enduring rivalries, though they follow regional social organizations at some distance at a decrease of 6% and 3% respectively. The economic potential that is lost when states enter recurring conflicts, and the sense that their future vitality is bound together when they share memberships in these types of institutions, is undoubtedly playing a role in decreasing the chances of enduring rivalry formation.

Regional political organizations allow the disputants to engage one another while the other members of the institution have a vested interest in seeing the dispute come to an end. For relationships that lead to higher levels of rivalry, the strongest can be seen with a one standard deviation increase in the number of shared memberships in universal social organization increases the chances of an enduring rivalry by 8.6%. Universal social organizations are theorized to have the least restraining impact on state behavior since they require the least amount of effort and political capital to be invested to reap its benefits. In other words, what state would turn away an organization that is meant to improve the health, safety, or welfare of their people? These are not the type of issues with which states in a rivalry would have much to fight about. Additionally, these

organizations may represent the first steps of two states in a rivalry actually being able to cooperate and these efforts may spill over into other areas.

A standard deviation increase in regional military organization leads to an 8.3% increase in the likelihood of a dyad experiencing an enduring rivalry. An increase by one standard deviation in membership of universal political organizations raises the chance of an enduring rivalry by 4%. This relationship may be due to the nature of these institutions which attempt to pull divergent types (different regime types, cultural background, economic standing, etc.) of states together and give them consistent rules to play by.

Results for Rivalry Termination

The relationship between IGOs and rivalry termination is evidenced in Table 4. As has been the case in previous tables utilizing different techniques, Model I tests the impact of the total number of IGO membership shared in the rivalry. Positive coefficients increase the hazard rate, which can be interpreted as decreasing the duration of the rivalry.

[Insert Table 4 here]

The coefficient for the shared number of IGO memberships is in the negative direction and is statistically significant, which is very much contrary to expectations (Hypothesis H3a). The percentage change in the hazard rate (the rate at which the enduring rivalry is likely to terminate) is found using the formula $[(\exp(\text{coefficient})) - 1] \times 100$, which in the case of shared IGO memberships decreases the likelihood of the rivalry ending by 4% with a one unit increase in the number of shared memberships.

This finding conforms to a previous analysis (Cornwell and Colaresi 2002), which employed a different set of high level rivalries and found that the aggregate number of shared memberships in IGOs does not reduce rivalry duration. They also suggest that a typology of IGO membership is required in order to get closer to the true impact of joint memberships. It seems that the only other variable in the model that is significant at the .05 in a two-tailed test is the indicator of the least democratic state within the pair. As the least democratic state in the rivalry increases the level of democracy by one unit, there is a 16% increase in the hazard rate that the rivalry will terminate.

Model II introduces the measure of both regional and universal organizations, though no variable in the model produces statistically significant findings. Model III of Table 4 has the full IGO typology and has many types that are statistically significant though in different directions, thus Hypothesis H3b finds support. Regional economic IGOs stand out from the other types due to the magnitude of its coefficient. Here, by adding one more regional economic membership in the dyad, the hazard ratio decreases by almost 100%, which comparatively makes for a lengthy rivalry. The incentives for cooperation facilitated by membership in regionally based economic institutions are not strong once states have entered an enduring rivalry. It may be the case that this finding is a result of rivalries located in regions that have little to offer in terms of the potential for economic cooperation. In point of fact, this assertion is borne out in the data with the rivalries possessing the highest number of such shared memberships being Morocco and Algeria and Ethiopia and Sudan. Similarly, the model reveals that regional political organizations tend to prolong rivalries. While it was demonstrated earlier that this type of organization reduces the likelihood of entering an enduring rivalry, it seems to do very

little in ending recurring disputes. What is likely happening in the regional political organization is that it is entrenching the rivalry relationship by allowing the two states to continue their battle in a political forum.

Types of regional organizations that increase the hazard rate are military and social organizations. Regional social organizations are an interesting case since by adding one more shared membership increases the hazard rate by roughly 200%. Unlike their universal counterparts, regional social organizations tend to offer fewer benefits. The focus of these organizations is typically agricultural, cultural, or educational, and otherwise represents low political issues. Since on average regional social organizations are limited in funding, there may be little incentive for states in serious rivalries to join in the first place. On the other hand, universal social organizations appear to increase the duration of enduring rivalries. Since membership in these organizations means almost immediate benefit, aid from the outside world, and do not require high levels of cooperation it is unlikely that joint membership in these organizations is seen as a significant step toward reconciling rivals.

Universal political and economic memberships are associated with shortened rivalries, though only economic organizations pass the threshold of statistical significance. By adding just one universal economic organization, the hazard increases by 400%, thus making the conditions ripe for the termination of the rivalry. Incentives presented by such organizations, such as the World Bank and the World Trade Organization, and their conflict resolution abilities have a tendency to lessen the duration of enduring rivalries.

Considering the control variables in Model III, only the ratio of military capabilities and the degree of contiguity of the rivalry are statistically significant. We theorized that states engaged in rivalry which are of relatively similar military capabilities would produce longer rivalries. However, the results suggest the opposite and are in keeping with similar findings elsewhere (Cornwell and Colaresi 2002).

Conclusion

Since 1816, the majority of militarized disputes have occurred between interstate rivals. What becomes paramount to the cause of peace is identifying those conditions that contribute to ending the cycle of recurring conflict in the context of a rivalry. The liberal approach to peace has identified three factors: democracy, trade, and shared memberships in IGOs that have proven to help realize peace between dyads, and such approach has begun to be applied to rivalries with mixed results (Cornwell and Colaresi 2002, Prins and Daxecker 2007).

This analysis has concentrated on the contribution to peace made by specific types of IGOs in the context of rivalries. It was theorized that previous negative and disparate findings about the relationship between institutional membership and rivalries was due to treating all IGOs as equals. To address this problem a typology of institutions is offered and was tested for its abilities to reduce the probability of allowing states to enter into higher rivalry forms or to lessen the duration of rivalries. The analysis confirm the previous finding that an aggregate measure of shared IGO membership was not related to preventing the development rivalries, nor was it able to lessen the duration of a rivalry. The IGO typology revealed some striking results due to the diversity of the relationships uncovered. While not all our theoretical expectations were congruent with our findings,

we are pleased with the success our models can demonstrate in lessening the probability of rivalry occurrence and decreasing the duration of rivalry. Future scholars may find it prudent to focus on the issue of timing and IGO types. Some contend that IGO socialization (Bearce and Bondanella 2007) is important in the process of peace, therefore it might be important to control for the time of membership in specific IGOs so we can examine the length of time it takes for IGOs to have an impact on a case of rivalry.

Our findings suggest that regional organizations lessened the chance of becoming proto and enduring rivalries in the first place, while having no pronounced affect on the probability of rivalry termination. Universal organizations, on the other hand, seemed to increase the likelihood of experiencing proto and enduring rivalries, though they are associated with less severe conflicts.

Looking at the typology that includes the issue focus of organization reveals no panacea. The various tests did illustrate the fact that the type of organization matters greatly. In certain situations, a type may perform amicably for the cause of peace, while looking to explain a different endogenous effect that same type may have no discernable impact. For example, shared memberships in universal economic IGOs can greatly lessen the duration of the rivalry while also increasing the probability that a proto rivalry develops in the first place. On the other hand, regional social IGOs seem to decrease the probability that a rivalry will occur in the first place, and if it does occur, shared memberships increase the probability that such a rivalry will terminate. It seems clear that there is no universal solution to the problem of rivalry provided by institutional memberships. Solutions to the problem of rivalry development and termination vary by

the type of IGO in operation. In sum, the liberal paradigm does provide not simple insights into the dynamics of interstate rivalries. This analysis has contributed towards addressing a piece of the rivalry puzzle that has long remained underdeveloped by examining how IGO types impacts the probability and termination of the event.

Table 2

Estimated Multinomial Logit Coefficients of the Type of
Rivalry Involvement, Varying Scope and Type of IGO Membership, 1816-1992

Variable	I	Model II	III
Proto Rivalry			
Shared IGO Membership	.0011 (.005)	----	----
Regional IGO Membership	----	-.046** (.016)	----
Universal IGO Membership	----	.016* (.007)	----
Regional Military IGO	----	----	.054 (.190)
Regional Economic IGO	----	----	.029 (.083)
Regional Political IGO	----	----	-.096 (.119)
Regional Social IGO	----	----	-.099 (.055)
Universal Economic IGO	----	----	.098* (.048)
Universal Political IGO	----	----	-.213**(.067)
Universal Social IGO	----	----	.051* (.026)
Major State Status	.601** (.159)	.628*** (.163)	.754***(.181)
Capability Ratio	-.006 (.052)	-.016 (.052)	-.047 (.055)
Contiguity	.796*** (.095)	.890***(.099)	.899***(.105)
Low Democracy	-.040** (.014)	-.036** (.014)	-.028 (.016)
Low Trade	-9.00 (11.4)	-9.91 (12.18)	-6.32 (15.0)
_cons	-1.02***(.241)	-1.16***(.244)	-.993***(.260)
Enduring Rivalry			
Shared IGO Membership	.005 (.005)	----	----
Regional IGO Membership	----	-.097*** (.016)	----
Universal IGO Membership	----	.040*** (.007)	----
Regional Military IGO	----	----	.422* (.199)
Regional Economic IGO	----	----	.22 (.098)
Regional Political IGO	----	----	-.158 (.132)
Regional Social IGO	----	----	-.203***(.052)
Universal Economic IGO	----	----	-.019 (.051)
Universal Political IGO	----	----	-.054 (.079)
Universal Social IGO	----	----	.090** (.030)
Major State Status	1.81*** (.165)	1.79*** (.171)	7.76***(.187)
Capability Ratio	-.325***(.061)	-.351*** (.065)	-.361***(.067)
Contiguity	1.53*** (.111)	1.70*** (.121)	1.72*** (.126)
Low Democracy	-.049** (.017)	-.0431** (.017)	-.043** (.019)
Low Trade	-58.43***(15.2)	-51.5*** (15.6)	-45.9** (17.3)
_cons	-1.95*** (.285)	-2.31*** (.296)	-2.17***(.314)

Note: Isolated rivalry is the comparison group. *= $p < .05$, **= $p < .01$, ***= $p < .001$ Robust Standard Errors in Parenthesis.

Table 3

Predicted Probabilities of Rivalry Type, Varying Scope & Function of IGO Membership

	Rivalry Type		
	Isolated	Proto	Enduring
<i>Model I</i>			
One Std. Deviation increase in			
Shared IGO Memberships	.262(-3%)	.373(-2%)	.364 (+4%)
Base Probability	.270	.379	.350
<i>Model II</i>			
One Std. Deviation increase in :			
Regional IGO Memberships	.306 (+18%)	.389 (+1.3%)	.305 (-14%)
Universal IGO Memberships	.227 (-13%)	.372 (-3.1%)	.401 (+13%)
Base Probability	.260	.384	.356
<i>Model III</i>			
One Std. Deviation increase in :			
Regional Military IGO	.282(-4.7%)	.312(-4.9%)	.405(+8.3%)
Regional Economic IGO	.293(-1.0%)	.331(+.92%)	.375(+.16%)
Regional Political IGO	.308(+3.7%)	.327(-.43%)	.365(-2.7%)
Regional Social IGO	.347(+17%)	.322(-1.8%)	.331(-12%)
Universal Economic IGO	.282(-5.4%)	.366(+12%)	.352(-6.1%)
Universal Political IGO	.330(+11%)	.280(-14%)	.390(+3.9%)
Universal Social IGO	.264(-10%)	.328(+.04%)	.407(+8.6%)
Base Probability	.297	.328	.375

Note: Percent change in predicted probability relative to base prob. given in parenthesis

Table 4

Estimated Cox Proportional Hazard Coefficients of Enduring Rivalry Termination

Variable	Model					
	I		II		III	
Shared IGO Membership	-.040**	(.018)	----	----	----	----
Regional IGO Membership	----	----	.095	(.155)	----	----
Universal IGO Membership	----	----	-.081	(.053)	----	----
Regional Military IGO	----	----	----	----	.889	(1.39)
Regional Economic IGO	----	----	----	----	-14.7***	(3.48)
Regional Political IGO	----	----	----	----	-3.36***	(.989)
Regional Social IGO	----	----	----	----	1.14***	(.335)
Universal Economic IGO	----	----	----	----	1.62***	(.418)
Universal Political IGO	----	----	----	----	.186	(.303)
Universal Social IGO	----	----	----	----	-.707**	(.236)
Major State Status	-.213	(.511)	-.123	(.529)	-.283	(.688)
Capability Ratio	-.745	(.508)	-.726	(.509)	-1.12**	(.457)
Contiguity	-.583	(.515)	-.662	(.493)	-1.43***	(.444)
Low Democracy	.146**	(.067)	.106	(.072)	.074	(.130)
Low Trade	-55.4	(62.2)	-57.1	(60.4)	-73.6	(83.6)

Note: N=380. *= $p < .05$, **= $p < .01$, ***= $p < .001$ Robust Standard Errors in Parenthesis.

Bibliography

Barbieri, Katherine. (1996). "Economic Interdependence: A Path to Peace or a Source of Interstate Conflict?" *Journal of Peace Research* 33(1): 29-49.

Barbieri, Katherine and Jack Levy. (1997). *Sleeping with the Enemy: Trade between Adversaries During Wartime*. Paper presented at Annual Meeting of American Political Science Association, Washington D.C., August.

Barbieri, Katherine and Jack Levy. (1999). "Sleeping with the Enemy: The Impact of War on Trade." *Journal of Peace Research* 36(4): 463-479.

Bearce, David H. and Stacy Bondanella. (2007). "Intergovernmental Organizations, Socialization, and Member-State Interest Convergence." *International Organization* 61: 703-33.

Beck, Nathaniel, Jonathan Katz, et al. (1998). "Taking Time Seriously: Time-Series Cross-Section Analysis with a Binary Dependent Variable." *American Journal of Political Science* 42 (4): 1260-88.

Bennett, D. Scott. (1996). "Security, Bargaining, and the End of Interstate Rivalry." *International Studies Quarterly* 40: 157-184.

Bennett, D. Scott. (1997). "Democracy, Regime Change and Rivalry Termination." *International Interactions* 22(4): 369-397.

Bennett, D. Scott. (1997). "Measuring Rivalry Termination, 1816-1992." *Journal of Conflict Resolution* 41(2): 227-254.

Bennett, D. Scott. (1998). "Integrating and Testing Models of Rivalry Duration." *American Journal of Political Science* 42(4): 1200-1232.

Bennett, D. Scott and Alan Stam. (2000). "EUGene: A Conceptual Manual." *International Interactions* 26:179-204.

Bennett, S. (1999). "Parametric Models, Duration Dependence, and Time-Varying Data Revisited." *American Journal of Political Science* 44(1): 256-270.

Boehmer, Charles, Erik Gartzke, et al. (2004). "Do Intergovernmental Organizations Promote Peace?" *World Politics* 57: 1-38.

Box-Steffensmeier, Janet M. and Bradford S. Jones. (1997). "Time is of the Essence: Event History Models in Political Science." *American Journal of Political Science* 41(4): 1414-1461.

Box-Steffensmeier, Janet M. and Christopher J. W. Zorn. (2001). "Duration Models and Proportional Hazards in Political Science." *American Journal of Political Science* 45(4):972-988.

Box-Steffensmeier, Janet M. and Christopher J.W. Zorn. (2003). Duration Models with Repeated Events. *Unpublished Manuscript*.

Bremer, Stuart A. (1992). "Dangerous Dyads: Conditions Affecting the Likelihood of Interstate War." *Journal of Conflict Resolution* 36:178-97.

Cioffi-Revilla, C. (1998). The Political Uncertainty of Interstate Rivalries: A Punctuated Equilibrium Model. *The Dynamics of Enduring Rivalries*. P. F. Diehl, Urbana: University of Illinois Press: pp. 64-97.

Cleves, Mario A., William W. Gould, et al. (2002). *An Introduction to Survival Analysis Using Stata*. College Station, TX: Stata Press.

Colaresi, Michael P., Karen Rasler, and William R. Thompson. 2008. *Strategic Rivalries in World Politics: Position, Space, and Conflict Escalation*. Cambridge: Cambridge University Press.

Cornwell, Derekh and Michael Colaresi. (2002). "Holy Trinities, Rivalry Termination, and Conflict." *International Interactions* 29(1).

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

Gasiorowski, Mark and Solomon Polachek. (1982). "Conflict and Interdependence: East-West Trade and Linkages in the Era of Détente." *Journal of Conflict Resolution* 26(4): 709-729.

Goertz, G. and Paul Diehl. (1995). "The Initiation and Termination of Enduring Rivalries: The Impact of Political Shocks." *American Journal of Political Science* 39: 30-52.

Goertz, G. and Paul Diehl. (1995). "Taking "Enduring" Out of Enduring Rivalry: The Rivalry Approach to War and Peace." *International Interactions* 21(3): 291-308.

Hensel, Paul, Gary Goertz, et al. (2000). "The Democratic Peace and Rivalries." *Journal of Politics* 62(4): 1173-1188.

Hensel, Paul R. (2001). "Contentious Issues and World Politics: The Management of Territorial Claims in the Americas, 1816-1992." *International Studies Quarterly* 45(1): 81-109.

Hensel, Paul R. (2003). "ICOW Multilateral Treaties of Pacific Settlement Data Set, Version 1.3." Tallahassee: Florida State University.

Hewitt, J. Joseph. (2000). *Enduring Rivalries and International Crises*. Paper Presented at the Annual Meeting of the American Political Science Association.

Hopkins, David Morse. (1974). Conflict and Contiguity: An Empirical Analysis of Institutionalization and Conflict in Contiguous Dyads. *Ph.D. dissertation*, Syracuse University.

Jones, Daniel, Stuart Bremer, et al. (1996). "Militarized Interstate Disputes, 1816-1992: Rationale, Coding Rules, and Empirical Patterns." *Conflict Management and Peace Science* 15(2): 163-213.

Leskiw, Christopher Scott. (2002). Sown for Peace? International Organizations and Interstate Conflict. *Ph.D. Dissertation*, Vanderbilt University.

Liberman, Peter. (1996). "Trading with the Enemy: Security and Relative Economic Gains." *International Security* 21(1): 147-175.

Maoz, Zeev. (2002). *Pacifism, Dispute Proneness, and Addiction: Patterns and Correlates of National and Dyadic Conflict History, 1816-1992*. Presented at the International Meeting of the International Studies Association, Hong Kong, July 2002.

Maoz, Zeev and Bruce Russett. (1993). "Normative and Structural Causes of Democratic Peace, 1946-1986." *American Political Science Review* 87:624-38.

Mitchell, Sara McLaughlin and Paul R. Hensel. (2007). "International Institutions and Compliance with Agreements." *American Journal of Political Science*, 51(4): 721-737.

Nye, J. S. (1971). *Peace in Parts: Integration and Conflict in Regional Organization*. Boston: Little, Brown and Co.

Prins, Brandon and Ursula Daxecker. (2007). "Committed to Peace: Liberal Institutions and the Termination of Rivalry." *British Journal of Political Science* 38: 17-43.

Ray, James Lee. (1995). *Democracy and international conflict : an evaluation of the democratic peace proposition*. Columbia, S.C.: University of South Carolina Press.

Reed, W. and D.H. Clark. (2002). "Toward a Multi-process Model of Rivalry and the Democratic Peace." *International Interactions* 28(1):77-92.

Reuveny, Rafael and Heejoon Kang. (1996). "International Trade, Political Conflict/Cooperation, and Granger Causality." *American Journal of Political Science* 40(3): 943-70.

Rosecrance, Richard. (1992). "A New Concert of Powers." *Foreign Affairs* 71(Spring): 64-82.

Russett, Bruce M. and John R. Oneal. (2001). *Triangulating peace : democracy, interdependence, and international organizations*. New York: Norton.

Singer, J. David and Michael Wallace. (1970). "Intergovernmental Organization and the Preservation of Peace, 1816-1964: Some Bivariate Relationships." *International Organization* 24(3): 520-49.

Thompson, W. (2001). "Identifying Rivals and Rivalries in World Politics." International Studies Quarterly 45 (4): 557-586.

Valeriano, Brandon. (2003). *Steps to Rivalry: Power Politics and Rivalry Formation*. *Ph.D. Dissertation*, Vanderbilt University.

Vasquez, John. (1993). *The War Puzzle*: Cambridge: Cambridge University Press.

Vasquez, John and Christopher S. Leskiw. (2001). "The Origins and War-proneness of International Rivalries." *Annual Review of Political Science* 4: 295-316.

Wallace, M. and J. D. Singer (1970). ""Intergovernmental Organization in the Global System, 1815-1964,"." International Organization 24(2):239-87.