What Do They Do When They Aren't Fighting?
Event Data and the Nonmilitarized Dimensions of Interstate Rivalry

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Abstract

Recent research has shown that interstate rival adversaries account for most interstate conflict, and that militarized relations between rivals become more conflictual as the adversaries accumulate longer histories of conflict. The existing research on rivalry, though, has focused almost exclusively on militarized relations between rivals; little is known about non-militarized or cooperative relations between rival states. This study uses COPDAB event data to study non-militarized relations between states from the perspective of rivalry. The results indicate that relations between interstate rivals are more conflictual in non-military terms than relations between non-rival states, as expected, and relations between rivals tend to become increasingly conflictual as their rivalry evolves. Rivals also appear to engage in greater cooperation than non-rivals overall and as their rivalry evolves, indicating that interstate rivalry appears to lead to a greater intensity in relations along militarized, nonmilitarized, and cooperative dimensions. Finally, characteristics of past conflict between rivals such as dispute outcomes, dispute severity levels, and contentious issues are all shown to help account for subsequent changes in their nonmilitarized conflictual and cooperative relations.

Recent research on international conflict has highlighted the importance of interstate rivalries, or pairs of adversaries that engage in repeated conflict over protracted periods of time. Interstate rivals have been shown to account for a vastly disproportionate fraction of all interstate conflict. Rivalry relationships have also been shown to evolve over time, with recurrent conflict between the same adversaries becoming increasingly likely as they accumulate longer histories of conflict. Existing research on rivalry, though, has focused on the militarized dimensions of relations between rivals, such as interstate crises, disputes, and wars. Although militarized confrontations may be the most prominent or most severe events in international relations, they are also relatively rare, even in rivalries.

This paper is meant to extend the study of rivalry by looking at the non-militarized dimension of relations between rivals. I use COPDAB event data to study day-to-day relations between states from the perspective of rivalry, augmenting the existing research on high-intensity crises or wars in rivalry by examining more frequent (but typically less severe) forms of interaction. This allows the study of several important queries relating to interstate conflict and rivalry: how do day-to-day relations between interstate rivals differ from relations between non-rival states, and do these relations change over time as the rivalry relationship evolves through the continued recurrence of militarized conflict?

This paper begins with a brief review of the scholarly literature on interstate rivalry. Drawing from this literature, I develop a series of hypotheses on non-militarized relations between rivals. I then present and employ a research design to evaluate these hypotheses empirically. I conclude by discussing my results and their implications.

Recent Research on Interstate Rivalry

The literature on interstate rivalry has clustered into three categories (Hensel 1997). Early research using the rivalry concept typically employed rivalry as a case selection mechanism, treating enduring rivalry as a background condition indicating dyadic dispute-proneness. Such research has used populations of enduring rivals to test propositions about arms races (Diehl 1985), power transitions (Geller 1993), or general deterrence (Huth and Russett 1993).

The second cluster of rivalry research treats rivalries as a useful topic for study in their own right, rather than a case selection mechanism to be used in studying some other topic or relationship. Such studies have typically focused on the differences in conflict behavior between enduring rivalry and other, presumably less severe interstate relationships (e.g., Brecher 1984; Brecher and James 1988; Goertz and Diehl 1992).

Others such studies have focused on the ending of rivalry (Bennett 1996), the effects of political shocks on rivalry (Goertz and Diehl 1995a), and the role of mediation efforts in rivalry (Bercovitch and Regan 1994).

The third cluster of rivalry research extends the second cluster by focusing on changes within ongoing rivalry relationships. Several early studies examined the impact of past conflict behavior on subsequent conflict initiation or escalation patterns (Leng 1983; Maoz 1984; Hensel 1994), thereby laying the groundwork for the study of evolutionary dynamics within rivalries. More recently, several scholars (Hensel 1996; Maoz and Mor 1996) have developed an explicit "evolutionary approach" to rivalry, focusing on the processes by which rivalries begin and change over time.

Together, these existing studies on rivalry have helped to improve our understanding of some processes of interstate conflict. Because of this recent research, we have come to recognize the prominence of rival dyads as participants in numerous forms of interstate conflict, including wars, crises, militarized disputes, and violent territorial exchanges. We have begun to recognize that many dimensions of conflict behavior change over time as a rivalry relationship evolves, including the severity of militarized confrontations and the likelihood of renewed conflict between the same adversaries in the future. We have also begun to understand some of the factors that lead to the recurrence of conflict between former adversaries, including dispute outcomes, contentious issues, the adversaries' relative capabilities, and their political regime type.

Yet the existing literature has left out some important dimensions of interstate interactions. The literature on rivalry has focused almost exclusively on the militarized dimension of relations between rival states, including such topics as the occurrence or recurrence, escalation, and outcomes of militarized confrontations. Indeed, as Thompson (1995) notes critically, most of the current literature on rivalry has identified rivals exclusively by the frequency or severity of their militarized confrontations. This emphasis on militarized events has unfortunately led scholars to overlook non-militarized events, which comprise the vast majority of all events in interstate relations. Even the most conflict-prone dyads in the interstate system only rarely become involved in more than one or two militarized disputes per year, although they typically engage in non-militarized interactions on a nearly daily basis. This paper extends the literature on rivalry by focusing on these much more frequent, albeit much lower-intensity, events below the military threshold that have been overlooked by the existing research on rivalry. I now offer a brief review of the recent scholarly literature employing event data to study conflict and cooperation between states, before presenting and testing hypotheses on nonmilitarized events within rivalry.

Hypotheses on Nonmilitarized Interactions between Rivals

Rivalry and Interstate Interactions

The first topic to be addressed involves the differences in interstate conflict and cooperation between enduring rival adversaries, proto-rival adversaries, isolated conflict dyads, and dyads that never become involved in militarized conflict during the period of study (to use the categorization of Goertz and Diehl 1992, 1995a). Much of the scholarly literature on rivalry argues that enduring rivals are more conflictual than other dyads because they have a history of disagreements and confrontations, they seem to contend over highly salient issues, and they typically expect their disagreements and hostility to continue into the future (Goertz and Diehl 1992). Brecher (1984, 1993), for example, suggests that the prolonged hostility that characterizes rivalry creates a deeply-rooted mistrust between them and generates a mutual anticipation of violent behavior in the future. With regard to militarized conflict, at least, these expectations seem to be met; rivals have been shown to account for the majority of all interstate disputes and wars, and confrontations between rivals seem to be more escalatory and less amenable to successful conflict management (e.g., Brecher 1984; Brecher and James 1988; Goertz and Diehl 1992; Bercovitch and Regan 1994).

With regard to relations below the militarized threshold, a similar logic would suggest that enduring rival dyads are also more conflictual and less cooperative than dyads that never reach such a protracted state of enmity. As Goertz and Diehl (1996: 299) point out, enduring rivalry is "a hostile and competitive relationship in which each side views the other as posing a significant threat to its own interests." In such a relationship, the rivals expect that disputes, crises, or war will continue into the future, and "[t]hese expectations condition current foreign policy choices" by each rival. The history of past disagreement and confrontations between two rivals has been argued to leave the adversaries with a great deal of distrust and suspicion of each other, and there is no reason to believe that these effects of rivalry should remain limited to the militarized dimensions of foreign policy. Rather, interstate rivals seem likely to view each other's actions below the militarized level with similar distrust and suspicion, particularly under the expectation that future militarized conflict is likely. In such an atmosphere, cooperation between the rivals should be difficult to attain, and cooperative initiatives by one side of the rivalry are likely to be rejected or treated cautiously by its rival. The legacy of past confrontation and expectation of continued conflict that are said to characterize rivalry can thus be hypothesized to generate future discord -- whether above or below the militarized threshold.

Hypothesis 1: *Nonmilitarized interstate relations will be most conflictual and least cooperative between enduring rivals, followed by proto-rivals, isolated conflict dyads, and dyads that never engage in militarized conflict.*

Beyond this general expectation about levels of conflict and cooperation between different types of rival states, I also consider the differences between these rivalry types in conflict and cooperation before their rivalries begin. This analysis allows me to study whether the enduring rivals are fundamentally different from other types of states even before their rivalries begin, which is an important element in Goertz and Diehl's (1995b) "basic rivalry level" approach. If enduring rivals are found to be much more conflictual or much less cooperative than other types of adversaries in their non-militarized periods, then event data may be useful as a type of early warning indicator to help identify potential rivalries before they begin. I expect that there may be some difference in levels of conflict or cooperation in the non-militarized phase of states' relations, with eventual enduring rivals perhaps starting off more conflictual and less cooperative than eventual proto-rivals, isolated conflict dyads, or non-rivals. This expectation comes from the arguments of Goertz and Diehl that enduring rivals differ fundamentally from other types of adversaries and that they settle into their rivalry quickly, as discussed above. Nonetheless, I do not expect these differences to be especially great. Relations during non-militarized periods may be able to serve as early warnings of potential rivalry, but research on rivalry from an evolutionary perspective -- discussed below -- suggests that relations between rivals seem to change or evolve in many ways. As a result, many of the most important differences between rivals and other states may not be apparent early on and may be manifested only after a lengthy period of conflict, in which case rivalry would be difficult to identify beforehand.

Hypothesis 2: *Nonmilitarized interstate relations before rivalry begins will help to predict the eventual rivalry type, with more conflictual and less cooperative nonmilitarized phases being followed by more advanced forms of rivalry.*

Evolving Rivalries and Interstate Interactions

The first set of analyses examined the impact of rivalry on interstate conflict and cooperation from the basic rivalry level or post hoc perspective on rivalry. A second set of analyses considers the impact of rivalry on conflict and cooperation from an evolutionary perspective, following Hensel (1996a). Such a perspective on rivalry

suggests that rivalry comes into existence through a series of interactions between two states, with each confrontation between them increasing the sense of mistrust and hostility between them, while potentially creating or exacerbating grievances if lives are lost or territory exchanges hands. From this evolutionary perspective, full-fledged rivalry can not be said to exist until a number of confrontations have occurred between the adversaries. The effects of rivalry on interstate relations are thus expected to begin at a low level, with eventual enduring rivals beginning much like eventual proto-rival or isolated conflict dyads. The effects of rivalry are then expected to increase over time as the adversaries accumulate a longer history of militarized confrontations and the corresponding increases in tension, hostility, mistrust, and grievances.

Based on this evolutionary perspective, I expect that relations between states will become more conflictual and less cooperative over time, as they evolve closer to full-fledged rivalry. Using the categories employed by Hensel (1996a), I thus expect that relations will become more conflictual and less cooperative as the adversaries evolve through the phase of non-militarized relations, the early rivalry phase, the intermediate phase, and eventually the advanced phase of rivalry. Beyond an aggregated analysis of all dyads in the study, I also run the same evolutionary analysis separately for dyads that eventually qualify as enduring rivals, in order to search for patterns of evolution within this particular form of rivalry. If levels of conflict and cooperation change substantially as eventual rivals evolve through the different phases of rivalry, then we can conclude with much greater confidence that any observed differences in conflict or cooperation result from evolution and not simply from some type of difference between different rivalry types. Alternatively, if the aggregated evolutionary analyses identify substantial changes in interstate interactions over time but the separate analyses for eventual enduring rivals and eventual proto-rivals do not reveal similar changes, then we can conclude that the differences across rivalry phases are largely due to the fact that the less severe rivalry types drop out of the analysis before reaching more advanced phases of rivalry, rather than because rivalry relations seem to evolve over time.

Hypothesis 3: *Nonmilitarized interstate relations will be most conflictual and least cooperative in the advanced phase of rivalry, followed by the intermediate phase, early phase, and nonmilitarized periods.*

Accounting for Changes in Interstate Interactions

Beyond examining whether or not there exist important differences between interstate interactions at different phases of rivalry, the present paper also seeks to

account for changes in these interactions as rivalry evolves. Previous research has shown that a number of factors affect the likelihood of militarized confrontation between two states. I now consider the impact of such factors on non-militarized interactions, focusing on the factors examined by Hensel (1996a).

An evolutionary approach to rivalry suggests that two adversaries' interactions will be influenced by the context of relations between them. That is, in a relationship where the adversaries have been actively engaged in confronting each other for many years, they are likely to have developed certain expectations about each other, and these expectations are likely to exert an important influence on actions taken toward that adversary in the future. On the other hand, in a relationship that has not previously been marked by the frequent resort to militarized methods, the adversaries may not have developed the same level of expectations about each other's likely future behavior. Specifically, I expect that adversaries that have moved further along an evolutionary scale of rivalry -- i.e., adversaries in the intermediate phase or, especially, the advanced phase of rivalry -- will typically engage in greater conflict and less cooperation than other adversaries, because of the accumulation of hostility and grievances through their past history of conflict. It should be noted that this expectation is similar to Hypothesis 3, except that in the current context this expectation can be tested while controlling for other factors that might be thought relevant to the course of interstate conflict and cooperation, as will be described in the following paragraphs.

Jervis (1976) suggested that statesmen "learn" from history, particularly from prominent events like crises or wars, and that the lessons they learn often help to shape their images of the former adversary and their interpretation of subsequent events. The empirical analyses of Leng (1983), Maoz (1984), and Hensel (1994) have all suggested that the outcome of a militarized confrontation can be an important source of such learning in the setting of recurrent interstate conflict, exerting a significant impact on the likelihood, timing, or escalation level of future militarized conflict between the same states. Following these scholars, I expect the outcome of the most recent confrontation between two states to affect their subsequent interactions. Two particular effects of dispute outcomes on post-dispute stability are expected. Relations between rivals are expected to be less conflictual and more cooperative following decisive outcomes, which may have left one side unable or unwilling to mount another serious challenge to the status quo (at least in the immediate aftermath of its defeat), and compromises, which may have helped to resolve the two states' differences (at least temporarily). Where neither of these conditions applies -- i.e., after indecisive, stalemated outcomes -- recurrence is expected to be more likely. In such disputes, neither side was able to

produce the desired changes in the status quo, neither was defeated and rendered unable or unwilling to mount another serious challenge, and no mutually satisfactory settlement was reached to resolve the two sides' differences. This inability to resolve the status quo through either a mutual agreement or a one-sided victory leaves one or both sides festering in its dissatisfaction, and is expected to lead to less cooperation and more conflictual relations between the adversaries than a dispute that had helped to resolve the contentious issues in one way or another.

Beyond the effects of dispute outcomes, the severity level reached in a previous confrontation between two adversaries may also affect their subsequent relations. If a confrontation reaches a high level of escalation, the involved nations may need to rearm or replace the loss of much of their military hardware or trained military personnel. Public opinion may develop an aversion to belligerent foreign policies as the result of previous experiences with wars or crises that raised the strong possibility of escalation to war. Either separately or in conjunction with the effects of public opinion, a state's policymakers may develop a similar aversion to war that will lead them to hesitate before seeking to initiate another confrontation, often referred to as a "war-weariness" or "negative reinforcement" effect. For each of these reasons, disputes that reached high levels of escalation are expected to be less likely to be followed by renewed conflict in their aftermath. The existing empirical evidence offers some support for the hypothesized "war-weariness" effect at the nation-state level and the level of the interstate system, although much of this evidence is weak or mixed (e.g., Garnham 1986; Morgan and Levy 1990; Stoll 1984). Because of my focus on dyadic interstate relations, the present study focuses on a slightly different version of the hypothesized effects of previous severity levels, based at the dyadic level instead of the systemic or nation-state level. Huth (1988) found that behavior in previous deterrence crises against a certain adversary has important effects on subsequent crises against that same adversary, but that behavior in previous crises against other adversaries does not produce the same effects. Similarly, I expect that the severity levels of previous confrontations against a certain adversary should have an important effect in decreasing the subsequent level of conflict and increasing subsequent cooperation with the same adversary, although previous confrontations against other adversaries are not expected to have this same effect. Thus, in the aftermath of an especially severe confrontation, two adversaries are expected to be less forceful in pushing their demands on each other, lest they rekindle the past conflict. After a more mild confrontation, though, the adversaries are expected to be unlikely to show such restraint against each other, and greater conflict might be expected in their subsequent interactions.

Another important theoretical perspective that may help to account for conflict recurrence involves the specific conflicts of interest, or the issues at stake, separating two potential rivals. Conflict occurs for a reason, and the specific issues or stakes in a given conflict can be seen as an important factor contributing to the course and consequences of that conflict (Mansbach and Vasquez 1981; Holsti 1991; Diehl 1992). With regard to recurrent conflict and rivalry, the issues at stake in a confrontation between two adversaries are expected to play an important role in shaping the way that the actors relate to each other, learn from their previous interactions with each other, and develop expectations about the future. Disagreement over stakes that are considered to be highly salient might be expected to lead the relevant policy-makers to adopt a more suspicious or more hostile stance toward their adversary, because the risks or costs of losing the disputed stakes to the enemy might be too great. More minor stakes, in contrast, might more easily be ignored by policymakers, and are less likely to lead policymakers to accept the risks and potential costs of interstate conflict. One particular stake that is often seen as possessing a special degree of salience involves territory. Territory can have tangible material consequences for both states, in terms of security and the economic benefits of the territory or any resources that it may contain. Territory has also been described as having an intangible, psychological importance to states that is quite out of proportion to its intrinsic strategic or economic value,. For these reasons, territorial disputes often lead to long-standing resentments and desires to recover lost territory, producing more escalatory conflict behavior than non-territorial issues, and being more likely to be the subject of recurrent militarized confrontations (Vasquez 1993; Hensel 1994, 1996b). I thus expect that relations between two rivals will be more conflictual and less cooperative when territorial issues were involved in their previous dispute than when they have been contending over less salient issues. When the issues at stake are seen as minor, then defeat or stalemate can be accepted much more easily. When two adversaries contend over highly salient issues such as territory, though, almost any outcome from the past confrontation can be seen as contributing to future tensions, and the distrust and suspicion that have already been argued to characterize rivalry are likely to be much greater than when they contend over more trivial issues with less tangible or intangible value to both sides.

Beyond the issues at stake in a confrontation, the results of previous confrontations, and the general history of conflict between two adversaries, it is important to consider characteristics of the adversaries that might be seen as making them more or less conflict-prone. One such characteristic that is often thought to be important is the balance of the two sides' relative capabilities, or their relative capacity for violent

conflict. This balance could be relatively even, a situation often termed "parity," or it could be much more uneven, which is often termed "preponderance." There is evidence that the balance of two states' relative capabilities -- often defined as some function of military, industrial, demographic, and perhaps economic indicators -- affects the likelihood of militarized conflict between them. Dyadic situations characterized by relative parity between the adversaries have been found to be more dangerous and conflict-prone than situations in which one side is preponderant (e.g., Weede 1976; Kugler and Lemke 1996). For the purposes of the present study, I expect a greater disparity in relative capabilities to inhibit conflict between two adversaries. More preponderant dyads should be less conflictual than more evenly matched pairs of adversaries, as suggested by the majority of the empirical literature on military capabilities. In such situations, the weaker side might be expected to be less likely to initiate militarized conflict and more likely to give in to the stronger side's demands to avoid conflict, and the stronger side should be less likely to push its demands by force because of the weaker side's tendency to give in. In situations of relative parity, in contrast, the two sides are roughly even in relative capabilities, each side may expect a reasonable likelihood of winning a confrontation, and neither is likely to be deterred from initiating conflict by the perception that the other side is substantially stronger militarily. In situations marked by parity, then, neither side necessarily has as much incentive for caution in dealing with the other side, because neither side necessarily expects a near-certain loss in any confrontation that might occur. I thus expect that relationships between states in parity should be more conflictual and less cooperative, as each side seems more likely to pursue belligerent foreign policies in pursuit of national goals, and less likely to pursue more cooperative or accommodative policies.

Beyond relative capabilities in a static sense, I also expect changes in relative capabilities to affect interstate conflict and cooperation. Several recent studies have suggested that the competition between rival adversaries leaves them particularly vulnerable to militarized conflict in situations marked by a rapid shift in relative capabilities (e.g., Organski and Kugler 1980; Geller 1993; Wayman 1996). Such situations occur when the weaker side in a relationship approaches the stronger in capabilities or actually passes the formerly stronger state. Rapid shifts in two states' relative capabilities are argued to lead to militarized conflict in a number of ways. For example, they may create confusion between the two adversaries as to their relative capabilities they may increase the capabilities of the rising state enough that it feels sufficiently confident to launch an attack on its declining adversary, and they may threaten the declining state enough to launch a preventive attack. Similarly, as Wayman

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(1996: 147) argues, rapid capability change "makes negotiation of differences vexing" because it can lead to the rise to salience of new issues between the shifting states, creating an atmosphere in which the adversaries -- intentionally or unintentionally -- may make provocative statements or moves. The notion of power transitions or capability shifts seems especially applicable to states involved in an ongoing rivalry relationship (Vasquez 1993; Wayman 1996). When a particular pair of adversaries has engaged in a longstanding competition over some stakes, and when they have repeatedly turned to militarized means to resolve their differences in the past, they are expected to pay close attention to their own national capabilities as well as those of their rival. Furthermore, the involvement of rivals in a long-term, hostile and competitive relationship means that their attention is likely to be focused on the future and on changes in their relative capabilities. For these reasons, I expect that when there is a greater shift in relative capabilities between two states, their relations will be more conflictual and less cooperative -- both because the gaining side considers itself better able to achieve its objectives, and because the declining side considers its opponent's gains to be threatening.

Finally, numerous scholars and policymakers have suggested that the regime types of potential adversaries exert an extremely important influence on their conflict propensity. Dyads composed of two democratic states rarely become involved in militarized conflict, rarely if ever escalate their disputes to war, and are more likely to end their confrontations with peaceful solutions than do dyads that include one or more authoritarian states (see Russett 1993; Ray 1995). One explanation for this phenomenon involves the institutional structure of the two sides' governments, which can be vulnerable to public opinion and to checks and balances from opposition voices within government. An alternative explanation suggests that the democratic peace results from a norm of bounded competition and peaceful conflict resolution within democratic systems that precludes fighting against other democracies and that leaves democracies much more willing to try to resolve their differences by less violent means. This latter point is particularly relevant to the present paper's focus on nonmilitarized interactions. As Dixon (1993, 1994) argues, democracies should be more likely than other types of adversaries to embrace peaceful means of conflict resolution rather than violence. For this reason, I expect democracies' nonmilitarized interactions to be more cooperative and less conflictual than interactions in nondemocratic dyads, where the same norms of bounded competition or peaceful conflict resolution are not expected to apply.

The preceding discussion leads to the following hypothesis on nonmilitarized interstate relations:

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Hypothesis 4: *Nonmilitarized interstate relations will be most conflictual and least cooperative when:*

A. *the adversaries are in a more advanced phase of rivalry*

B. *the previous militarized dispute between the adversaries ended in stalemate*

C. *the previous militarized dispute between the adversaries reached a high severity level*

D. *the adversaries are contending over territorial issues*

E. *the adversaries are characterized by parity in relative capabilities*

F. *the adversaries are undergoing a rapid shift in relative capabilities*

G. *the adversaries are not both democratic.*

Research Design

Operationalization of Variables

Militarized Conflict and Rivalry

The central concept in this project, interstate rivalry, is operationalized in terms of militarized conflict between nation-states (see Goertz and Diehl 1992, 1993; Hensel 1996a). A militarized interstate dispute is a set of interactions between states involving the explicit threat, display, or use of militarized force (Gochman and Maoz 1984). Such interactions can be seen as lying on the higher end of a continuum of conflictual interstate relations, where a disagreement between two states has led at least one of the states to militarized means of pursuing its goals. While this militarized dimension of interstate interactions is used to define rivalry, the present paper primarily studies interactions on the lower end of this continuum, involving political, diplomatic, or economic interactions short of the threat, display, or use of military force.

In this paper I employ the specific rivalry definitions of Hensel (1996a), which follow closely from the work of Goertz and Diehl (1992, 1995a). Two states are classified as rivals when they become involved in enough militarized interstate disputes without a substantial conflict-free gap. The occurrence of frequent militarized confrontations between the states indicates the presence (and persistence) of serious competition between the states that is seen as important enough to justify the frequent resort to militarized force. Furthermore, the number of confrontations and the lack of a substantial confrontation-free gap indicate the protracted nature of the rivalry relationship. In specific operational terms, an enduring rivalry is defined as a pair of states that engages in at least six militarized disputes without a gap of fifteen years or more between disputes. Two states that engage in three to five disputes without such a

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gap are considered to be proto-rivals, and two states that engage in one or two disputes are considered to be an "isolated conflict" dyad.

The above operationalization of rivalry represents what Hensel (1996a) calls the "post hoc" approach. Under this approach two states' eventual rivalry status is determined by a threshold (the outbreak of a sixth dispute) that may not be crossed until a number of years have passed, and once this threshold is crossed the entire relationship between the involved states is re-classified (post hoc) as an enduring rivalry. Hensel (1996a) also introduced an "evolutionary" definition of rivalry, which is based on the history of conflict between two states at any given point in time. Under Hensel's evolutionary approach the first two disputes between two states are always classified as having occurred in the "early phase" of rivalry, regardless of whether or not those two states later engage in further conflict. The third through fifth disputes between those states (without a fifteen year conflict-free gap) are classified as the intermediate phase of rivalry, regardless of whether or not the states subsequently engage in renewed conflict that would later qualify them as enduring rivals. Finally, any additional disputes after the fifth that occur without a fifteen year gap are considered to have occurred in the advanced phase of rivalry, which is analogous to the post hoc classification of "enduring rivalry" (but which does not lead to the re-classification of earlier events under the evolutionary approach as it would under the post hoc approach). Under the post hoc approach to rivalry, then, two states that engage in six or more disputes without a fifteen year gap are considered to be enduring rivals from the start of the first dispute until the conclusion of the last. The evolutionary approach classifies the first two of those states' disputes to have occurred in the early phase, the third through fifth in the intermediate phase, and the sixth and any subsequent disputes in the advanced phase.

Interstate Interactions

[Table 1 about here]

This study's measure of non-militarized conflict and cooperation between states is drawn from the Conflict and Peace Data Bank (COPDAB). COPDAB includes data on "reportable" or "newsworthy" events between states beyond the constant flow of "transactions" such as trade, mail flow, or travel (Azar 1980). The COPDAB data set includes fifteen different types of interstate interactions, each of which has been assigned an weighted intensity value. Table 1 lists the fifteen types of events in the COPDAB data, along with their corresponding intensity values. It should be noted that this study's event data indicators of interstate interaction exclude the four types of COPDAB events that involved militarized interaction ("political-military hostile actions," "small-scale

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military acts," "limited war acts," and "extensive war acts"). As mentioned earlier, the existing literature on rivalry has focused almost exclusively on militarized interactions between rivals, and indeed has defined rivalries by the occurrence of militarized events. The present study is meant to extend the existing research by going beyond militarized events or interactions to examine sub-militarized interactions between states, including cooperative and neutral events as well as conflictual events that do not cross the militarized threshold.

For the present paper's analyses, I aggregated the COPDAB data into dyad-years, producing a dataset with one case per dyad for each year from 1948 to 1978. As mentioned earlier, I only include those dyads that had COPDAB events in at least five years in this period, to avoid distorting the results by including dyads with a brief flurry of conflict or cooperation followed by no further events in the COPDAB data. For those years that a given dyad did not experience any COPDAB events, the dyad's interstate relations are coded as having a weighted event intensity score of zero, indicating neutral relations for that year (at least given the definitions and data collection of the COPDAB data set).

Three indicators of dyadic relations were computed for each relevant dyad-year, based on the mean weighted event intensity value for events in the dyad during that year.[1] The first indicator represents the mean weighted intensity value for all events in the dyad-year, ranging from intensity scale values one through eleven (i.e., from voluntary unification to diplomatic-economic hostile actions). The second and third indicators present the separate mean weighted intensity values for conflictual and cooperative events, or those events with scale values of nine through eleven (conflict) and one through seven (cooperation). Each of my analyses examines all three of these variables separately, in order to ascertain whether there are differences in conflictual or cooperative behavior as rivalry evolves that might be drowned out by only examining the aggregated measure of all events. Merritt (1994), for example, suggests that cooperation and conflict may be separate dimensions of interstate relations, rather than two ends of a single dimension as is implicitly assumed by a single scale (such as that in the COPDAB data).

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[1] Separate analyses were run with alternative indicators. One set of alternative analyses used the COPDAB scale (1 to 15) instead of the weighted intensity score (-102 to 92) for each event, and another used a simple count of events per year. The results reported herein did not change appreciably using these alternative indicators.

Accounting for Changes in Interstate Interactions

The variables used to account for changes in interstate interactions in the present study were all used previously to study militarized conflict within rivalry (Hensel 1996a); the interested reader is urged to refer to that study for further details on each variable. The effects of evolutionary rivalry phases are represented through several dichotomous variables. Separate indicators are used to represent whether or not a given dyad-year occurred in the intermediate or advanced phase of rivalry, as defined earlier. The early phase is left out of the analyses as a reference group for comparison, in order to avoid perfect multicollinearity between variables representing all three phases (where each variable would be a perfect linear combination of the other two).

Dispute outcomes are also represented with two dichotomous variables, indicating whether the previous dispute ended in a decisive outcome or a compromise, respectively. Stalemated outcomes are left out of the analyses as the comparison group. Conflict outcomes in the COW militarized dispute data set are coded based upon the relationship between the pre- and post-dispute status quo. A "decisive" outcome refers to a dispute with a clear winner, whether by a battlefield victory, or by the loser backing down or granting concessions without the large-scale use of military force.[2] An example is the 1870 Franco-Prussian War, which ended with a decisive military victory for the Prussian forces and a one-sided peace settlement. Compromise outcomes involve mutually satisfactory negotiated settlements between the adversaries. Stalemated outcomes reflect the absence of these types of settlement -- i.e., stalemates lack both a clear winner and a mutually satisfactory compromise between the antagonists.

The dispute severity indicator employed here, introduced by Hensel (1994), is multidimensional, incorporating three elements: the dispute's level of hostility, duration, and fatalities. Each adversary in a dispute can have a level of hostility of 1 (no militarized action), 2 (threat to use military force), 3 (display of military force), 4 (use of military force short of war), or 5 (interstate war); I add the two sides' levels of hostility together to produce a dyadic measure. Dispute duration is measured as the natural log of the dispute's duration in days, in order to minimize problems with skewness and kurtosis in the resulting severity measure. Fatalities in a dispute are coded categorically in the militarized interstate dispute dataset for disputes below the level of full-scale war, where 0 = no battle deaths, 1 = 1-25, 2 = 26-100, 3 = 101-250, 4 = 251-500, 5 = 501-999, and 6

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[2] This "decisive" outcome type includes both the "victory" and "yield" categories from the data set, because the purpose of the present study offers little theoretical reason to separate these two similar categories.

refers to disputes with over 1000 battle deaths. Z-score transformations are taken for each of these three components, in order to normalize them and render them comparable. The three z-scores are then added to produce the severity measure, because there is no a priori reason to weight any of the three components more than the others.

The contentious issues at stake in a dispute are coded dichotomously, with a value of one reflecting contention over some territorial issue(s) in the dispute, and a value of zero reflecting the absence of explicit contention over such issues. Contentious issues are treated in this study in the sense used by Holsti (1991: 18), as "the stakes over which two or more parties contend," which might include (for example) specific pieces of territory, governmental policies, or the independence or leadership of a nation-state. As with Hensel (1996b), I am primarily interested in whether or not the issues or stakes in a given dispute involve territory, rather than the specific type of territory that they involve. Examples would include any dispute in which the adversaries explicitly contested the disposition of a piece of territory or the demarcation of a border, such as the numerous militarized disputes between Bolivia and Paraguay over the Chaco Boreal or between France and Germany over Alsace-Lorraine. Disputes not involving such an explicit territorial dimension are all treated equally in the present study, including such non-territorial issues as human rights, the treatment of ethnic minorities, treaty compliance, or economic matters.

This study's relative capability indicator begins with the two adversaries' capability scores on an evenly-weighted composite measure derived from the COW Project's National Material Capabilities data set (Singer, Bremer, and Stuckey 1972). The composite measure used in this study is based on the two states' military personnel and military expenditures; an alternative measure of relative capabilities that incorporates all six indicators in the COW data set produces virtually identical results. For the analyses presented herein, a dichotomous variable is employed to indicate whether or not the adversaries are considered to be in relative military parity, defined as a situation where the weaker side's capabilities are at least 80 percent of the capabilities of the stronger side (Organski and Kugler 1980).

Capability shifts are measured as the percentage change in relative capabilities in the dyad from one year to the next, using the capability measure described above. For the purposes of dyadic comparison, capability shifts were measured as movement toward parity in the dyad, with negative values reflecting movement toward greater preponderance by the stronger side. The capability shift indicator reported in this study's analyses measures shifts in dyadic relative capabilities over three-year periods, in order to

identify medium-term changes; shorter and longer periods of measurement do not produce substantially different results.

This study's measure of dyadic democracy is based on Polity II data (Gurr, Jaggers, and Moore 1989). The measure used in this study begins by subtracting each state's autocracy index from its democracy index, following Ray (1995: Chapter Two). Each state thus has a regime type indicator that can range from -10 (highly autocratic) to +10 (highly democratic). The dyadic measure is formed by taking the lower of these two state-level scores, or the score of the less democratic member of the dyad. By measuring the least democratic member of the dyad, this measure addresses the argument that the democratic peace depends on relations between two democratic states. If either state is very undemocratic the dyad will take on a low value on this measure, and a high value on this measure indicates that both members of the dyad are highly democratic.

Spatial-Temporal Domain

This study examines relations between states in the 1948-1978 period, which is the period for which the COPDAB data are publicly available. My analysis begins with the population of all members of the interstate system (Small and Singer 1982) during this time period. I limit the cases included in this study to dyads that experienced COPDAB events in at least five of the thirty years in this study, in order to avoid distorting my results with cases that show up briefly in a single year or two but are not consistently involved in events as coded by COPDAB. Approximately one-half of the dyads included in the COPDAB data set are eliminated by this rule, typically dyads in the developing world that were not covered on a regular basis by the approximately seventy sources used to code the COPDAB data. The remaining dyads are included in the study with a separate entry for each dyad-year during the period of study, providing a total of 103,664 dyad-years in the full analyses (31 years each for 3344 dyads).

This study's final analysis, which attempts to account for changes in levels of conflict and cooperation, uses a more limited data set originally employed by Hensel (1996a). This data set is limited to dyad-years from the outbreak of a potential period of interstate rivalry (with the outbreak of the first militarized dispute in a dyadic relationship, regardless of how many later disputes occur between the same states) to the conclusion of that period (fifteen years after the end of the last militarized dispute in the rivalry -- i.e., the point at which a new dispute would be too distant temporally to be considered as prolonging the period of rivalry). This limitation on cases is meant to allow me to study the factors that an evolutionary approach to rivalry suggests should lead to the recurrence of conflict or the end of rivalry. That is, by limiting this set of

cases to periods of ongoing rivalry, I can study the effects of dispute outcomes, severity levels, and contentious issues (as well as control variables) on the adversaries' subsequent levels of non-militarized conflict and cooperation and on the likelihood of renewed militarized conflict between them. After cases with missing data are excluded, this limitation produces a set of 3950 dyad-years between 1948-1978.

Methodology

This paper's analyses employ several different research methods to answer different types of questions. The effects of rivalry on levels of conflict and cooperation are tested using oneway analyses of variance (ANOVAs). The conflict and cooperation indicators employed in this study are continuous, reflecting a range of possible values. Oneway ANOVAs allow comparison of the differences between the mean levels of conflict and cooperation in different rivalry types or phases, in order to see whether certain eventual rivalry types or certain rivalry phases tend to produce more escalatory relations. The tables include an F-ratio statistic, which compares the deviation of individual cases within the different groups (different types or phases of rivalry) with the deviation of the different groups from the overall mean in the table. When this F-ratio is sufficiently high, we can conclude that the mean severity values for the different groups are unlikely to have been taken from the same population of cases. We could then conclude that the observed differences between groups are greater that we would expect to find by chance under the null hypothesis of no difference between groups -- i.e., that the groups are significantly different from each other (Iversen and Norpoth 1987; Phillips 1992). Ordinary least squares regression (OLS) is then used to help account for the observed differences in conflict and cooperation as rivalries evolve. OLS allows the testing of multivariate models with continuous dependent variables, in this case the level of conflict or cooperation between two states in a given year (Lewis-Beck 1980; Berry and Feldman 1985).

<center>Empirical Analyses</center>

Rivalry and Interstate Interactions

Hypothesis 1 suggested that nonmilitarized interstate relations would be most conflictual and least cooperative for adversaries that reached more advanced types of rivalry. Table 2 uses the eventual rivalry classification of two states to distinguish between states that never engage in militarized conflict during the 1948-1978 period, states that engage in isolated conflict, and states that reach proto- or enduring rivalry at some point during this period. The different eventual rivalry types have significantly

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different levels of conflict and cooperation whether we examine the indicators based on all types of events (F = 115.23, p < .001), conflictual events only (F = 3383.64, p < .001), and cooperative events only (F = 412.84, p < .001). Each of these differences remains significant if the analyses are restricted to only the three eventual types of rivalry, excluding the much more frequent cases of non-militarized relations to search for differences between enduring rivals, proto-rivals, and isolated conflict dyads.

[Table 2 about here]

A closer look at each of the analyses presented in Table 2 reveals that dyads that eventually reach the level of proto-rivalry and enduring rivalry are much more conflictual than other types of states, as expected. On a weighted scale where larger negative numbers reflect more conflictual relations, the level of conflict increases from -1.30 for non-militarized dyads to -4.08 for isolated conflict dyads to -6.81 for proto-rivals and -8.90 for enduring rivals. Surprisingly, though, relations between more advanced rivals are also significantly more cooperative. The level of cooperation rises from 5.05 for non-militarized dyads to 7.12 for isolated conflict dyads to 8.32 for proto-rivals and 8.37 for enduring rivals. Using an aggregated measure that includes both conflictual and cooperative events, there is less differentiation between types of rivalries, partly because more advanced rivals are both more cooperative and more conflictual than other types of states. The aggregated measure declines in mean value from 4.06 to 4.03 to 3.08 to 0.96 for more advanced types of rivalry (with lower or negative numbers representing more conflictual relations), a noticeably smaller range of values than the separate indicators for either conflict or cooperation.

The results reported in Table 2 suggest several possible explanations. One possibility is that the same processes or factors that lead states to more advanced types of rivalry produce relations between these states that are both more cooperative and more conflictual than relations between other types of states. This might simply result from the occurrence of greater interaction between such states, some of which will be conflictual and some of which will be cooperative or neutral. Thus, rival states may simply interact more with each other than other states that lack the immediate pressure of rivalry, which might make them more prone to events of interactions of all types. The increased levels of cooperation in more advanced forms of rivalry may also result from the nature of rivalry, which could lead to greater cooperation between the rivals as they recognize the risks inherent in their continued enmity and attempt to manage (if not resolve) their differences. In the Cold War, for example, the United States and the Soviet Union engaged in a number of confidence-building measures to attempt to prevent their rivalry from leading to a nuclear war, which would be coded in event data as cooperative events.

[Table 3 about here]

Hypothesis 2 suggested that nonmilitarized interstate relations before the onset of rivalry would be able to help us predict the eventual type of rivalry that would be reached by the two adversaries. Table 3 addresses this hypothesis by focusing on relations between different types of rivals in the periods before their rivalries began. It is important to note that Table 3 excludes all events that occurred during ongoing phases of rivalry, which are the subject of Tables 2, 4, and 5. The results prove to be statistically significant at the .001 level for both conflictual events (F = 1524.07) and cooperative events (F = 287.06). The results for the aggregated measure of all events are also statistically significant (F = 9.04, p < .001), but the large number of cases and the relatively small differences in absolute values for different rivalry types in this analysis suggest that these differences are of only marginal substantive or theoretical significance. Again, each of these differences remains significant if the non-militarized relations category is removed from the analysis to focus on the differences between eventual isolated conflict, proto-rival, and enduring rival dyads.

In the non-militarized period of their relations, relations between states that eventually reach more advanced types of rivalry tend to be more conflictual than relations between other states. Dyads that never engage in militarized conflict during the period of study have a mean conflictual event intensity value of -1.30, which reaches the more conflictual levels of -3.87 for isolated conflict dyads and -5.86 and -6.19 for proto- and enduring rivals. At first glance, this finding would seem to suggest that early warning is possible, or that dyads that engage in more conflictual relations short of the militarized threshold are then at a greater risk for future militarized conflict and rivalry. Yet dyads that eventually reach more advanced types of rivalry also experience more cooperative relations before their periods of rivalry than dyads that never become involved in militarized conflict. The mean level of cooperation increases from 5.05 for states with non-militarized relations to 7.07 for those that become involved in isolated militarized conflict, and to 8.40 and 7.57 for eventual proto- and enduring rivals. From an early warning perspective, it would seem misleading to identify states with more cooperative relations as more likely to engage in future conflict and rivalry. When both conflictual and cooperative events are combined into the aggregated measure of interaction, there is virtually no difference between different eventual rivalry types, with enduring rivalries being only slightly more conflictual (mean = 2.87) than the other three dyad types (with means of 4.06, 4.16, and 4.24). In short, there seems to be little systematic evidence from the COPDAB data that nonmilitarized interstate relations can help us to predict which dyads will eventually become serious adversaries or rivals.

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Evolving Rivalries and Interstate Interactions

[Tables 4 and 5 about here]

Hypothesis 3 suggested that, whatever the differences between different types of eventual rivals, nonmilitarized interstate relations should become more conflictual and less cooperative as rivalry evolves. Tables 4 and 5 examine the relationship between rivalry and interstate conflict and cooperation from an evolutionary perspective. Table 4 presents the changes in conflict and cooperation levels as rivalries move through the different evolutionary rivalry phases described earlier. The results in this table indicate that there are important changes in non-militarized interactions as two states evolve through these rivalry phases, with differences that are significant at the .001 level for conflictual events (F = 2313.07), cooperative events (F = 133.51), and the overall aggregated measure (F = 213.61).

In each section of Table 4, the results reveal a steady change in conflictual or cooperative behavior as rivalry evolves. In each case there is a great difference in (non-militarized) conflict or cooperation once rivalry begins, with the non-militarized phase of relations being much different from the early, intermediate, and advanced phases. Regarding conflictual events, each rivalry phase features more conflictual interaction than each previous phase, ranging from a mean value of -1.66 in the non-militarized phase to a mean of -12.54 in the advanced phase. Similarly, regarding cooperative events, each rivalry phase features more cooperative interaction than the previous phases, although these differences are not as great as the differences in conflictual events (increasing from 5.31 to 9.50). Furthermore, in the aggregated measure, each phase is more conflictual than the previous phases, with the intermediate and advanced phases of rivalry showing negative values (i.e., conflictual events outweigh cooperative events during those phases).

The latter finding with the aggregated measure of interstate interaction is interesting because it suggests that there are times in rivalry relationships where conflictual events come to dominate the relationship. In Tables 2 and 3, in contrast, none of the rivalry types experienced negative values in the aggregated interaction measure, suggesting that over the course of their relationship even eventual proto-rivals or enduring rivals are generally more cooperative than conflictual. The findings from Table 4 suggest that these eventual interstate rivals may undergo changes within their relationship, rather than being simply more conflictual than other types of dyads by their very nature. If this suggestion is accurate, then the results of this paper can be seen as offering additional support for an evolutionary approach to rivalry, because conflict behavior changes over time within rivalry and because the level of conflict in a rivalry

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seems to result at least partly from actions within the rivalry itself (instead of being predestined or largely determined in advanced, as suggested by the post hoc approach to rivalry).

One important way to evaluate the relative value of the evolutionary and post hoc approaches to rivalry involves studying the interactions of states that eventually become enduring rivals or proto-rivals, in order to see whether their conflict behavior changes within their periods of rivalry. Table 5 presents such an analysis of interactions across the different evolutionary phases of eventual enduring rivalries. These results largely indicate that conflict behavior within enduring rivalries seems to evolve over time, with the results of each element of the table being significant at the .001 level.

Dyads that eventually reach enduring rivalry undergo substantial changes in patterns of both cooperative and conflictual interactions en route to full-fledged rivalry. The intensity of cooperative events increases from 7.57 in the non-militarized phase to 9.00 and 9.01 in the early and intermediate phases, and finally to 9.50 in the advanced phase. The intensity of conflictual events increases from -6.19 in the non-militarized phase to -10.98, -11.45, and -12.54 in the early, intermediate, and advanced phases, respectively. Interactions measured with the aggregated indicator also become increasingly conflictual as rivalry evolves, changing from 2.87 in the non-militarized phase to -0.40, -0.93, and -1.62 in the three phases of militarized rivalry.[3] Overall, the results from Tables 4 and 5 offer substantial evidence that interstate relations evolve in a non-militarized sense as well as in the militarized sense examined in previous studies (e.g., Hensel 1996a).

Accounting for Changes in Interstate Interactions

[Table 6 about here]

Having established that levels of conflict and cooperation change over time in evolving interstate rivalry relationships, I now attempt to account for these changes, using the relationships suggested in Hypothesis 4. Table 6 presents the results of OLS regression analysis with the three COPDAB-based indicators of interstate interaction as the dependent variables. Each model is statistically significant at the .001 level (F = 37.38, 30.48, and 21.51), although the R^2 values are quite low (R^2 = .08, .07, and .05). Overall, then, although these models improve our understanding of the changing levels of

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[3] Similar changes in the intensity of conflictual events and overall relations occur in dyads that eventually reach proto-rivalry, although there is no systematic change in the intensity of cooperative events for eventual proto-rivals.

interstate conflict and cooperation within evolving rivalries, these models leave a great deal unexplained.[4]

The results presented in Table 6 suggest that many of the same factors that have been shown by previous work to affect the recurrence of militarized conflict within ongoing rivalries also affect the levels of non-militarized conflict and cooperation between the rivals. A more advanced rivalry context significantly increases the level of nonmilitarized conflict both alone and in the aggregated COPDAB interaction measure, as indicated by the dummy variables representing the intermediate and advanced phases of rivalry; the rivalry context also had an effect of borderline significance on the level of cooperation.[5] This finding mirrors the results presented in the bivariate analyses of Tables 4 and 5, which indicated increasing conflict and cooperation as rivalry evolves. Indeed, Table 6 reveals that the same relationship remains even after controlling for the effect of other factors that are believed to be important.

Characteristics of previous militarized conflict between two adversaries are found to have an important effect on subsequent non-militarized conflict between them. Thus, as hypothesized, the outcome of the previous militarized dispute between two rivals has a significant and positive impact, both increasing the level of cooperation between the states and decreasing the level of conflict between them. Both negotiated compromises and decisive outcomes seem to create at least temporary stability in relations between rivals by helping to resolve the issues between them much more than stalemates (at least temporarily). Dispute severity does not affect the conflictual dimension alone, but it does produce a substantial decrease in the level of cooperation (and a corresponding decrease in cooperation as measured by the overall interactions indicator). Cooperation between two states decreases noticeably, then, in the aftermath of an especially severe dispute or

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[4] Diagnostic tests of the models failed to indicate any problems with autocorrelation (using the Durbin-Watson test) or multicollinearity (using tolerance, variance inflation factor, or condition index statistics). Further diagnostics suggested a potential problem with heteroskedasticity, but an attempt to correct for the problem with generalized least squares (GLS) produced very little improvement in the diagnostics and did not substantially change the direction or significance level of the results presented in Table 6.

[5] In order to aid interpretation of the results, Table 6 uses the absolute value of the conflict-only indicator. Thus, whereas in Tables 2 through 5 more conflictual results were negative (peaking at -102), in Table 6 more conflictual results are positive (peaking at 102). This is done to make the coefficients in these tables easier to interpret -- e.g., the coefficient of 4.18 for the effects of the advanced rivalry phase in Table 6 means that relations between two rivals in the advanced phase of rivalry are substantially more conflictual than relations between rivals in an earlier phase. No other analyses were altered in this way.

war between them. The issues at stake in the dispute do not affect the level of cooperation systematically, but contention over territorial issues does produce a substantial increase in the level of conflict between the adversaries.

Finally, the control variables in this analysis produced mixed results. Military parity increases the level of cooperation between two states overall (i.e., using the aggregated indicator) and has a borderline significant effect on the level of cooperation alone ($p < .06$), but has little systematic effect on the level of conflict between them. More rapid shifts in relative capabilities between the adversaries decrease both conflict and cooperation in their aftermath, although they produce little systematic effect in the aggregated analysis. Finally, dyadic democracy is associated with greater levels of cooperation and lower levels of conflict between states, using both the individual and aggregated indicators, which supports the arguments of the democratic peace literature that rivals are less conflict-prone in their relations with other democracies.

Overall, as mentioned earlier, the results presented in Table 6 do not account for a great deal of the variance in levels of interstate conflict and cooperation within ongoing interstate rivalries. One reason for this is that I have not included some of the relationships that have been shown to account for a great deal of the variance in dyadic event flows. For example, Ward (1982) finds very strong patterns of reaction and memory in dyadic event flows, with stronger overall results than those shown in Table 6. Nonetheless, the purpose of these analyses has been to identify the effects of specific forms of militarized conflict and rivalry on nonmilitarized interstate relations, and factors such as those in Ward's study are not directly relevant for this purpose. Furthermore, most previous analyses such as those of Ward have focused on memory or reaction in unidirectional event flows (e.g., Israeli conflict toward Egypt), whereas the present study is more concerned with aggregated dyadic event flows (e.g., aggregated Israeli-Egyptian event flows) as rivalries evolve.

Furthermore, Table 6 offers a number of suggestive findings about the sources of changing levels of conflict and cooperation. The effects of the variables examined in these models are nearly identical in direction and significance level to the effects of these same variables on militarized conflict within ongoing rivalries (as studied in Hensel 1996a). This great similarity in results suggests that the previous research on rivalry has helped to identify a set of relationships that go beyond simply the militarized dimension of militarized relations that has been studied so far. Furthermore, whereas previous studies of changes in militarized conflict within ongoing rivalries have used the same COW militarized dispute data to study these changes in conflict that they used to identify

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cases of rivalry, the results in Table 6 suggest that similar relationships are at work in the non-militarized dimensions of interstate relations as well.

Conclusions and Implications

This study's results suggest that adding event data to the study of interstate rivalry has been a useful endeavor. These analyses have suggested some important results that support and extend the existing literature on rivalry. These analyses also offer some promising implications for the (usually separate) scholarly literatures on event data and on interstate rivalry, as well as some potentially important implications for foreign policymakers.

The results presented in this study show substantial differences in levels of non-militarized conflict and cooperation between different types of rivals, as well as substantial changes in these dimensions of interaction as rivalry evolves. This finding is important for the study of rivalry, because most existing research on rivalry has focused exclusively on the militarized dimension of relations between rival states, overlooking the various non-militarized dimensions of interaction that make up so much of international relations (even between enduring rivals). Additionally, this finding is important because it uses a very different data set than the COW data sets that have been the almost exclusive focus of the existing research on rivalry. This study has thus produced results that are similar to the existing research, while using a very different data set that covers a different temporal domain (1948-1978 instead of 1816-1992) and that includes very different types of events. Together, the results from Tables 2 through 5 suggest that non-militarized dimensions of interstate interaction change substantially as a rivalry relationship evolves, much like the militarized dimensions that have been studied previously. Similarly, the results from Table 6 suggest that similar sets of factors affect changes in both militarized and non-militarized relations between states.

Beyond its value in extending the scholarly literature on interstate rivalry, the present study suggests several implications for policymakers. First, non-militarized relations in the period before a rivalry begins are generally poor predictors of which states will eventually become entangled in rivalry, so event data (at least in the form examined in the present study) do not seem to offer useful early warning indicators. Once a potential rivalry has begun with the outbreak of militarized conflict, though, event data on interstate interactions seem to become much more important. Both conflictual and cooperative relations within a dyad change as the states in the dyad evolve toward the intermediate or advanced phases of rivalry, typically becoming much more conflictual as the rivalry relationship evolves. If increased interstate cooperation and the avoidance of

conflict are considered preferable to continued interstate conflict and rivalry as foreign policy goals, then this paper's analyses suggest the importance of resolving a potential rivalry quickly. This suggestion is even more important in light of recent research (e.g., Hensel 1996a) suggesting that evolving rivalry increases the likelihood of future militarized conflict between the same adversaries.

In summary, this study has suggested the utility of adding event data to the study of interstate rivalry. Using a very different data set from the COW conflict data sets that have traditionally been used to define and study rivalry, I have found evidence that complements the findings of previous research. Interstate interactions measured with event data have been found to be different for different types of rivalry relationships, and have been found to change over time as rivalries evolve. I have also begun to account for some of these changes in interaction levels as rivalry evolves, and have shown that these changes in turn help to account for the recurrence of militarized conflict. The present study, though, is only preliminary, and leaves open a number of directions that should be pursued by future researchers.

Future research in this area could benefit from a number of potential improvements to the present study. I have used a single event data set, collected a number of years ago with a limited temporal domain. Many other event data sets exist that might be examined in the future. Howell (1983) and Vincent (1983) discuss some of the differences that can arise between several event data sets, identifying situations where the COPDAB and WEIS data sets might lead to opposite conclusions about relationships over the same period of study. In light of their findings, I might do well to re-examine the present topic with at least one other data set, to ensure that my results did not depend on some quirk of the particular data set that I used. Nonetheless, COPDAB employed a much wider variety of sources in its data collection than WEIS, and covers a longer temporal period, so it represents a useful starting point for the present study.[6] Several ongoing data collection projects offer even greater promise for use in future research, such as GEDS (Global Event Data System), KEDS (Kansas Event Data System), and PANDA (Protocol for the Assessment of Nonviolent Direct Action). These projects have begun extending the temporal coverage of event data up to the 1990s, and have attempted to utilize machine coding of event data in order to improve the data collection and coding process.

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[6] Reuveny and Kang (1996) offer another possibility, by attempting to splice the WEIS and COPDAB data into a single time series. Future research in this area should consider methods similar to theirs, which offer the potential of a longer time series that can be used for longitudinal research such as this.

Further research might also extend my current application of event data to the study of rivalry. COPDAB, for example, includes data on the issue types involved in interstate events. I have not examined these additional variables in the present paper, but this may offer an important direction for future research. A follow-up study might benefit from examining changes in the frequency with which certain issues or certain types of issues are raised in evolving rivalries. Similarly, it may prove useful to examine whether states' interactions -- overall or in certain types or phases of rivalry -- are affected systematically by the issues involved in these interactions. Nonetheless, I feel that the present has been a reasonable first cut at the relationship between rivalry and non-militarized interstate interactions, and I hope to extend these results through the use of better data sets as they become available publicly.

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Table 1: Weighted COPDAB International Event Scale

A. Cooperative Events

Scale	Weight	Description
1	92	Voluntary unification
2	47	Major strategic alliance (regional or international)
3	31	Military, economic, and strategic support
4	27	Non-military economic, technological, and industrial agreement
5	14	Cultural and scientific agreement and support (non-strategic)
6	10	Official verbal support of goals, values, and regime
7	6	Mild verbal support: minor official exchanges, talks, and policy expression

B. Neutral Events

Scale	Weight	Description
8	1	Neutral or non-significant acts

C. Conflictual Events

Scale	Weight	Description
9	- 6	Mild verbal expressions displaying discord in interaction
10	- 16	Strong verbal expressions displaying hostility in interaction
11	- 29	Diplomatic-economic hostile actions
12	- 44	Political-military hostile actions
13	- 50	Small scale military acts
14	- 65	Limited war acts
15	- 102	Extensive war acts

Table 2: Eventual Rivalry Type and COPDAB Interactions

A. All Types of Interaction

COPDAB Event Intensity:

Eventual Rivalry Type	Mean (SD)	N	
Non-militarized Relations	4.06 (8.69)	89962	
Isolated Conflict	4.03 (9.81)	8215	F = 115.23
Proto-Rivalry	3.08 (10.15)	2821	(p < .001)
Enduring Rivalry	0.96 (10.34)	2666	
Total	*3.95 (8.89)*	*103664*	

B. Conflictual Events Only

COPDAB Event Intensity:

Eventual Rivalry Type	Mean (SD)	N	
Non-militarized Relations	- 1.30 (4.62)	89962	
Isolated Conflict	- 4.08 (7.45)	8215	F = 3383.64
Proto-Rivalry	- 6.81 (8.39)	2821	(p < .001)
Enduring Rivalry	- 8.90 (8.32)	2666	
Total	*- 1.86 (5.40)*	*103664*	

C. Cooperative Events Only

COPDAB Event Intensity:

Eventual Rivalry Type	Mean (SD)	N	
Non-militarized Relations	5.05 (8.19)	89962	
Isolated Conflict	7.12 (8.35)	8215	F = 412.84
Proto-Rivalry	8.32 (7.91)	2821	(p < .001)
Enduring Rivalry	8.37 (7.28)	2666	
Total	*5.39 (8.22)*	*103664*	

Table 3: Pre-Rivalry COPDAB Interactions and Eventual Rivalry Type

A. All Types of Interaction

COPDAB Event Intensity:

Eventual Rivalry Type	Mean (SD)	N	
Non-militarized Relations	4.06 (8.69)	89962	
Isolated Conflict	4.16 (9.75)	7819	F = 9.04
			(p < .001)
Proto-Rivalry	4.24 (9.72)	2162	
Enduring Rivalry	2.87 (10.15)	1382	
Total	*4.06 (8.82)*	*101325*	

B. Conflictual Events Only

COPDAB Event Intensity:

Eventual Rivalry Type	Mean (SD)	N	
Non-militarized Relations	- 1.30 (4.62)	89962	
Isolated Conflict	- 3.87 (7.32)	7819	F = 1524.07
			(p < .001)
Proto-Rivalry	- 5.86 (8.17)	2162	
Enduring Rivalry	- 6.19 (8.39)	1382	
Total	*- 1.66 (5.16)*	*101325*	

C. Cooperative Events Only

COPDAB Event Intensity:

Eventual Rivalry Type	Mean (SD)	N	
Non-militarized Relations	5.05 (8.19)	89962	
Isolated Conflict	7.07 (8.37)	7819	F = 287.06
			(p < .001)
Proto-Rivalry	8.40 (8.20)	2162	
Enduring Rivalry	7.57 (7.90)	1382	
Total	*5.31 (8.24)*	*101325*	

Table 4: Evolutionary Rivalry Phase and COPDAB Interactions

A. All Types of Interaction

COPDAB Event Intensity:

Rivalry Phase	Mean (SD)	N	
Non-militarized Relations	4.06 (8.82)	101325	
Early Phase	0.24 (10.71)	1145	F = 213.61
			(p < .001)
Intermediate Phase	- 1.06 (10.02)	627	
Advanced Phase	- 1.62 (10.03)	567	
Total	*3.95 (8.89)*	*103664*	

B. Conflictual Events Only

COPDAB Event Intensity:

Rivalry Phase	Mean (SD)	N	
Non-militarized Relations	- 1.66 (5.16)	101325	
Early Phase	- 9.45 (8.49)	1145	F = 2313.07
			(p < .001)
Intermediate Phase	- 11.24 (7.68)	627	
Advanced Phase	- 12.54 (6.24)	567	
Total	*- 1.86 (5.40)*	*103664*	

C. Cooperative Events Only

COPDAB Event Intensity:

Rivalry Phase	Mean (SD)	N	
Non-militarized Relations	5.31 (8.24)	101325	
Early Phase	8.29 (7.32)	1145	F = 133.51
			(p < .001)
Intermediate Phase	8.77 (6.60)	627	
Advanced Phase	9.50 (4.83)	567	
Total	*5.39 (8.22)*	*103664*	

Table 5: Evolution of COPDAB Interactions in Eventual Enduring Rivalries

A. All Types of Interaction

COPDAB Event Intensity:

Rivalry Phase	Mean (SD)	N	
Non-militarized Relations	2.87 (10.15)	1382	
Early Phase	- 0.40 (10.61)	333	F = 34.94
			(p < .001)
Intermediate Phase	- 0.93 (9.92)	384	
Advanced Phase	- 1.62 (10.03)	567	
Total	*0.96 (10.35)*	*2666*	

B. Conflictual Events Only

COPDAB Event Intensity:

Rivalry Phase	Mean (SD)	N	
Non-militarized Relations	- 6.19 (8.39)	1382	
Early Phase	- 10.98 (7.86)	333	F = 117.92
			(p < .001)
Intermediate Phase	- 11.45 (7.73)	384	
Advanced Phase	- 12.54 (6.24)	567	
Total	*- 8.90 (8.32)*	*2666*	

C. Cooperative Events Only

COPDAB Event Intensity:

Rivalry Phase	Mean (SD)	N	
Non-militarized Relations	7.57 (7.90)	1382	
Early Phase	9.00 (6.99)	333	F = 12.01
			(p < .001)
Intermediate Phase	9.01 (6.70)	384	
Advanced Phase	9.50 (5.90)	567	
Total	*8.37 (7.28)*	*2666*	

Table 6: Regression Analysis of COPDAB Interactions

Variable	(1) All interactions Est. (S.E.) Signif.			(2) Conflict only Est. (S.E.) Signif.			(3) Cooperation only Est. (S.E.) Signif.		
Intercept	4.87	(0.29)	.001	6.46	(0.22)	.001	9.87	(0.22)	.001
Intermediate Phase	- 1.68	(0.43)	.001	2.46	(0.33)	.001	0.51	(0.32)	.12
Advanced Phase	- 3.63	(0.48)	.001	4.18	(0.37)	.001	0.70	(0.36)	.06
Decisive Outcome	4.23	(0.54)	.001	- 1.84	(0.42)	.001	1.94	(0.40)	.001
Compromise	3.47	(0.69)	.001	- 0.46	(0.53)	.39	1.55	(0.52)	.01
Dispute Severity	- 0.77	(0.08)	.001	- 0.01	(0.06)	.91	- 0.54	(0.06)	.001
Territorial Issues	- 0.81	(0.46)	.08	1.24	(0.35)	.001	0.42	(0.34)	.22
Military Parity	1.88	(0.55)	.001	- 0.50	(0.42)	.24	0.78	(0.41)	.06
Capability Shift	- 0.06	(0.23)	.80	- 0.53	(0.18)	.01	- 0.49	(0.17)	.01
Dyadic Democracy	0.31	(0.03)	.001	- 0.10	(0.03)	.001	0.21	(0.02)	.001

$F = 37.38$ (9 d.f., $p < .001$) $R^2 = .08$ N: 3950

$F = 30.48$ (9 d.f., $p < .001$) $R^2 = .07$ N: 3950

$F = 21.51$ (9 d.f., $p < .001$) $R^2 = .05$ N: 3950