Interstate Rivalry and the Recurrence of Crises: A Comparison of Rival and Nonrival Crisis Behavior, 1918–1994

BRANDON C. PRINS

Research on enduring rivalry has received considerable theoretical and empirical attention in the last few years.[1] As scholars begin to relax assumptions regarding event independence and historical memory, rivalry has emerged to explain dependencies across countries and over time. The Soviet Union and the United States, for instance, engaged in fifty-three disputes over the forty-five or so years of the Cold War and many, if not most, were related to one another. These disputes did not occur in a vacuum, and each one had an impact on the incidence of future crises and on the foreign policy strategies used by decision-makers to resolve the conflicts in the best interests of their respective states. If the vast majority of conflict in the international system occurs within some type of rivalry context, then these nation-states are particularly important for understanding the causes and consequences of interstate violence.

Despite the asymmetrical distribution of militarized disputes across countries, Gartzke and Simon challenge the operationalization of rivalry and insist that chance alone can explain the string of disputes used to distinguish enduring rivals from their less-belligerent counterparts.[2] Yet even if the historical frequency of interstate disputes does not differ statistically from a model that randomly distributes disputes over time and over pairs of states, by itself such a

Brandon C. Prins is an assistant professor of political science at Texas Tech University. His research interests include interstate conflict, US foreign policy, and military strategy. His work has appeared in *International Studies Quarterly*, *Journal of Peace Research*, *International Interactions*, and other scholarly journals. *Address for correspondence*: Professor Brandon C. Prins, Texas Tech University, Department of Political Science, 11 Holden Hall, Lubbock, TX 79409-1015. Phone: (806) 742-2991. E-mail: *brandon.prins@ttu.edu*

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finding does not prove that relations between rival states are equivalent to relations between nonrival states. Indeed, while many rivalry scholars expect relations between rival states to become increasingly hostile over time, with future disputes dependent strongly on the severity and outcome of previous disputes, little is known about the crisis behavior of rival states (Leng's research is an exception).[3] Aggregated analyses of dispute involvement or initiation cannot distinguish actions taken during the period of the militarized dispute. Yet, the actions of states in rivalry may be more violent and escalatory than those taken by states without historical animosity. Such an empirical finding would provide additional support for the theoretical conjecture that enduring rivals do represent a distinct category of states.

In this article, I empirically examine the crisis behavior of rival and nonrival states. Drawing on Goertz, Diehl, and Hensel, I investigate whether the crisis decision-making of rival nation-states differs from isolated conflict among nonrival nation-states.[4] Indeed, if the pairings of states that define the enduring rivals list of Diehl and Goertz are fundamentally different than other pairings, differences in behavior should be evident in crisis situations.[5] If in fact the six militarized disputes between Honduras and Nicaragua during the years 1909–1927, or the eleven disputes between Pakistan and Afghanistan during the years 1949–1989, are not related to one another, but erupted independent of previous hostilities, then two things should be evident. First, for rival states in crisis, foreign policy strategies should not vary across different conflicts; the likelihood of military action should be the same in dispute one as in dispute six, or eight, or twelve. Second, the foreign policy strategies of rival states in crisis should not differ from the foreign policy strategies of nonrival states in crisis. Using data from the Interstate Crisis Behavior (ICB) Project, the empirical evidence supports the conjecture that states in rival contexts tend to behave differently in crises than their nonrival counterparts, although an indirect effect of rivalry is observed as well.[6] Rival states in crisis frequently resort to military action against nonrivals.[7] Further, the likelihood of a military response in crisis situations increases as the number of crises between rivals increases, providing evidence for an evolutionary model of rival behavior.[8]

Rivalry as Historical Continuity

During the Cuban Missile Crisis in October 1962, the United States and the Soviet Union contested over the placement of medium- and intermediate-range nuclear missiles on Cuban soil. While the dynamics of this crisis had much that was new, both sides also based decisions on the actions and outcomes of previous crises. Indeed, Khrushchev believed US vacillation during the Bay

of Pigs invasion showed JFK's true mettle, and Khrushchev expected similar behavior if enough pressure was exerted by the Soviets. Graham Allison and Philip Zelikow also conclude that the actions of Khrushchev were related to other issues in contention and other crises.[9]

> Khrushchev's maneuver [in Cuba] made sense for victory in Berlin. If the Americans did nothing, Khrushchev would force the West out of Berlin, confident that the missiles in Cuba would deter the Americans from starting a war. If the Americans tried to bargain, the terms would be a trade of Cuba and Berlin.

After the missiles were removed and Khrushchev had been retired for his domestic and foreign policy failures, the Soviets seemingly vowed to prevent such a capitulation in the future.[10] The Soviet Union under Brezhnev began an arms buildup designed to match the United States' military might and place the Soviets in a better position to challenge US authority and influence. So the Cuban Missile Crisis and its outcome contributed to foreign policy behavior for some time to come.

The relationship between Ecuador and Peru also shows signs of historical dependence. In at least three conflicts during the last sixty years, both states have sought control of the upper Amazon territory, which they share, to acquire access to the Atlantic via the Amazon River system. This issue generated considerable conflict between the parties, and in 1981 an outbreak of hostilities led to a deepening in the mistrust and animosity of both sides. In describing relations between rival states, Thompson writes, "Rivalries thus represent a distinctive class of conflict in the sense that rivals deal with each other in a psychologically charged context of path-dependent hostility."[11] After a Peruvian helicopter was brought down by Ecuadorian fire in February 1981, Peru's President Fernando Belaunde Terry notified Ecuador and the world that any further infiltrations would be considered an act of war.[12]

These two cases illustrate the basic feature of rivalry research, namely, that the causes of violent interstate conflict can in part be traced to earlier conflicts and crises between countries. Although rivalry has received considerable attention in the last few years, the concept of historic international adversaries has been around for quite some time. Indeed, one cannot read diplomatic history without mention of rival states, such as England and France, Germany and Russia, or more recently India and Pakistan.[13] These pairs of states are singled out because they exhibit long periods of deep hostility and often multiple militarized conflicts. Therefore, any attempt to understand the sources of violent conflict between nation-states cannot ignore these very dangerous dyads.[14]

Defining Rivalry

Rivalry challenges the common assumption of event independence.[15] While each dispute, crisis, or war undeniably has unique features and dynamics, the enmity and mutual suspicion of opponents in power influence the decisions of state leaders. This is not to say that emotion necessarily clouds one's judgment, yet expectations of the future behavior of one's enemies are shaped by past relations. Conflict begets conflict, and humiliation is not easily forgotten. Goertz writes, "A rivalry sets the stage for escalating tensions in a dispute to culminate in war. Disputes without a violent past are more likely to be resolved peacefully, or at least without resort to all out force."[16] Research designs that ignore such historical dependence potentially mis-specify a model of interstate conflict.

According to Thompson, three elements help define a rivalrous relationship: competitiveness, militarization, and an extended adversarial association.[17] While similar, Diehl focuses more heavily on the latter two conditions.[18] Rivalry characterizes states that have fought repeatedly over time; as such, both the likelihood of future outbreaks of conflict and the likelihood that such conflict will take a violent and escalatory form hinge in part on past behavior. Where Diehl and Thompson disagree is over the nature of competitiveness. Thompson insists that rivalry can only exist between states of relatively equal capabilities.[19] Extended conflict between unequals makes little sense, since the weaker side cannot hope to realistically challenge and prevail against the more powerful side. However, Diehl counters by claiming that "looking at series of hostile interactions as a rivalry only after approximate parity is achieved may ignore the roots of the competition";[20] therefore, why exclude a priori such cases? Despite the minor difference of opinion, rivalry scholars appear to agree that militarized competition between states, a heightened sense of threat perception, and an expectation of future conflict characterize rivalry.[21]

An inability to resolve contentious issues also marks rivalrous relations. Be the issue territory, political influence, government policy, or some combination, disagreement over a scarce good typically drives the conflict.[22] While Diehl admits that these issues can and do change over time, "some thread linking the competitions" conditions future behavior.[23] As the issue or issues fail to be resolved, and discussions devolve into threats and even more violent actions, future conflict becomes increasingly likely. In part this is a result of the stakes at hand, but Vasquez maintains that over time the hostility takes on an actor dimension as well, and such directed antipathy is difficult to resolve.[24] The relationship enters an "us versus them" stage wherein hostile acts reinforce hostile acts.

The empirical record demonstrates that rival states interact in a zone of turmoil.[25] Goertz and Diehl report that nearly 75 percent of militarized disputes, and

53 percent of interstate wars since 1816, occurred within some form of rivalry context, be it proto or enduring.[26] According to Goertz and Diehl, "the most serious enduring rivalries are almost eight times more likely to experience a war than pairs of states in isolated conflict."[27] Territorial conflict also tends to be particularly intense in rival contexts.[28] Hensel finds that only 25 percent of all territorial changes occur between enduring rivals; however, when territorial changes turn violent, the states involved are much more likely to be rivals.[29] Diehl writes that "territorial changes occurring in a rivalry context (proto- or enduring) are about three times more likely to involve military conflict and represent over three-fourths of the violent territorial changes."[30] What is more, Vasquez concludes that territory explains which rivalries will end in war and which will not.[31] Wars between rivals are likely to involve territorial issues, while rivals that contest over alternative issues will either avoid war or possibly be drawn into war through a process of spatial diffusion. Given that rival dyads represent only a small percentage of all state pairings in the international system, we see that a significant amount of violent conflict between states is accounted for by certain highly competitive and extremely hostile relationships.

While the initiation of conflict remains important in rivalry research, decision-making during interstate crises also can provide insight as to how rivalrous relations condition bargaining behavior. Leng, for example, has documented the escalatory nature of foreign policy decision-making among rival states.[32] First, Leng found that the types of bargaining strategies used by states during crises contributed to the eventual outcome.[33] Accommodative bargaining strategies tend to reduce the chances of war—although they also increase the chances of losing—while bullying strategies increase the chances of winning, but at the cost of increasing the possibility of war. Only reciprocal strategies successfully protect one's interests while avoiding war. Second and more important, in repeated crises, Leng observed war avoidance to be nearly impossible. In fact, after three crises, nearly all of the dyads examined reached the war stage. It appears that the bargaining strategies of states become more violent as the conflict lengthens and deepens. Violent strategies result in future violence, and accommodative strategies are frequently deemed as having failed, leading to escalation in the bargaining relationship. Leng's results suggest that rivalry presents a formidable obstacle in preventing war between states.[34]

Recent evidence by Colaresi and Thompson supports Leng's general conclusions.[35] Crises involving rivals are much more lethal and more frequent than similar events between non-rivals. Addressing Gartzke and Simon's stochastic model, Colaresi and Thompson use ICB data and examine the amount of time between crises.[36] The evidence uncovered using a Cox proportional hazard model indicates that previous crisis activity increases the hazard rate and thus

decreases the duration of peace.[37] Further, the effect of past crises on the hazard rate increases with the number of crises. "The risk of a violent crisis increases by a factor of 3.51 after the first crisis," the authors note, "and a factor of 8.75 after the second crisis, in comparison to a dyad with no previous crises."[38] Colaresi and Thompson thus conclude that not only do past crises condition future crises in general, but past crisis involvement also affects the future crisis involvement of rival states. This evidence fundamentally undermines Gartzke and Simon's stochastic explanation of rivalry.[39]

Crisis Bargaining and Rivalry

According to Blainey, war is a failure of measurement.[40] If one assumes that fighting and losing is more costly than simply losing through acquiescence, state leaders who opt to escalate a crisis to war and lose must have miscalculated the capabilities and/or resolve of the opposing side. In an environment where the misrepresentation of preferences is common, forcing an opponent to reveal information about resolve, strategy, and military might enables one to more effectively address the crisis situation. Escalation conveys such information by compelling an adversary to incur heavy costs for prolonging the dispute.[41] In rivalry, the demonstration of resolve is particularly important, but also particularly dangerous. To prevent exploitation, rivalrous states need to convince opponents of their commitment to the issue in contention.[42] As both sides suffer from this heightened insecurity, escalation is a paramount concern and a likely outcome.

While one may expect rivals to learn over time, thus reducing the chances of miscalculation, the effects of knowing one's enemy should not necessarily lead to more peaceful responses to initial crisis events. In rivalry, the signaling of resolve tends to prevent a quick resolution to a crisis and may often militarize it as both sides seek to avoid the appearance of weakness. That is, both sides may increasingly view an overture of peace as a sign of vulnerability, and a lack of resolve and serious commitment to the issue in contention. Once a crisis is triggered, then, both sides may quickly look to the military to signal determination, particularly as the rivalry deepens further. Moreover, if anger directed at one's opponent also characterizes the relationship, as it often does in rivalry, then "the escalation of hostility becomes self-generating as the parties become 'locked in' to tit-for-tat exchanges of increasingly coercive behavior."[43]

Far less is known about the patterns of decision-making of rival states in crisis situations than about the persistence of rivalry itself. Two important theoretical models, however, address the bargaining behavior of states in rivalry. While both models show similarities, along a number of salient dimensions the expected behavior of rivalrous states varies. An analysis of such intraconflict behavior, then, can provide empirical evidence in support of one theory or the other.

Diehl and Goertz's punctuated equilibrium model suggests that rivalries remain relatively stable over time, but often end through an unexpected change in an important structural condition.[44] Drawing on Azar and his theoretical ideas on a normal relations range (NRR), Goertz and Diehl propose that states in rivalry maintain a certain level of hostility over the course of their tense relationship.[45] While relations may deteriorate or improve for short periods of time, there will be regression to the mean of sorts. What this also means is that Goertz and Diehl do not believe that rivalrous states will become increasing conflictory over time.[46] The hostility series, therefore, remains stationary over the course of the rivalry.

The punctuated equilibrium model predicts that, while conflict may tend to beget conflict, the precise severity and outcome of the most recent dispute has little if any impact on the behavior of the rivalrous states in the next dispute. Exogenous shocks throw states into rivalry, but once involved, their actions fail to move the rivalry in a monotonic direction. Therefore, Goertz and Diehl expect hostility levels in rivalries to be noticeably higher on average than non-rivalrous relationships, but until a structural change terminates the hostile relationship, the basic rivalry level (BRL) should fluctuate randomly over time.[47] Goertz and Diehl write, "Simply put, the punctuated equilibrium model anticipates that conflict patterns within rivalries will 'lock in' quickly at the onset of the rivalry relationship and remain that way throughout the rivalry."[48]

The empirical record does demonstrate some support for the basic rivalry level. Many rivalries appear to show signs of violent conflict in early stages and thereafter fail to systematically move toward more violent military encounters.[49] This evidence suggests that rivalries may be strongly affected by early actions. That is, the violence associated with early crises, which throw states into rivalry, may tend to establish a more intense and deadly foreign relations baseline. Political leaders cannot escalate the quarrel inasmuch as violent coercion has characterized the relationship from the beginning.

Hensel proposes a different explanation for rivalry behavior. His evolutionary model expects rivalries to deepen over time, becoming increasingly hostile and violence prone. In this way, the actions of rival states should vary systematically over the course of the rivalry.[50] Hensel expects militarized disputes to be related to one another in rivalry context. The probability of dispute eight occurring is higher than the probability of dispute seven occurring. Further, as the rivalry deepens the likelihood of more violent actions will increase, with all-out war becoming increasingly probable. Admittedly, the exact nature of the previous crisis must also be taken into account in Hensel's model.[51] While the use of military force in a crisis will likely increase the probability that military force will be used in the next crisis, negotiated outcomes that mutually satisfy certain demands will likely decrease both the probability of another crisis erupting and the probability of armed force being used.

For Hensel, then, the foreign policy behavior of nation-states involved in rivalrous relationships affect subsequent foreign policy decisions. The overall context of the hostile relationship influences foreign policy actions, but this context does not remain static over the course of the rivalry. Early on the impact of foreign policy decisions should have only a small effect on future decision-making since the states have yet to acquire an enemy image of one another. Rivalries that have matured, however, should show much stronger signs of event dependence. Not only do the states view each other as enemies; future interactions are likely, and thus actions in the present are designed in part to influence actions that will likely be taken in the future. Military statecraft becomes more likely in the latter stages of rivalry to demonstrate resolve and issue salience to an opponent that has not fully backed down in previous encounters.[52]

Hensel finds empirical support for the evolutionary model.[53] The probability of militarized dispute recurrence at the beginning of enduring rivalries is 54 percent. As the dyadic rivalry deepens, the likelihood of conflict recurrence increases rather dramatically. In the intermediate phase of rivalry (after six militarized disputes), the probability of recurrence is 71 percent, while it increases to nearly 90 percent in the most advanced rival dyads (after thirteen militarized disputes). Hensel also observes that both compromise outcomes and democracy decrease the chances of future violence.[54]

Expectations

In a recent paper, Hensel argues that "the only way a dispute-to-dispute relationship could safely be rejected would be to examine the probability of conflict in dispute-level analyses—hopefully incorporating dispute characteristics such as outcomes—rather than aggregated analyses that could disguise multiple opposing relationships."[55] While conflict involvement or initiation can provide important evidence for event dependence, it cannot provide a look into the intradispute foreign policy behavior of rival states. Such an analysis is needed inasmuch as both the evolutionary and punctuated equilibrium models expect specific behavioral patterns within crisis contexts.

Drawing from Diehl and Goertz's punctuated equilibrium model, Hensel's evolutionary model, and Gartzke and Simon's stochastic model critique, two basic hypotheses are proposed.[56] The first examines whether the crisis behavior of rival states differs from nonrival states. That is, is the use of military statecraft in crisis contexts more likely if the states are in rivalry? If so, this would cast doubt on Gartzke and Simon's claim that the rivalry distinction is invalid. Gartzke and Simon expect a rivalry coefficient to be zero. The second hypothesis tests whether the hostility level of states in rivalry increases, decreases, or remains stable over the temporal course of the rivalry relationship. Evidence of

increasingly hostile actions supports Hensel's evolutionary model, while a stable relationship supports Diehl and Goertz's theoretical expectations. Diehl and Goertz, therefore, expect a count measure of disputes within a rivalry to be unrelated to foreign policy decision-making. The coefficient should be zero.

H_1: States in rivalry will behave differently in crises than nonrivalrous states. The use of military statecraft will be more likely in crises with rivalrous states. Thus, the coefficient for rivalry should be positive and statistically significant.

H_2: In crises involving rival states, the likelihood of a military response will increase over time. That is, the probability of a military action being used in a crisis by a rival state will be higher in later crises than in earlier ones. The coefficient for a count measure should be positive and statistically significant.

Data and Methods

Datasets

Three datasets are used in the empirical analysis. The ICB dataset is now housed at the University of Missouri, and was originally compiled by Michael Brecher and Jonathan Wilkenfeld. This dataset records instances of interstate crises from 1918–1994 (up through 2001 for the most recent version). Like other events datasets, it includes information on the nation-states involved, such as power, regime type, domestic political and economic situation, and contextual factors such as the issue in contention and great powers that intervened. The foreign policy actions of the states involved in the crisis are also recorded. The rivalry dataset comes from work by Diehl and Goertz, and the appendix lists those rivalries. For each of the countries involved in a crisis (as defined by the ICB project), I code whether each is involved in an enduring rivalry included on the Diehl and Goertz list. For regime type, I utilize the Polity IIId dataset provided by the Center for International Development and Conflict Management. The Polity dataset records information on the regime and authority characteristics of nation-states over the last two hundred years. This is the preeminent dataset on regime types in the international system.

Rivalry

Using militarized conflict between states as the defining criterion, Goertz and Diehl operationalize rivalry as the occurrence of militarized interstate disputes between two states over an extended period of time.[57] In this way, the criteria

used by Diehl and Goertz stress consistency, time, and militarized competitiveness.[58] The precise conditions include involvement in at least six militarized disputes over a twenty-year period. The rivalry ends when the two belligerent states experience no militarized conflict for ten years. If the same two states engage in conflict after the ten-year period, then an entirely new rivalry would have begun (if the original criteria were met once again). Based on the Diehl and Goertz criteria, sixty-three rivalries are observed, accounting for 934 militarized interstate disputes from 1816–1992. The total length of time that states have been in rivalry is approximately 2,238 years (see appendix).[59]

Interstate Crisis Behavior

The ICB dataset is the data source used here to empirically examine the impact of rivalry on foreign policy decision-making during interstate crises.[60] ICB offers information on 412 interstate crises from 1918 to 1994. Similar to the Correlates of War Militarized Interstate Dispute (MID) Project, ICB provides two datasets. The first catalogues information at the crisis level, while the second offers details on each of the crisis participants. Given a concern with the individual decision-making of states, I utilize the latter data file, the actor-level one, which codes 895 specific states involved in the 412 interstate crises recorded.

To avoid confusing cases, only bilateral and multilateral crises are examined. That is, the ICB project includes single-actor crises. Although these types of events may be relevant for testing certain theories of conflict, I suspect that the decision-making in these contexts may be quite different from crises involving two or more main actors.[61] Of the 412 interstate crises, 139 involved only a single state actor. In deleting these cases from the analysis, then, 139 of 895 foreign policy actions are lost. This leaves 756 state actors involved in foreign policy crises from 1918–1994.

Dependent Variable

Crisis Response. To empirically test hypotheses 1 and 2, the ICB variable measuring the type of foreign policy response by each crisis actor has been selected here. This ICB variable codes the major crisis management response by each actor to the crisis trigger.[62] The crisis actor could respond to the trigger by (1) ignoring it or relying on verbal signaling. This is a low-level response to the crisis. The crisis actor could respond to the trigger by (2) using political, economic, or other nonviolent, nonmilitary actions; or, the crisis actor could respond to the trigger with (3) non-violent or violent military actions.[63] A three-category ordered dependent variable on the crisis response has been created from this ICB information.

Independent Variables

Rivalry. The 756 state crises coded by the ICB project are matched with the rivalry list provided by Diehl and Goertz.[64] Based on this criterion, 410 state crises are coded as rivalrous from 1918–1994. This categorization, however, has one prominent weakness. Since the concern here is with the individual decision-making of states, and not the dyad, it is quite possible for a state involved in a rivalry to be engaged in a crisis with a nonrival. While problematic, this approach does allow me to examine both the behavior of states against their rivals, and the behavior of states against nonrivals. It may be that rivalry tends to militarize the foreign policy process, leading to more violent and escalatory behavior even in crises against nonrivals. Of the 756 ICB crisis actions, 251 involved rivals on both sides.

To test the evolutionary model of Hensel, I also classify the state actors into early, intermediate, and advanced stages of crisis.[65] This type of research design allows for an empirical examination of whether crisis bargaining strategies become more escalatory as the number of crises between states increases. Rather than using the MID data to create dummy variables for similar stages of rivalry, the number of ICB crises determines whether states fall within a certain stage of crisis.[66] Rival states having experienced one to five crises are considered to be at an early stage of crisis. States having experienced six to thirteen are classified into an intermediate stage of crisis, and more than thirteen crises are classified as an advanced stage of crisis. Goertz and Diehl establish a similar classification scheme for rivalry using militarized interstate disputes.[67] To make sure that the classification scheme is not unduly influencing the results, I also create a continuous count of previous crises.

Issue. A territorial issue variable is included based on coding provided by the ICB project. Hensel insists that the issues in contention in a conflict are expected to have an important impact on the bargaining behavior of the states involved.[68] Hensel writes, "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."[69] Territory is one such issue. Indeed, Vasquez maintains that territory is one of most contentious, if not the most contentious, issue to confront heads of state.[70] As such, a territorial dummy variable is included to assess whether such issues are more contentious in crisis situations.

Regime Type. Using the Polity IIId datafile, each state involved in a crisis is scored on the democracy and autocracy indices based on the start date of the crisis.[71] Only the democracy index (an 11-point measure) is used here to create two dichotomous regime type variables to capture basic threshold effects.[72] States scoring 6 or above on the democracy index are considered democratic,

while all those below 6 are coded nondemocratic.[73] Both the regime of the opponent alone, and a variable based on whether democratic states are on both sides of the crisis, are noted. Democracy is expected to have a pacifying impact on crisis bargaining.[74]

Power. Two separate variables are created to control for power and the willingness to use force. First, a dummy variable is created for whether states are great powers. While this is perhaps more an empirical distinction than a theoretical one, evidence does indicate that significant differences exist in the foreign policy behaviors of each. For example, Morgan and Campbell find that higher political constraints only reduce the propensity to use force for major power states.[75] In fact, they find that higher political constraints tend to increase the war-proneness of minor power states. Therefore, to prevent misinterpreting the relationship between rivalry and crisis response, a control for major power is included.[76] Major powers include: US 1918–1994; UK 1918–1994; France 1918–1940 and 1945–1994; Germany 1925–1945; Italy 1918–1943; Russia 1922–1994; China 1950–1994; Japan 1918–1945. A second power variable derives from the ICB dataset and measures the power discrepancy between the states involved in the crisis. This variable, thus, measures the power of the crisis actor relative to its adversary. ICB incorporates size of population, gross national product (GNP), alliances, size of territory, and military expenditures into this capability index. Brecher and Wilkenfeld write that "the extent of power discrepancy in a crisis ranges from none to maximal discrepancy when the principal adversaries are a superpower and a small power."[77]

Crisis Characteristics. Three additional controls are included relating to the context of the crisis and its geographic location. First, a variable for the triggering action has been incorporated into the model. The concern is that violent crisis triggers will necessarily be met with a different response than nonviolent triggers. A dichotomous distinction is made between violent and nonviolent crisis triggers, with the former increasing the probability of a violent military response by the nation-state actors. Second, intrawar crises are distinguished from crises that occur outside of a general war setting. Again, the behavior of states may vary depending on the context of the crisis. Crises that erupt during periods of extended violent conflict presumably would be addressed differently by foreign policy leaders. A dummy variable is included, which accounts for crises that appear with a war context.[78] Finally, a dichotomous control for home territory has been added to the models. This variable taps into contiguity and thus ensures that distance to a crisis location is not confounding any relationships. Crises located on a state's home territory are coded 1, while all others receive a 0. Each of these three controls should increase the likelihood of a violent response to a crisis trigger.

Results

To empirically assess the relationship between rivalry and the use of military force in crises, basic crosstabulations with chi-squared tests of independence and ordered probit estimations are used. The ordered probit models are particularly important inasmuch as controlling the impact of other salient covariates is necessary to estimate accurately the influence of rivalry on crisis bargaining. Given the ordinal nature of the dependent variable, standard ordinary least squares (OLS) techniques provide potentially misleading results. OLS implicitly assumes that the intervals between categories are equal, even when such an assumption may be entirely unwarranted.[79] The ordered probit model maps a latent continuous variable onto an observed, but categorical *y*. In this way, one might think of the crisis response along a continuum from no action to the full use of the military capabilities of the state.[80] Unfortunately, a continuous measure of such a process cannot be recovered; thus we are left with the observed ordinal process described above.

Rival versus Non-Rival

Table 1 shows preliminary evidence for a difference in the crisis bargaining behavior of rival and nonrival states. While nonrival states in isolated crises use military statecraft approximately 57 percent of the time, rival states rely on the military over 67 percent of the time. This represents over a 15 percent difference in the observed use of military statecraft. Table 1 also illustrates nonviolent and verbal responses to be higher in nonrival crises. In this regard, rival states appear to resort to the military more often in crisis contexts than their nonrival counterparts. This evidence does not support the conclusion by Gartzke and Simon that rival states cannot and/or should not be distinguished from nonrivals.[81] Crisis bargaining strategies do appear to be somewhat different, thus providing initial support for hypothesis 1.

Table 1 confounds crises in which rival states face off against each other, and crises between a rival and a nonrival. To compare crises with rivals on both sides with all other types of crises, all crises in which only one rival state is involved or no rivals have been recoded together. Table 2 illustrates this relationship, and we actually observe less of a distinction between rivals and nonrivals. While nonrival states in crisis use military statecraft 61 percent of the time, rivals opt for the military 66 percent of the time. The difference is statistically significant only at an α level of .10. This result suggests that states in rivalry frequently use military statecraft in crises involving a nonrival opponent. Rivalry appears to predispose states for more escalatory foreign policy decision-making. This result also suggests that relations with one state have an impact

Table 1

Crosstabulation of rival states and crisis response techniques, 1918–1994

	Crisis response technique		
Rival state	No response or nonviolent verbal response	Political or economic response	Military response
No	12	137	197
Row %	3.47%	39.60%	56.94%
Yes	1	133	276
Row %	0.24%	32.44%	67.32%
Total	13	270	473

Note: χ^2 (2) = 17.3 (p = .000).

on relations with other states. Thus, foreign policy strategies may not only be affected by strategies followed and decisions made in the past; they are also affected by the strategies designed for other dyadic relationships.[82]

Table 3 presents ordered probit results from a model of crisis response. Three models are included in the table. The first codes a rival state regardless

Table 2

Crosstabulation of rival state versus rival state and crisis response technique, 1918–1994

	Crisis response technique		
Rival v. rival	No response or nonviolent verbal response	Political or economic response	Military response
No	12	185	308
Row %	2.38%	36.63%	60.99%
Yes	1	85	165
Row %	0.40%	33.86%	65.74%
Total	13	270	473

Note: χ^2 (2) = 4.78 (p = .092).

Table 3

Ordered probit results of the impact of rivalry on crisis response technique, 1918–1994

				Marginal effects		
Variable	Model 1[a]	Model 2[b]	Model 3[c]	P[Y = 1]	P[Y = 2]	P[Y = 3]
Rival	.206** (.098)	—	.264*** (1.00)	−50%	−23%	+17%
Rival v. rival	—	.088 (.099)	—	—	—	—
Territorial issue	.272** (.117)	.278** (.118)	.208* (.125)	−45%	−19%	+13%
Democratic opponent	−.020 (.103)	−.007 (.103)	.037 (.113)	—	—	—
Crisis trigger	.298*** (.113)	.295*** (.113)	.307*** (.122)	−58%	−27%	+19%
Crisis location	−.125 (.108)	−.128 (.108)	−.170 (.111)	—	—	—
Intrawar crisis	.424*** (.114)	.436*** (.113)	.374*** (.123)	−67%	−32%	+23%
Major power	.310** (.128)	.392*** (.120)	—	—	—	—
Power difference (ln)	—	—	.229** (.116)	−93%	−54%	+136%
Cut 1	−1.83 (.142)	−1.87 (.138)	−1.18 (.464)			
Cut 2	.059 (.103)	.064 (.099)	.833 (.455)			

Note: Dependent variable is ordinal and captures the level of effort used in the crisis, from little effort, to political and/or economic actions, to the use of military statecraft. $N = 755$ for models 1 and 2, but 648 for model 3. Columns 5–7 report the percent change in the P[Y = i] given a one-unit change in X_i (from 0 to 1 or low value to high value) for model 3, holding other variables at their mean values. $*p < .10$; $**p < .05$; $***p < .01$. Robust standard errors in parentheses.
[a]LL = −526.0; χ^2 (7) = 48.97 ($p = .000$); Pseudo $R^2 = .048$.
[b]LL = −527.6; χ^2 (7) = 44.76 ($p = .001$); Pseudo $R^2 = .044$.
[c]LL = −445.7; χ^2 (7) = 33.93 ($p = .001$); Pseudo $R^2 = .039$.

of the opponent. The second only codes rivalry when both sides in the crisis are rivals according to the list provided by Diehl and Goertz.[83] The third model is identical to the first, but uses power discrepancy, rather than the major power dummy. Three things are evident from table 3. Crises involving at least one rival state are much more likely to rely on the use of military statecraft. In fact, for

crises involving a state in rivalry, the probability that an economic or diplomatic strategy is used decreases by 23 percent, while the probability of a military response increases by 17 percent.[84] Territorial issues and crises involving major power states are also more likely to result in a military response, while democratic opponents appear to have little impact on the decision-making of states in crisis.[85] Crises involving rival against rival show no statistical difference from other crises, but this is in part a result of crises with only one rival state being particularly contentious. In the following analyses, this distinction is examined more closely. Generally, however, the ordered probit results support the expectation delineated in hypothesis 1.

The ordered probit results in table 3 also show that context plays an important role in militarizing crisis responses. Violent triggers and intrawar crises both increase the probability of military actions, while geographic location appears to have little impact on the foreign policy decisions of crisis actors. The most significant predictor of military statecraft is relative capabilities. States that possess a power advantage over an adversary are much more likely to take military action in crisis situations. In fact, the probability of a military response increases by 136 percent when a crisis actor goes from a position of pure powerlessness to a position of pure military dominance.

Evolution or Punctuated Equilibrium

Tables 4–7 illustrate the bivariate relationship between rivalry and the crisis response technique, controlling for the level of rivalry. We observe in these tables that as rivalry deepens, the observed use of military statecraft increases, as hypothesis 2 stipulates. In table 4 we observe that states in an advanced stage of rivalry (i.e., having experienced fourteen or more crises with the same opponent) opt to use the military in crisis situations nearly 90 percent of the time. This drops as the level of rivalry decreases, with rivals having experienced 5 or fewer crises relying on military statecraft only 61 percent of the time. Accompanying the increased likelihood of military statecraft is a concurrent decrease in the probability of diplomatic or economic tools being used to resolve crises. While rival states with between 1 and 5 interstate crises utilize nonmilitary responses nearly 40 percent of the time, a nonmilitary strategy becomes increasingly unlikely as the number of crises between rival states increases. After thirteen crises between rival states, a nonmilitary response occurs only about 10 percent of the time. This change in crisis bargaining behavior tends to support Hensel's evolutionary model.[86] While Hensel expects relations to deteriorate as the number of conflicts increases, with latter crises experiencing more violent acts, the punctuated equilibrium model hypothesizes more stable crisis bargaining behavior.[87] The monotonic increase in the probability of a military

Table 4

Crosstabulation of rivalry level and crisis response technique, 1918–1994

	Crisis response technique		
Rivalry level	No response or nonviolent verbal response	Political or economic response	Military response
Other crises (Isolated and indirect)	12	185	308
Row %	2.38%	36.63%	60.99%
Early rivalry stage (1–5 crises)	1	61	96
Row %	0.63%	38.61%	60.76%
Intermediate rivalry stage (6–13 crises)	0	22	53
Row %	0.00%	29.33%	70.67%
Advanced rivalry stage (>13 crises)	0	2	16
Row %	0.00%	11.11%	88.89%
Total	13	270	473

Note: χ^2 (6) = 11.40 (p =. 077).

response suggests an increasingly hostile and violence-prone relationship. This evidence provides strong initial support for hypothesis 2.

Table 5 shows the indirect effect of rivalry on crisis bargaining. Rival states facing off against nonrivals in interstate crises rely on military actions nearly as often as states in an intermediate stage of rivalry (between six and thirteen crises with the same opponent). Given that some of these states may be involved in an intermediate or mature rivalry, it appears that being prepared for a military response against a rival carries over to relations with nonrivals. This finding is interesting in that little is known about the impact rivalry has on relations with other states. This crosstabulation provides one piece of evidence hinting at the carryover effects of rival relations.[88]

Tables 6 and 7 control for crises between rivals and nonrivals. We observe in these two tables that crises between rivals have a much higher probability of a military response. Table 6 shows a significant mean level difference in the type of bargaining strategy used by rivals in crisis compared to isolated crises between nonrivals. Over 65 percent of the time, states in rivalry respond to crisis

Table 5

Crosstabulation of rivalry level, controlling for the indirect effect of rivalry and crisis response technique, 1918–1994

	Crisis response technique		
Rivalry level	No response or nonviolent verbal response	Political or economic response	Military response
Indirect rivalry effect	0	48	111
Row %	0.00%	30.19%	69.81%
Early rivalry stage (1–5 crises)	1	61	96
Row %	0.63%	38.61%	60.76%
Intermediate rivalry stage (6–13 crises)	0	22	53
Row %	0.00%	29.33%	70.67%
Advanced rivalry stage (>13 crises)	0	2	16
Row %	0.00%	11.11%	88.89%
Total	1	133	276

Note: χ^2 (6) = 8.97 (p = .17).

Table 6

Crosstabulation of crisis against rival, dropping the indirect cases, and crisis response technique, 1918–1994

	Crisis response technique		
Rivalry level	No response or nonviolent verbal response	Political or economic response	Military response
Isolated crises	12	137	197
Row %	3.47%	39.60%	56.94%
Rival against rival	1	85	165
Row %	0.40%	33.86%	65.74%
Total	13	222	362

Note: χ^2 (2) = 9.44 (p = .009).

Table 7

Crosstabulation of rivalry level dropping indirect cases, and crisis response technique, 1918–1994

	Crisis response technique		
Rivalry level	No response or nonviolent verbal response	Political or economic response	Military response
Isolated crises	12	137	197
Row %	3.47%	39.60%	56.94%
Early rivalry stage (1–5 crises)	1	61	96
Row %	0.63%	38.61%	60.76%
Intermediate rivalry stage (6–13 crises)	0	22	53
Row %	0.00%	29.33%	70.67%
Advanced rivalry stage (>13 crises)	0	2	16
Row %	0.00%	11.11%	88.89%
Total	13	222	362

Note: χ^2 (6) = 15.9 (p = .014).

conditions by relying on military statecraft when the opponent is the rival. Nonrival states opt for a military response only 57 percent of the time. When the level of rivalry is considered, the results are even starker. After fourteen or more crises, rivals select a military action nearly 90 percent of the time. Thus, table 7 reveals that as rivalry deepens, the observed use of military statecraft increases and is considerably higher than isolated crises involving nonrival states.[89] Table 6 reveals strong support for hypothesis 1, while table 7 provides additional evidence in support of hypothesis 2.

The ordered probit results in table 8 largely confirm the bivariate findings, even after controlling for issue, regime type, power, and crisis context. Model 4 shows the probability of a military response increasing as rivalry deepens (the evolution variable). As the number of crises between two rivals increases, reliance on the military to respond to a crisis trigger increases as well.[90] Model 5 breaks rivalry into its different stages; as was observed in the crosstabulations, states in an advanced stage of rivalry have a much higher likelihood of taking military action. In fact, holding all other variables at mean values, advanced

Table 8

Ordered probit results of the impact of rivalry level on crisis response technique, 1918–1994

				Marginal effects		
Variable	Model 4[a]	Model 5[b]	Model 6[c]	P[Y = 1]	P[Y = 2]	P[Y = 3]
Indirect impact	—	.286** (.131)	.367*** (.139)	−64%	−33%	+22%
Early crisis stage	—	.064 (.121)	.090 (.128)	—	—	—
Intermediate crisis stage	—	.279* (.171)	.317* (.172)	−60%	−29%	+18%
Advanced crisis stage	—	1.09*** (.386)	1.14*** (.398)	−97%	−80%	+49%
Evolution	.142** (.063)	—	—	—	—	—
Territorial issue	.205* (.125)	.317*** (.119)	.262** (.128)	−55%	−24%	+16%
Democratic opponent	.034 (.113)	−.007 (.104)	.059 (.114)	—	—	—
Crisis trigger	.290** (.123)	.288*** (.113)	.298** (.123)	−58%	−26%	+19%
Crisis location	−.180 (.111)	−.100 (.108)	−.123 (.112)	—	—	—
Intrawar crisis	.374*** (.122)	.436*** (.114)	.403*** (.123)	−67%	−35%	+24%
Major power	—	.271** (.130)	—	—	—	—
Power difference (ln)	.261** (.117)	—	.225** (.118)	−94%	−54%	+131%
Cut 1	−1.13 (.468)	−1.81 (.143)	−1.15 (.467)			
Cut 2	.873 (.459)	.088 (.104)	.874 (.459)			

Note: Dependent variable is ordinal and captures the level of effort used in the crisis response, from little effort, to political and/or economic actions, to the use of military statecraft. $N = 648$ for models 4 and 6, but 755 for model 5. Columns 5–7 report the percent change in the P[Y = i] given a one unit change in X_i (from 0 to 1 or low value to high value) for model 6, holding other variables at their mean values. *$p < .10$; **$p < .05$; ***$p < .01$. Robust standard errors in parentheses.

[a]LL = −446.7; χ^2 (7) = 30.48 ($p = .000$); Pseudo $R^2 = .037$.

[b]LL = −521.9; χ^2 (10) = 58.37 ($p = .000$); Pseudo $R^2 = .055$.

[c]LL = −441.3; χ^2 (10) = 42.51 ($p = .000$); Pseudo $R^2 = .049$.

rivalry increases the probability of a military response by nearly 50 percent. In looking at the variables for early, intermediate, and advanced rivalry, it remains clear that rivalry dramatically decreases the chances of political or economic policy responses to crisis triggers and increases the likelihood of military actions. Therefore, as rivalries deepen, crisis actors are increasingly likely to resort to military statecraft, providing additional support for hypothesis 2. Interestingly, the indirect effect is quite large also; larger, in fact, than the effects of an early stage of crisis and even slightly larger than the effects of states having experienced between six and thirteen crises. It does appear that rivalry has an escalatory impact on relations between rivals and nonrivals.

The ordered probit results in table 8 further confirm the strong impact of crisis context and power. Violent crisis triggers, as well as crises erupting in the midst of war, are much more likely to result in military responses. For example, crisis actors at war are 24 percent more likely to respond to a crisis trigger with military moves compared with decision-making during crises outside of the context of war. Thus, war itself tends to strengthen the hand of generals at the expense of diplomats. Model 6 also demonstrates the dominant influence of relative power. Crisis actors facing weak adversaries are substantially more likely to resort to military actions than actors confronting powerful opponents.

Conclusion

It is difficult to deny that certain states account for the vast majority of conflicts that erupt. For example, while Ecuador experienced approximately thirty-eight disputes in the last 150 years, Uruguay entered six, and Ireland three. Does chance alone explain these dispute differences? Or are particular states distinguishable by historical animosity, deep mistrust, and a heightened sense of insecurity? Rivalry theory insists that conflicts between states are not independent of one another, but that each has an impact on the future likelihood of renewed violence. In support of the rivalry distinction, Hensel finds the advanced stage of rivalry to have the largest impact on the likelihood of dispute recurrence, with territorial issues a distant second.[91]

While the incidence of militarized disputes provides one piece of empirical evidence of rivalry, behavior within disputes potentially provides a second piece. Thompson writes, "We cannot yet say that we know a great deal about how conflict in rivalry operates differently from conflict in non-rivalry contexts."[92] Accounting for crisis behavior is crucial if rivalry is to be fully explained. Does the conflict level in a rival dyad remain relatively constant throughout the rivalry? Or does the use of military statecraft become increasingly likely as the rivalry lengthens and deepens? Further, is the crisis behavior of rival and nonrival states distinguishable?

The evidence uncovered here suggests that not only is foreign policy decision-making different in rival versus nonrival states (supporting hypothesis 1), but also an upward trend in violent foreign policy behavior appears to characterize an enduring rivalry relationship (supporting hypothesis 2). In interstate crises, the observed use of military action for rival states is considerably higher than nonrival states in isolated conflict. Further, as the rivalry deepens, the observed use of military statecraft increases dramatically. States having experienced fourteen or more crises with the same opponent opted for a military response nearly 90 percent of the time in these latter crises. Indeed, next to relative power, advanced rivalry has the largest impact on the decision by states to use military coercion. Moreover, the likelihood of using the military option reaches nearly 98 percent when mature rivals face off against one another, there is asymmetry in the relative power balance, territory represents the issue in contention, and the crisis trigger was violent. Thus, strong empirical support has been uncovered here for hypotheses 1 and 2.

While the evidence presented here tends to support Hensel's evolutionary expectations, as well as the evidence presented recently by Colaresi and Thompson, in the future greater attention might be given to both exogenous shocks to the rivalry environment and to the outcomes and settlements of previous conflicts.[93] Hensel has argued that accommodative strategies used during crises and the decisiveness of conflict outcomes should influence the likelihood of future disputes, and his earlier research on dispute recurrence shows some support for these conjectures.[94] More refined foreign policy datasets, however, might uncover associations between specific behavioral strategies selected in successive crises. Incorporating these additional factors into a model of crisis bargaining between rival states will provide a more nuanced understanding of conflict behavior.

Appendix A

Enduring rivals, 1816–1992 (from Diehl and Goertz 2001)

Rivalry	Life	Disputes	Duration (years)
USA-Cuba	1959–1990	15	31
USA-Mexico	1836–1893	17	57
USA-Ecuador	1952–1981	8	28
USA-Peru	1955–1992	6	37
USA-UK	1837–1861	8	24
USA-Spain	1850–1875	10	25
USA-USSR	1946–1986	53	40
USA-China	1949–1972	24	23
USA-North Korea	1950–1985	18	35
Honduras-Nicaragua	1907–1929	6	22
Ecuador-Peru	1891–1955	21	64
Brazil-UK	1838–1863	6	24
Chile-Argentina	1873–1909	10	36
Chile-Argentina	1952–1984	17	32
UK-Germany	1887–1921	7	34
UK-Russia	1876–1923	17	47
UK-USSR	1939–1985	18	46
UK-Turkey	1895–1934	10	39
UK-Iraq	1958–1992	10	34
Belgium-Germany	1914–1940	8	26
France-Germany	1911–1945	9	34
France-Germany	1830–1887	12	57
France-Turkey	1897–1938	11	41
France-China	1870–1900	6	30
Spain-Morocco	1957–1980	8	23
Germany-Italy	1914–1945	7	31
Italy-Yugoslavia	1923–1956	8	33
Italy-Ethiopia	1923–1943	6	20
Italy-Turkey	1880–1924	14	44
Yugoslavia-Bulgaria	1913–1952	8	39
Greece-Bulgaria	1914–1952	9	38
Greece-Turkey	1958–1989	14	30
Greece-Turkey	1866–1925	17	59
Cyprus-Turkey	1965–1988	7	24
USSR-Norway	1956–1987	9	32
USSR-Iran	1908–1987	18	80
Russia-Turkey	1876–1921	12	45
USSR-China	1862–1986	50	124
USSR-Japan	1895–1984	43	90
Congo Brazzaville-Zaire	1963–1987	7	23
Uganda-Kenya	1965–1989	6	24
Somalia-Ethiopia	1960–1985	16	25
Ethiopia-Sudan	1967–1988	8	21
Morocco-Algeria	1962–1984	6	22
Iran-Iraq	1953–1992	20	40
Iraq-Israel	1967–1991	6	24
Iraq-Kuwait	1961–1992	9	31
Egypt-Israel	1948–1989	36	41
Syria-Jordan	1949–1991	9	41
Syria-Israel	1948–1986	45	38
Jordan-Israel	1948–1973	13	25
Israel-Saudi Arabia	1957–1981	6	24
Saudi Arabia-North Yemen	1962–1984	6	21
Afghanistan-Pakistan	1949–1989	11	40
China-South Korea	1950–1987	9	37
China-Japan	1873–1958	34	85
China-India	1950–1987	22	37
North Korea-South Korea	1949–1992	20	43
South Korea-Japan	1953–1982	15	29
India-Pakistan	1947–1991	40	44
Thailand-Cambodia	1953–1987	14	34
Thailand-Laos	1960–1988	13	27
Thailand-North Vietnam	1961–1989	6	28

Notes

1. The term *enduring rivals* refers to pairs of countries that have fought repeatedly over time. Thus a protracted militarized relationship characterizes these nation-states. See below for additional discussion.

2. Erik Gartzke and Michael Simon, "Hot Hand: A Critical Analysis of Enduring Rivalries," *Journal of Politics* 63 (1999): 777–798.

3. William R. Thompson, "Identifying Rivals and Rivalries in World Politics," *International Studies Quarterly* 45 (2001): 557–586.

4. See Gary Goertz and Paul F. Diehl, "Rivalries: The Conflict Process," in *What Do We Know About War*, ed. John A. Vasquez (New York: Rowman Littlefield Publishers, Inc., 2000), 197–218; Paul F. Diehl and Gary Goertz, *War and Peace in International Rivalry* (Ann Arbor: University of Michigan Press, 2001); and Paul R. Hensel, "Interstate Rivalry and the Study of Militarized Conflict," in *Conflict in World Politics: Advances in the Study of Crisis, War, and Peace*, ed. Frank P. Harvey and Ben D. Mor (New York: St. Martin's Press, 1998).

5. Diehl and Goertz, *War and Peace*.

6. See discussion in notes 60 and 61 below for definitions of crises.

7. Sara M. Mitchell and Brandon C. Prins, "Rivalry and Diversionary Uses of Force." Paper presented at the annual meeting of the Peace Science Society International, Atlanta, GA, October 26–28, 2001.

8. See Michael Colaresi and William R. Thompson, "Hot Spots or Hot Hands? Serial Crisis Behavior, Escalating Risks, and Rivalry," *Journal of Politics* 64 (2002): 1175–1198; and Michael Colaresi and William R. Thompson, "Strategic Rivalries, Protracted Conflict, and Crisis Escalation," *Journal of Peace Research* 39 (2002): 263–287.

9. Graham Allison and Philip Zelikow, *Essence of Decision: Explaining the Cuban Missile Crisis*, 2nd ed. (New York: Longman, 1999), 104.

10. See Adam B. Ulam, *Expansion and Coexistence: Soviet Foreign Policy 1917–73* (New York: Holt, Rinehart, and Winston, 1974), 630.

11. Thompson, "Identifying Rivals," 558.

12. *Keesing's Record of World Events,* volume 27 (1981), 30763.

13. England and France, for example, fought repeatedly during the Hundred Years War, such as at Crécy (1354), Poitiers (1356), and Agincourt (1415). Germany and Russia feared each other's national power and fought twice in the twentieth century over European dominance. India and Pakistan emerged from British rule as opponents and have militarily engaged each other nearly every year since independence.

14. Although Edward Azar initiated much of the research into protracted international conflict, followed soon after by Michael Brecher, Paul Diehl effectively launched the current research program into rivalry, along with fellow University of Michigan graduate Gary Goertz. Both studied under David Singer and worked on the Correlates of War Project. Paul Hensel studied under Diehl at the University of Illinois and has written extensively on international rivalry. William Thompson trained under George Modelski (professor emeritus at the University of

Washington) and has worked on the role of power and rivalry in international politics. Michael Colaresi was a student of Thompson at the University of Indiana and has continued to work on great power rivalries.

15. Gary Goertz and Paul F. Diehl, "The Empirical Importance of Enduring Rivalries," *International Interactions* 18 (1992): 151–163.

16. Gary Goertz, *Contexts of International Politics* (Cambridge: Cambridge University Press, 1994).

17. Thompson, "Identifying Rivals," 560.

18. Paul F. Diehl (ed.), *The Dynamics of Enduring Rivalries* (Urbana: University of Illinois Press, 1998).

19. Thompson, "Identifying Rivals," 563. Also see John Vasquez, *The War Puzzle* (Cambridge: Cambridge University Press, 1993).

20. Diehl, *Dynamics of Enduring Rivalries*, 4.

21. See John A. Vasquez, "Distinguishing Rivals That Go to War From Those That Do Not," *International Studies Quarterly* 40 (1996): 531–558.

22. Diehl, *Dynamics of Enduring Rivalries*.

23. Diehl, *Dynamics of Enduring Rivalries*, 3. Also see Gary Goertz and Paul F. Diehl, "Enduring Rivalries: Theoretical Constructs and Empirical Patterns," *International Studies Quarterly* 37 (1993): 147–171.

24. Vasquez, "Distinguishing Rivals," 532.

25. See, for example, Frank W. Wayman, "Rivalries: Recurrent Disputes and Explaining War," in *What Do We Know About War* (see note 4), 219–234. Also see Michael Brecher and Patrick James, "Patterns of Crisis Management," *Journal of Conflict Resolution* 32 (1988): 426–456.

26. Goertz and Diehl, "Rivalries," in *What Do We Know About War* (see note 4).

27. Goertz and Diehl, "Enduring Rivalries" (see note 26), 148.

28. See, for example, Paul K. Huth, "Enduring Rivalries and Territorial Disputes, 1950–1990," in *A Road Map To War: Territorial Dimensions of International Conflict*, ed. Paul F. Diehl (Nashville, TN: Vanderbilt University Press, 1999).

29. Paul R. Hensel, "Hot Hands and Cold Wars: A Reassessment of the Stochastic Model of Rivalry." Paper presented at the annual meeting of the American Political Science Association, San Francisco, CA, August 29–September 2, 2001).

30. Diehl, *Dynamics of Enduring Rivalries*, 7.

31. Vasquez, "Distinguishing Rivals."

32. Russell J. Leng, "When Will They Ever Learn? Coercive Bargaining Behavior in Recurrent Crises," *Journal of Conflict Resolution* 27 (1983): 379–419.

33. Ibid.

34. Ibid.

35. See Colaresi and Thompson, "Hot Spots or Hot Hands," and Colaresi and Thompson, "Strategic Rivalries."

36. Gartzke and Simon, "Hot Hand," and Colaresi and Thompson, "Hot Spots or Hot Hands?"

37. Ibid., 1188–1189.

38. Ibid., 1190.

39. Colaresi and Thompson similarly examine ICB escalation among rival and non-rival states. Two methodological choices distinguish their work from my own here. First, Colaresi and Thompson use Thompson's principal rivalry distinction and not the rivalry distinction used by Diehl and Goertz. Second, Colaresi and Thompson examine crisis reoccurrence, while I examine the foreign policy response to the initial crisis trigger. In this way, the analysis here is more closely tied to Leng's accommodative and bullying strategies distinction. My results, nonetheless, support the conclusions drawn by Colaresi and Thompson. See Colaresi and Thompson, "Hot Spots or Hot Hands?"; Thompson, "Identifying Rivals"; and Leng, "When Will They Ever Learn?"

40. George Blainey, *The Causes of War* (New York: Free Press, 1973), 122.

41. See James Fearon, "Domestic Political Audiences and the Escalation of International Disputes," *American Political Science Review* 88 (1994): 577–592.

42. See Zeev Maoz and Ben D. Mor, "Learning, Preference Change, and the Evolution of Enduring Rivalries," in *Dynamics of Enduring Rivalries* (see note 18), 129–164.

43. See Russell J. Leng, "Escalation: Crisis Behavior and War," in *What Do We Know About War* (see note 4), 237. Bennett, though, finds an increasing hazard rate for rivalries, which indicates that rivalrous relationships are not self-sustaining but will eventually end. As the rivalry duration increases, the likelihood of the conflict ending increases rather than decreases. See D. Scott Bennett, "Integrating and Testing Models of Rivalry Duration," *American Journal of Political Science* 42 (1998): 1200–1232.

44. Diehl and Goertz, *War and Peace*.

45. See Edward E. Azar, "Peace as Crisis and War as Status-Quo: The Arab-Israeli Conflict Environment," *International Interactions* 6 (1979): 159–184; and Edward E. Azar, "Protracted International Conflicts: Ten Propositions," *International Interactions* 12 (1985): 59–70. Also see Gary Goertz and Paul F. Diehl, "The Volcano Model and Other Patterns in the Evolution of Enduring Rivalries," in *Dynamics of Enduring Rivalries* (see note 4).

46. See Goertz and Diehl, "The Volcano Model;" Goertz and Diehl, "Rivalries."

47. Goertz and Diehl, "The Volcano Model."

48. Goertz and Diehl, "Rivalries" (see note 4), 202.

49. Maoz and Mor, "Learning, Preference Change, and the Evolution of Enduring Rivalries."

50. Paul R. Hensel, "An Evolutionary Approach to the Study of Interstate Rivalry," *Conflict Management and Peace Science* 17 (1999): 175–206. Also see Goertz and Diehl, "Rivalries" (see note 4).

51. Hensel, "An Evolutionary Approach."

52. For a nice review of rivalry literature, see Gary Goertz and Paul F. Diehl, "(Enduring) Rivalries," in *Handbook of War Studies II*, ed. Manus I. Midlarsky (Ann Arbor: University of Michigan Press, 2000).

53. Hensel, "An Evolutionary Approach."

54. Ibid.

55. Hensel, "Hot Hands or Cold Wars," 8.

56. See Diehl and Goertz, *War and Peace*; Hensel, "An Evolutionary Approach"; and Gartzke and Simon, "Hot Hand."

57. See Goertz and Diehl, "Enduring Rivalries" (see note 26).

58. Diehl and Goertz, *War and Peace*.

59. Ibid.

60. A *crisis*, according to Brecher and Wilkenfeld, is a situation in which state leaders perceive "a threat to one or more basic values, along with an awareness of finite time for response to the value threat, and a heightened probability of involvement in military hostilities." See Michael Brecher and Jonathan Wilkenfeld, *A Study of Crisis* (Ann Arbor: University of Michigan Press, 1997). Also see Michael Brecher, *Crises in World Politics: Theory and Reality* (New York: Pergamon Press, 1993).

61. Hewitt and Wilkenfeld find important differences between single-actor and multi-actor crises, and they caution researchers about possible inference problems if such cases are combined in empirical analyses. See J. Joseph Hewitt and Jonathan Wilkenfeld, "One-Sided Crises in the International System," *Journal of Peace Research* 36 (1999): 309–323.

62. The *crisis trigger* is defined by Brecher and Wilkenfeld as the "specific act, event, or situational change perceived by the decision maker(s) as a threat to basic values, with finite time for response and a heightened probability of military hostilities." See Brecher and Wilkenfeld, *A Study of Crisis*, 48.

63. The original variable from the ICB actor dataset is labeled "Crisis Management I: Major Response to Crisis Trigger." The original coding has nine separate categories: (1) no response, (2) verbal act, (3) political act, (4) economic act, (5) other non-violent act, (6) non-violent military act, (7) multiple including non-violent military act, (8) violent military act, and (9) multiple including violent military act. The ordinal variable utilized in the empirical analyses collapses categories 1 and 2, 3 through 5, and 6 through 9 to create the three-category ordinal dependent variable. This categorization follows a principle interest here with the decision to respond initially to a crisis trigger by relying on the military, even if violent clashes do not in the end occur. Further, separate analyses of different cut-points largely support a dichotomous distinction between a military response and a response that involves either diplomatic and/or economic statecraft. I do not utilize the Crisis Management II variable provided by ICB because it bases its coding on the primary conflict management technique used throughout the entire crisis, rather than the specific response to the trigger and whether any type of military action was taken.

64. Diehl and Goertz, *War and Peace*.

65. Hensel, "An Evolutionary Approach."

66. See, for example, Goertz and Diehl, "Rivalries" (note 4).

67. Ibid.

68. Hensel, "An Evolutionary Approach," 187.

69. Ibid.

70. See Vasquez, *The War Puzzle*, and Vasquez, *What Do We Know About War.*

71. Sara McLaughlin, Scott Gates, Håvard Hegre, Ranveig Gissinger, and Nils Petter Gleditsch, "Timing the Changes in Political Structures: A New Polity Database," *Journal of Conflict Resolution* 42 (2001): 231–242.

72. See, for example, William J. Dixon, "Democracy and the Peaceful Settlement of International Conflict," *American Political Science Review* 88 (1994): 14–32; and William Reed, "A Unified Statistical Model of Conflict Onset and Escalation," *American Journal of Political Science* 44 (2000): 84–93.

73. While dichotomizing the ordinal democracy index of Polity IIId does discard information, theoretically the regime type and conflict relationship is a threshold one. That is, a certain type of regime or set of institutions alters the relationship. The 11-point index goes from zero to 10, with 10 coding a regime characterized by strong institutional constraints on the executive, competitive political participation, and openness of executive recruitment.

74. Bruce Russett, *Grasping the Democratic Peace: Principles for a Post-Cold War World* (Princeton, NJ: Princeton University Press, 1993).

75. Cliff Morgan and Sally Campbell, "Domestic Structures, Decisional Constraints, and War," *Journal of Conflict Resolution* 35 (1991): 187–211.

76. See J. David Singer and Melvin Small, *Resort to Arms* (Thousand Oaks, CA: Sage Publications, 1982).

77. Brecher and Wilkenfeld, *A Study of Crisis*, 27. To reduce the range of this series and the potential for heteroskedasticity, the natural log of power discrepancy is used in the empirical analysis.

78. Analyses were also run without intrawar crises included in the dataset. Results remain robust to the deletion of these cases.

79. J. Scott Long, *Regression Models for Categorical and Limited Dependent Variables* (Thousand Oaks, CA: Sage Publications, 1997).

80. See Goertz and Diehl, "The Volcano Model."

81. See Gartzke and Simon, "Hot Hand."

82. This finding implies that not only should temporal and spatial dependence be modeled in pooled time series datasets, but temporal-spatial correlation also needs to be considered. That is, the US-UK dyad in 1920 is in part dependent on the US-UK dyad in 1919 (temporal correlation), and the US-UK dyad in 1920 may be influenced by the US-France dyad in 1920 (spatial correlation), but it also is quite likely that the US-UK dyad in 1919 influences the US-France dyad in 1920.

83. Diehl and Goertz, *War and Peace*.

84. The marginal effects represent the change in probability of Y given some unit change in X_i. So, using table 3 and model 3 as examples, going from nonrival to rival increases the probability that Y equals three by 17 percent. That is, states involved in an enduring rivalry are 17 percent more likely to use military statecraft than states not involved in an enduring rivalry.

85. The impact of regime type probably plays out at the initiation stage of crises. States involved in crises are already on average much more resolved.

86. See Hensel, "An Evolutionary Approach."

87. Ibid.

88. Admittedly, rivalry may not be the causal factor, but the characteristics of certain regimes themselves. Some regimes may simply be more belligerent than others, and this pushes them into rivalry as well as into conflict with other states. However, it seems likely that rivalry helps prepare regimes for conflict.

89. Bercovitch, Diehl, and Goertz find conflict management efforts prevalent in enduring rivalries. They suggest that the need to demonstrate resolve with a rival limits the usefulness of direct negotiation and thus mediation offers an attractive alternative. However, while enduring rivalries are much more likely to receive mediation efforts, these efforts typically end in failure. Bercovitch et al. found "no moderating effects on the severity of subsequent disputes, or even on the lessening of the likelihood of war following a mediation "(p. 761). See Jacob Bercovitch, Paul Diehl, and Gary Goertz, "The Management and Termination of Protracted Interstate Conflicts: Conceptual and Empirical Considerations," *Millennium* 26 (1997): 751–769.

90. The evolution variable essentially counts the number of crises between two rival states over time. I collapse the counts into a four-category ordinal variable to match the Goertz and Diehl distinctions. Thus, no previous crises between rival states gets coded a 0, one to five previous crises receives a 1, six to thirteen a 2, and greater than thirteen previous crises gets coded a 3. A continuous count variable was also run and the results were nearly identical. See Goertz and Diehl, "Rivalries" (see note 4).

91. See Hensel, "An Evolutionary Approach."

92. Thompson, "Identifying Rivals," 558.

93. See Hensel, "An Evolutionary Approach"; and Colaresi and Thompson, "Hot Spots or Hot Hands."

94. Hensel, "Hot Hands and Cold Wars."