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7 Interstate Rivalry and the Study of Militarized Conflict

Paul R. Hensel

The concept of interstate rivalry has recently been used to suggest some new directions for the scientific study of militarized conflict. The scholarly literature on rivalry, which was initiated in the mid-1980s and has only begun in earnest in the past five years, has suggested some important advancements in research on interstate conflict. Even more recently, several scholars have begun to advance this rivalry literature even further by focusing on the evolution of interstate rivalries. Taken together, the concepts of rivalry and evolution have already changed the way that many scholars study interstate conflict, and these concepts are likely to continue to affect the way that conflict is studied for many years to come. The first section of this chapter reviews a number of theoretical contributions that have resulted from the concepts of rivalry and evolution.

The second section of this chapter offers a series of original analyses to assess the empirical contributions of rivalry, by comparing a rivalry-based approach and an evolutionary perspective to the more traditional approaches to interstate conflict. These analyses employ the recently updated Correlates of War (COW) Project data on militarized interstate disputes from 1816 to 1992, which covers sixteen more years than the previous data used by most published studies of rivalry (Goertz and Diehl, 1992b, 1993, 1995a) and includes roughly twice as many militarized disputes. As will be seen, the present chapter's analyses also extend the existing literature by controlling for the effects of the issues at stake between two rivals and the outcomes of their confrontations as well as the history of past conflict between them. These analyses thus offer a number of potential contributions to the existing research on interstate rivalry. This chapter concludes by summarizing the impact of the concepts of rivalry and evolution on research to date, and by suggesting how these concepts can help to shape conflict research in the future.

THE CONCEPT OF RIVALRY

Before examining the contributions of rivalry to the study of interstate conflict, we must consider the meaning of rivalry. A number of scholars have discussed rivalry and related concepts in international relations, including 'enmity' (Finlay, et al., 1967; Feste, 1982), 'protracted conflict' (Azar et al., 1978; Brecher, 1984), and 'enduring rivalry' (Wayman, 1989; Goertz and Diehl, 1992b, 1993; Vasquez, 1993; Bennett, 1993). Each of these concepts refers in the general sense to a long-standing, competitive relationship between two or more adversaries. Drawing from the above scholars' work, enduring rivals can be described as two or more 'actors whose relations are characterized by disagreement or competition over some stakes that are viewed as important, where each perceives that the other poses a significant security threat, and where this competition and threat perception last for substantial periods of time' (Hensel, 1994b:2). Furthermore, enduring rivals are often characterized as being involved in repeated confrontations or crises, which helps to highlight the rivals' disagreement over important stakes and which contributes to each rival's perception of a security threat from the other; 'enduring rivalry' in empirical research has become synonymous with 'enduring militarized rivalry' (Wayman, 1989; Goertz and Diehl, 1993; Hensel, 1996a). Examples of states that are commonly described as enduring rivals include France and Germany through much of the nineteenth and twentieth centuries, the United States and Soviet Union during the Cold War, India and Pakistan since 1947, and Israel and Syria since 1948.

Rivalry can also be considered in a broader and more continuous fashion. Many adversaries do not engage in enough confrontations to build up the history of disagreement or the level of threat perception that characterize full-fledged enduring rivalry. Even if such adversaries never become full enduring rivals, though, some scholars (e.g. Wayman and Jones, 1991; Goertz and Diehl, 1993) consider the possibility of 'lesser' forms of rivalry between non-militarized interstate relations and full enduring rivalry.

Adversaries whose disagreements remain confined to the diplomatic, political, or economic realms are typically described as being involved in 'non-militarized interstate relations' (Hensel, 1996a). Adversaries that turn to militarized means of settling their disagreements begin to risk potential escalation to rivalry, and – depending on the frequency or severity of the militarized conflict between them – can be characterized as 'isolated conflict' (Goertz and Diehl, 1993) or 'short-term

militarized rivalry' (Wayman and Jones, 1991). Adversaries that confront each other repeatedly can approach enduring rivalry on one or more dimensions, although not qualifying fully: such dyads have been termed 'proto-rivalry' (Goertz and Diehl, 1993) or 'medium-term militarized rivalry' (Wayman and Jones, 1991).

These lesser forms of conflictual relationships may not be as severe or as protracted as full enduring rivalries, but they highlight the continuous nature of rivalry. 'Isolated conflict' adversaries that never go beyond one or two border incidents certainly appear to differ from enduring rivals that engage in numerous crises and wars, but such adversaries also appear to be very different from those that have no disputed issues at stake or those that always resolve their disputed differences peacefully. Similarly, 'proto-rivals' or 'medium-term militarized rivals' that engage in numerous confrontations over time may not reach the levels of tension or hostility that characterize full enduring rivalry, but such relationships would seem difficult to classify in the same category as 'isolated conflict' or 'non-militarized relations.' From this perspective, the concept of rivalry is best viewed as a continuum, with enduring rivalry at one extreme end of the continuum, non-militarized relations at the other extreme, and these other forms of conflict (or lesser forms of rivalry) in the middle. Although some scholars treat 'interstate rivalry' as synonymous with 'enduring interstate rivalry,' the present chapter employs the term 'rivalry' in a more continuous sense, allowing for different types or levels of rivalry. 'Enduring rivalry' represents the high end of this continuum, and hereafter will specifically be called *enduring* rivalry.

As will be seen later, a continuous conception of rivalry is also central to an evolutionary perspective on interstate rivalry. An evolutionary perspective suggests that even enduring rivals rarely begin by recognizing the protracted, hostile nature of their eventual relationship. Instead, most enduring rivals begin much like other adversaries, and evolve through several lesser phases into full-fledged enduring rivalry (Hensel, 1996a). In the early and intermediate stages of a conflictual relationship, the fact that at least one of the adversaries has resorted to militarized methods marks the relationship as a potential rivalry, although whether or not the adversaries will be able to manage their relationship short of true enduring rivalry will depend on future events. If the two adversaries in such a potential rivalry relationship continue to confront each other over time, their relationship may eventually reach the advanced stage of rivalry, at which point the relationship would be classified as a full enduring rivalry.

Having discussed the conceptual meaning of 'rivalry,' I now consider the theoretical and empirical contributions of this concept to the study of interstate conflict. I begin with the contributions of the rivalry concept, both as a case selection mechanism and as a separate phenomenon to be studied. I then examine recent attempts to broaden the study of rivalry by examining the evolution of rivalry.

CONTRIBUTIONS OF THE RIVALRY CONCEPT

The existing literature about rivalry and the evolution of rivalry has made a number of scholarly contributions. Perhaps most important has been a renewed focus on the context in which interstate interactions take place. As Goertz and Diehl (1996) point out, the notion of rivalry has led to the development of the 'rivalry approach' to war and peace, which focuses scholarly attention on contextual issues that are typically overlooked in traditional research on interstate conflict.

Research on rivalry emphasizes the differences between contexts of enduring rivalry, proto-rivalry, and isolated conflict. Research on the evolution of rivalry further emphasizes the changing context of relations between rivals, highlighting the differences in relations between rivals in the earlier and later phases of their rivalry relationship. In each case, the study of rivalry and evolution has identified contexts or settings in which we would expect to observe different patterns of interstate behaviour or conflict. By leading us to expect different patterns or outcomes in different contexts, the study of rivalry and evolution allows us to generate and test more refined theories, and offers the possibility of more meaningful results than more general studies that do not distinguish between different types of contexts.

In this chapter I distinguish three different uses of the concept of rivalry in recent international conflict research. Perhaps the most common use of the rivalry concept employs rivalry as a case selection mechanism to help in testing other, non-rivalry propositions about interstate conflict. A second use of the concept of rivalry employs rivalry as an independent variable, examining the impact of rivalry on other phenomena to see whether conflict behavior differs across rivalry and non-rivalry contexts. The third use treats rivalry as a dependent variable, examining the processes that lead to the outbreak or evolution of rivalry.

Rivalry as a Case Selection Mechanism

One way that the notion of rivalry has improved the study of conflict involves the use of rivalry to identify populations of cases for use in testing propositions about interstate conflict. Wayman (1989), for example, suggests that rivalries represent a dangerous situation, characterized by strong issue disagreements, mutual suspicion, and repeated militarized conflict. Huth and Russett (1993) further suggest that the frequent confrontations involved in rivalries leave one or both rivals dissatisfied with the prevailing status quo, and leave each rival viewing the other as a primary security threat. This mutual suspicion, threat perception, and history of conflict produce a situation in which each rival is aware of the other's actions and reactions, and in which one or both sides might conceivably initiate militarized conflict in response to threatening moves by the other (see also Goertz and Diehl, 1993).

For the reasons described above, rivalries have been used to test propositions about interstate conflict involving arms races (Diehl, 1985b; Diehl and Kingston, 1987), power transitions (Wayman, 1989; Geller, 1993), and general deterrence (Huth and Russett, 1993; Lieberman, 1994). Propositions on arms races, power transitions, and general deterrence suggest that there is an adversarial component to each of these concepts. Arms races or general deterrence can not take place between states that do not regard each other as adversaries, and power transitions are said to be unlikely to lead to war unless they take place between two states that see each other as threatening. In each case, rivalries would seem to offer an ideal ground for empirical analysis, because rivalries represent the type of adversarial relationships where these relationships are expected to apply.

In this sense, rivalry as a case selection mechanism resembles the notion of 'relevant dyads,' or countries that have potentially serious interests under contention and that possess the force-projection capability to fight over these interests (e.g. Maoz and Russett, 1993; Lemke, 1995). Much like 'relevant dyads,' rivalries in this sense are treated as countries with both disputed issues and the frequently demonstrated capability to confront each other. Furthermore, dyads lacking the history of disputed issues and military confrontations that characterize rivalry are treated as unlikely to engage in conflict in any situation – whether or not an arms race or power transition occurs, and whether or not one state pursues general deterrence policies.

As Huth and Russett (1993) point out, studying general deterrence (or arms races, power transitions, or similar factors) in enduring rivalries

may not be able to tell us much about the frequency of deterrence successes, arms races, or power transitions in the entire interstate system, because rivalries make up only a small fraction of the number of dyads in the system. Nonetheless, the characteristics of rivalries discussed above can increase our confidence in our conclusions about these phenomena. If arms races or power transitions do not lead to war in dyads that are marked by a history of conflict and by high levels of mutual suspicion, or if a variable does not affect the likelihood of successful deterrence in such a situation, then we can be reasonably certain that these effects will be even weaker in situations lacking such a background of hostility and suspicion.

Another advantage of using enduring rivalry as a case selection mechanism is that it allows us to examine dynamic questions or longitudinal relationships over the course of a rivalry. Lieberman (1994) demonstrates this by examining the longitudinal record of deterrence in the Israeli–Egyptian rivalry from 1948 to 1979, which includes a number of deterrence breakdowns as well as a number of periods of relative deterrence success and stability. By studying a lengthy period of the same rivalry, Lieberman is able to analyze the effects of changes over time in his independent variables. Beyond studying the static impact of factors such as the balance of forces or the balance of interests between two states, a rivalry-based study allows the study of changes in these factors over time. A rivalry-based study also allows the study of factors or strategies that take effect over time, such as learning or attempts to develop a bargaining reputation. In each of these ways, the use of rivalry to select cases for analysis helps to increase the potential contributions that can result from research.

The results of the above studies have helped to increase our understanding of the conditions under which conflict occurs between rivals, as well as our understanding of the effects of arms races, power transition, and general deterrence. Because of the history of hostility and conflict between enduring rival adversaries, rivalries form an ideal population for testing propositions that previously had been difficult to test empirically. As suggested above, these characteristics of rivalries as a population of cases for analysis can increase our confidence that the scholars' research findings are meaningful and do not result from the inclusion of inappropriate cases. For example, Diehl and Kingston (1987) find that enduring rival adversaries are no more likely to initiate militarized conflict while undergoing either a dyadic arms race or a unilateral military build-up by either side than in the absence of such conditions. If arms races and military build-ups do not seem to

lead to the outbreak of conflict between enduring rivals, then it seems even less likely that these factors will lead to conflict between states that do not have the same suspicion or hostility between them as enduring rivals.

Additionally, these analyses offer some implicit lessons about the factors that influence the timing of conflict within ongoing rivalries. Research by Wayman and by Geller, for example, has suggested the importance of power transitions (or 'rapid approaches') for conflict between rivals, similar to Diehl's research on arms races and Huth and Russett's work with general deterrence. Even if such studies are originally intended primarily to test propositions about power transitions, arms races, or deterrence theory – rather than propositions about the timing of conflict within rivalries – their results nonetheless add to our understanding of when rivals are most likely to engage in conflict or war.

Rivalry as an Independent Variable

When used as a case selection mechanism, the concept of rivalry has helped to improve the study of numerous other propositions of interest. Yet we can learn little about the effects or consequences of rivalry when the rivalry concept is only used to identify a set of cases to be studied or to define a particular phenomenon of interest (e.g. by defining arms races as requiring a history of conflict and suspicion between two adversaries). A second application of rivalry in international relations research treats rivalry as a phenomenon of interest in its own right. Research using this latter approach has used rivalry as an independent variable, in order to study the effects of rivalry on such dependent variables as the frequency or escalation levels of conflict.

Research treating rivalry as an independent variable argues that an understanding of the processes of interstate conflict depends on studying the impact of rivalry, beyond the effects of other potential explanatory factors such as arms races or power transitions. For example, Brecher (1984, 1993) argues that prolonged hostility between two adversaries creates deeply rooted mistrust and the mutual anticipation of violent behavior, which is expected to make the crisis behavior of rivals more escalatory than the behavior of non-rival adversaries. Similarly, Bercovitch and Regan (1994) suggest that peaceful conflict management should be more difficult in enduring rivalries, because of the frequency and duration of hostile interactions characterizing rivalry. On the other hand, Brecher (1984) and Brecher and James (1988) suggest that external intervention should be more likely in crises involving

protracted conflict than in other crises, because such crises are more likely to be seen as potentially destabilizing to the regional or world system. Similarly, the latter authors expect outside involvement to be more effective in protracted conflict crises than in other crises, partly for the same reasons. When a crisis breaks out between two long-term adversaries, outside actors are expected to take stronger actions to preserve regional or global stability than they would be willing to do for crises in less prominently conflictual or unstable settings. Treating rivalry as an independent variable also allows us to understand the effects of rivalry as a context affecting interstate conflict, by studying whether or not the results of arms races, power transitions, or crisis management differ between rivalry and other types of international contexts.

Goertz and Diehl (1992b) offer one example of research treating rivalry as a phenomenon or an independent variable. The authors examine the frequency of different forms of conflict behavior between enduring rivals, proto-rivals, and isolated conflict adversaries. They find that proto-rivals and enduring rivals account for the vast majority of all modern interstate conflict, with 'isolated conflict' accounting for less than one-fourth of all interstate wars, militarized disputes, and violent territorial changes. Also, the probability of war at some point between two adversaries increases greatly for adversaries in more advanced forms of rivalry, increasing from 6.9 per cent for isolated conflict dyads to 17.6 per cent for proto-rivals, 28.3 per cent for enduring rivals with under ten militarized disputes, and 55.6 per cent for the most advanced enduring rivals.

Beyond the frequency of conflict in different types of rivalry relationships, several scholars have studied the impact of rivalry on crisis behavior and escalation patterns. Brecher (1984, 1993) and Brecher and James (1988) find that crises in protracted conflicts are much more likely than other crises to be triggered by direct violence or non-violent military acts, instead of internal or political triggers. Crises in protracted conflicts are much more likely than other crises to involve threats to greater stakes, such as threats of grave damage or threats to an actor's existence. Protracted conflict crises are much more likely to involve military crisis management techniques and to involve severe levels of violence than crises in other contexts. Crises occurring in protracted conflicts are also more likely than other crises to end in ambiguous outcomes or stalemates, and the actors in protracted conflict crises are much less likely to be satisfied with the crisis outcome than protagonists in other settings.

Several studies have also examined the impact of protracted conflict or rivalry on mediation or intervention by outside actors. Bercovitch and Regan (1994) and Bercovitch and Diehl (1995) find that conflict management attempts are common both in enduring rivalries and in other contexts. Bercovitch and Diehl (1995), for example, find that over half of all enduring rivalries are the subject of conflict management efforts, drawing over forty per cent of all management attempts with an average of more than ten attempts per rivalry. Examining specific actors, Brecher (1984) and Brecher and James (1988) found the United States, the Soviet Union, and the United Nations to be more likely to reach high levels of involvement in protracted conflict crises than in other crises, and roughly half as likely to avoid involvement in such crises altogether.

Despite the frequency of conflict management attempts in rivalries, though, Bercovitch and Diehl find that the world community seems to be ineffective at anticipating serious conflicts or taking early action. Few conflict management attempts take place before the start of militarized competitions in eventual rivalries; conflict management attempts in proto-rivalries and enduring rivalries are generally spread across the entire period of rivalry. Bercovitch and Diehl (1995) also find little difference in the form of conflict management or the identity of actors attempting conflict management between the different types of rivalry. Bercovitch and Regan (1994) find some slight differences, with enduring rivals being somewhat less likely than other adversaries to submit disputes to arbitration and somewhat more likely to engage in direct negotiations and to submit their grievances to international organizations.

Conflict management attempts within enduring rivalries are also less likely to be successful than attempts involving other adversaries, particularly when the adversaries possess roughly equal national capabilities (Bercovitch and Regan, 1994). Somewhat differently, Brecher (1984) and Brecher and James (1988) found the United States, the Soviet Union, and the United Nations to be somewhat more effective contributors to crisis abatement in protracted conflict crises than in other crises. The United States and the United Nations are also somewhat more likely to contribute negatively to conflict resolution, though, in that their involvement is more likely to lead to crisis escalation in protracted conflict crises than in other crises. Bercovitch and Diehl (1995) also find that conflict management attempts within rivalries do not substantially reduce or prevent subsequent conflict between the same adversaries. Although conflict management in enduring rivalries significantly increases the time until the recurrence of militarized conflict between the rivals, future conflict is only postponed by around one year and the likelihood of future conflict remains unchanged.

There is also reason to believe that rivalries or protracted conflicts throughout the world show similar patterns of conflict behavior, but that rivalries and non-rivalry relationships show very different patterns. For example, Brecher and James (1988:452–3) conclude that protracted conflict crises from different regions of the world exhibit nearly identical conflict behavior, while protracted conflict crises differ noticeably from non-protracted conflict crises in either the same region or other regions. Similarly, Wayman (1989) finds that the occurrence of relative power shifts slightly increases the risk of war for non-rivals, but these results are generally weak. Power shifts have a much stronger effect on rival adversaries, though, more than doubling the likelihood of war. The conflictual effects of power shifts thus seem to differ greatly between rivalries and non-rivalry relationships.

The use of rivalry as an independent variable in the studies reviewed above has demonstrated the importance of rivalry and protracted conflict. Rivalry has been found to account for a majority of all interstate conflict behaviour. Militarized disputes and crises in enduring rivalries tend to be more violent and more escalatory than confrontations between non-rival adversaries, from their initial crisis trigger to their eventual termination. Crises occurring within enduring rivalries may be more likely to attract external conflict management efforts, but such efforts are less likely to succeed in a rivalry context than in other types of interstate relationships. As Wayman finds, the impact of additional sources of interstate conflict also seems to be stronger (and more likely to lead to the outbreak of militarized conflict) within enduring rivalries.

On the basis of results such as these, Goertz and Diehl (1992b:161) argue that scholars can not reasonably assume that conflicts are independent of one another. They conclude that interstate conflict behavior is context-dependent, with conflict being more frequent and more severe within enduring rivalries than in isolation or in proto-rivalries. They then suggest (Goertz and Diehl, 1992b:162) that the concept of rivalry is important for the study of interstate conflict, with the rivalry framework being better able than other approaches 'to reflect actual conflict patterns and to allow scholars to understand irregular, but interconnected, conflict over long periods of time.' Similarly, Brecher (1984:292) concludes that crises within protracted conflicts differ along a number of dimensions from crises outside of such an 'environment

of cumulative hostility,' and Brecher and James (1988) – as noted above – conclude that there are great differences between the conflict behavior of rivals and non-rival adversaries.

As a result of these studies that employed rivalry as an independent variable, we now have a great deal of evidence that conflict behavior within the context of enduring rivalry differs from conflict behavior in other contexts. Yet we still have little understanding of the reasons for these observed differences. That is, these studies tell us little about the factors that make relationships between enduring rivals more conflict-prone or more escalatory than relations between other types of adversaries. Even if enduring rivalries or protracted conflicts differ from non-protracted conflicts, the studies discussed so far can tell us little about the factors that give rise to these protracted relationships. The next section of this review examines studies that move rivalry from the role of independent variable – or influence on conflict behavior – to that of dependent variable, in order to account for the origins of rivalry and for the observed effects of rivalry.

The Evolutionary Approach: Rivalry as a Dependent Variable

The final approach to rivalry is what Hensel (1994b, 1996a) and Maoz and Mor (1996a, 1996b, 1996c) call the 'evolutionary approach.' Rather than using rivalry as a case selection mechanism or an independent variable, studies from an evolutionary approach examine the origins of rivalry itself. Such studies treat rivalry as a dependent variable, or as a changing phenomenon that we must attempt to explain. Evolutionary studies have focused attention on the interactions or dynamics that can lead to rivalry, as well as the way that relations between two adversaries can change as the result of past events in the rivalry. These studies typically emphasize the changing context of relations across earlier and later phases of the same rivalry, and attempt to account for the movement of certain adversaries to full enduring rivalry while other adversaries resolve their differences much earlier.

Evolution and Conflict Behaviour

Several studies have contributed to an understanding of evolutionary processes by examining the relationships between episodes of interstate conflict, even though these studies did not focus on rivalry explicitly. One such study is Leng's (1983) examination of experiential learning processes in recurrent crises between the same adversaries. Leng (1983) argues that statesmen tend to learn lessons from crisis outcomes, and that these lessons are especially important if their state becomes involved in a subsequent crisis against the same adversary. Leng's empirical analyses of recurrent crises generally support his hypotheses. In particular, states that obtained unsuccessful outcomes in previous crises tend to shift to more coercive bargaining behavior in later crises with the same adversaries, and five of the six dyads in his study had escalated a crisis to full-scale war at least once by the end of their third crisis.

Similarly, in a study of arms races and escalation that uses enduring rivalry as a case selection mechanism, Diehl (1985b) finds that arms races alone do not substantially increase the escalation of militarized disputes to war between major power enduring rivals. Further analysis reveals, though, that arms races do increase the risk of escalation to war when – among other factors – the adversaries have a history of recent militarized conflict. That is, 19 of the 22 rivalries in Diehl's study engaged in war (in either the presence or absence of an arms race) only after engaging in a number of sub-war militarized disputes. These studies by Leng and by Diehl offer some important evidence of evolution in conflict behavior between adversaries, with previous confrontations appearing to influence subsequent relations between the same adversaries.

Studies of deterrence crises offer further support for an evolutionary conception of interstate rivalry. Huth (1988a), for example, argues that the potential attacker in a deterrence situation can use the defender's behavior in previous crises as a measure of the defender's likely actions in a later crisis. If the defender had backed down in the previous crisis, Huth suggests, its subsequent deterrent threats are likely to be less successful because the defender's behavior in the previous crisis should weaken its credibility. Similarly, if the defender had been intransigent and forced the attacker to back down in the previous crisis, then its subsequent deterrent threats might also be less successful because the potential attacker can not afford to risk further weakening of its own credibility and bargaining reputation. These hypotheses are supported by Huth's empirical analyses: a record of either conciliation or intransigence by the defender decreases the probability of deterrence success in the next deterrence crisis between the same adversaries. Past behavior by the defender in crises against other adversaries does not have a systematic impact on subsequent deterrence crises, though, leading Huth (1988a:81) to conclude that past behavior and reputations are primarily important 'in continuing rivalries between adversaries who have a history of prior confrontations.'

Fearon (1994) offers a broader alternative to Huth's conception of the impact of previous conflict behavior. Rather than focusing on details such as the outcome or escalation level of the previous crisis, Fearon (1994:264) argues that what matters most is simply that the previous crisis occurred. The occurrence of the crisis can be seen as a 'costly signal,' indicating the defender's willingness to resist the challenger – even if the defender ultimately backed down before the previous crisis ended. In subsequent general deterrence situations, when the challenger must decide whether or not to initiate a new crisis, such a signal of the defender's willingness to resist is expected to make general deterrence more successful than if the two adversaries had not been involved in any previous crises. To Fearon, only a highly motivated challenger is likely to initiate a crisis under the expectation that the defender will resist – which he then suggests makes crisis escalation (immediate deterrence failure) more likely. Alternatively, when the challenger expects the defender to prefer concessions to war, then general deterrence is less likely to succeed, but if a crisis begins and the defender makes an (unexpected) immediate deterrent threat then immediate deterrence should be more likely to succeed.

Fearon (1994) finds support for his hypotheses. Much as Huth had suggested, the effect of past crises is strongest when the defender had previously used a bullying or conciliatory strategy. Yet Fearon also finds a weak but negative effect after a crisis in which the defender had used a firm-but-flexible strategy, indicating that all three types of previous defender strategies tend to decrease the likelihood of subsequent deterrence success. Fearon then finds a strong negative result for a combined indicator of any previous deterrence crisis between the adversaries (regardless of the outcome or strategy used in the past crisis). While Fearon's evidence does not rule out a reputational effect based on past crisis behaviour or outcomes, it does support his model. That is, any previous deterrence crisis between the same adversaries seems to increase the likelihood of general deterrence success, while decreasing the likelihood of immediate deterrence success if general deterrence should break down.

Fearon's formal model seems to fit the observed patterns of escalation in recurrent crises, and is compatible with Leng's finding of increasingly coercive crisis behavior in recurrent crises. A number of scholars suggest alternative views of the effect of past conflict on subsequent crisis initiation, though, arguing that past episodes of conflict often make the outbreak of recurrent conflict more likely in their aftermath. For example, Anderson and McKeown (1987) suggest that when

a state's decision-makers decide to become involved in interstate conflict, they are not equally likely to choose each country in the interstate system as their target. Instead, Anderson and McKeown (1987:5) argue, governmental attention is focused by prior interaction, with leaders being more likely to target a state with which they had interacted previously – such as a past adversary[1] – than some other, randomly selected state: '*casus belli* do not exist for governments that have not had prior substantial interaction.' They also suggest that states should be especially likely to target a state that is currently the source of conflict and friction, such as a current rival.

Similarly, Maoz (1984) and Hensel (1994a) study the likelihood and timing of recurrent conflict between states that had already been involved in at least one confrontation. Maoz (1984) suggests that conflict can be seen as a turning-point in relations between states, and that the outcome of a confrontation helps to shape the adversaries' subsequent attitudes toward the status quo and their subsequent decisions related to the recurrence of militarized conflict. Hensel (1994a) also suggests that a confrontation can influence subsequent relations between the protagonists both by creating or augmenting tension, hostility and suspicion, and by producing potential changes to the status quo ante.

Both Maoz (1984) and Hensel (1994a) see dispute outcomes as important sources of recurrent conflict. Hensel, for example, suggests that recurrent conflict should be more likely after stalemated outcomes than after decisive outcomes (where one side emerges victorious) or compromises (where the two sides reach a negotiated settlement). In such cases, Hensel (1994a:283) suggests, '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.' Hensel also examines contentious issues as a potential source of recurrent conflict, arguing that issues that are seen as unimportant are unlikely to produce recurrent conflict regardless of the outcome of a previous crisis, while highly salient issues might be likely to produce recurrent conflict after any outcome because of the importance of the issues.

Empirical analyses have supported many of the above hypotheses on the relationship between past conflict and subsequent relations between the adversaries. Anderson and McKeown (1987), for example, find that militarized conflict behavior is influenced greatly by the history of interaction between states: states with a history of recent

militarized conflict are much more likely than other states to become involved in militarized conflict in a given year. Maoz (1984) and Hensel (1994a) also find that former adversaries are likely to become involved in recurrent conflict overall, regardless of the outcome of their past confrontation.

Important differences are found in the likelihood and timing of conflict recurrence, though, particularly with regard to dispute outcomes and issues. Maoz (1984) finds that decisive outcomes and imposed settlements tend to produce longer periods of post-dispute stability without the recurrence of conflict than do tied disputes or formal, mutually agreed settlements. Similarly, Hensel (1994a) finds that both decisive outcomes and negotiated compromises tend to produce greater stability in their aftermath than do stalemated outcomes, particularly when territorial issues are at stake between the former adversaries. Hensel (1994a) also finds that the effects of dispute outcomes and contentious issues on recurrent conflict are strongest when considering recurrent conflict over the same contentious issue(s) as in the previous dispute. That is, decisive and compromise outcomes are much more likely to end conflict over a specific contentious issue than they are to end conflict overall.

Accounting for Evolution

The studies discussed so far have examined processes involved in the recurrence and escalation of conflict, although they have not focused explicitly on interstate rivalry. Several recent studies have begun to study the evolution of recurrence and escalation processes from a more explicit rivalry framework, putting these processes in more of a long-term context. Wayman and Jones (1991) call for an evolutionary approach to the study of rivalry, involving questions such as how rivalries start, how rivalries end, and how we can account for fluctuations in conflict severity during ongoing rivalries. Hensel (1994b, 1995, 1996a) and Maoz and Mor (1996a, 1996b, 1996c) each present an explicit evolutionary framework, treating interstate rivalry as a dynamic relationship that comes into being over time as the result of interactions between two states. Under this evolutionary approach, two states do not begin their relationship with the knowledge that they are long-term enemies. Instead, the relationship between those states changes over time as the result of past actions and future expectations, perhaps evolving towards rivalry if they should continue to engage in confrontations, and perhaps stopping short of rivalry if they can reach a mutually acceptable settlement of their differences. Continued involvement in crises or wars is seen as likely to build up suspicion, distrust, and hostility, along with grievances and desires for revenge if their confrontations should lead to the loss of life or changes in the status quo ante. If these elements of suspicion, hostility, and grievances accumulate enough over time, then the adversaries' relationship might reach full-fledged rivalry (see especially Hensel, 1996a).

Under such an evolutionary conception of rivalry, two states that eventually reach the level of enduring rivalry must pass through several less severe phases. All interstate adversaries begin their conflictual relationships in the early phase of rivalry, in which the adversaries have turned to militarized means of pursuing their goals at least once. Adversaries in the early phase are distinguished from most other dyads by their demonstrated willingness to threaten or use military force, but they have not yet engaged in a prolonged series of conflicts and – while they are very likely suspicious of each other's motives – have not yet accumulated substantial grievances against each other. If the same adversaries engage in several more confrontations, they can be considered to have reached the intermediate phase of a rivalry relationship. At this point, it is becoming clear to them that their differences are serious, and that neither side is likely to let matters drop peacefully. The continued confrontations between these states also typically exacerbate the tension and suspicion between them, and are likely to have produced serious grievances if any territory has changed hands, lives have been lost, or similar changes have occurred. If the confrontations continue beyond this point, the adversaries eventually reach what is considered the advanced phase of rivalry, which is analogous to the notion of full-fledged enduring rivalry. Once two adversaries reach the advanced phase of rivalry, there is little doubt on either side that they are involved in a protracted, conflictual relationship, and both sides expect the conflict to continue for some time into the future.

Hensel (1995, 1996a) and Maoz and Mor (1996a, 1996b, 1996c) attempt to account for the movement of dyads along this evolutionary path from the early phase through the intermediate and advanced phases to enduring rivalry. As with much of the research discussed above, these scholars argue that previous interactions set the stage for subsequent relations between two states. In particular, past conflicts often set the stage for recurrent conflict. Hensel's (1994b, 1996) evolutionary approach to rivalry differs from the previous studies on temporal linkages between conflicts by incorporating the effects of more than one previous confrontation. That is, the evolutionary approach explicitly studies how relations between two adversaries change (or evolve) over

the course of a conflictual relationship. Beyond the effects of past dispute outcomes or escalation levels, then, the evolutionary approach suggests that relations between adversaries will tend to become more conflict-prone and more escalatory later in a rivalry relationship, regardless of the outcome or severity level reached in their single most recent dispute.

Similarly, Maoz and Mor's (1996a, 1996b, 1996c) game theoretic model of the evolution of rivalry allows for learning and preference changes by one or both sides during an ongoing relationship. Two potential rivals can learn from earlier interactions with each other in their model, with each side revising its expectations or beliefs if the opponent's behavior departs from expectations. Preferences can also change due to the outcomes of previous plays of the game: a previously satisfied state can become dissatisfied if it loses in a dispute, and a previously dissatisfied state can become satisfied if it wins.

Goertz and Diehl (1995b) offer an alternative conception of the evolution of rivalry, where rivalry relationships are essentially centered around some 'basic rivalry level' of conflict severity for the dyad. Goertz and Diehl suggest that rival states become 'locked in' to this basic rivalry level at an early point in their relationship, with no secular trend towards more conflictual or more peaceful relations. Except perhaps for short periods at the beginning and ending of rivalries, or perhaps during periods of dramatic political shocks, they argue that relations between rivals fluctuate around this basic level. This conception differs from the evolutionary approach that has been proposed by Wayman and Jones, Hensel, and Maoz and Mor (and that draws from earlier work by Leng, Huth, and others), which suggests that one event or set of events in a relationship directly affects subsequent relations between the adversaries.

With regard to empirical results, Wayman and Jones (1991) find that the likelihood of dispute escalation to war does not change much during ongoing periods of rivalry. They identify 18 wars between rivals in the period of their study, and note that these wars are evenly distributed over time. That is, five of these wars occurred in the first five years of rivalry, followed by either three or four wars for each subsequent five-year period.

Goertz and Diehl (1995b) also fail to identify a single evolutionary pattern of ever-increasing conflict severity in the early development of rivalries. Looking only at dyads that eventually reach full enduring rivalry, they search for patterns in the severity levels of the first three and last three militarized disputes within each rivalry. They find that 26.6 per cent of their rivalries – a 'significant subset of our cases,'

although 'far from universally valid' (Goertz and Diehl, 1995b:11) – fit some version of the 'volcano model' (an evolutionary model featuring increasing severity) in terms of dispute severity, and 20 per cent of their rivalries fit this model for dispute duration. A similar number of rivalries exhibit 'wavy' patterns, showing variation but not following a secular trend, and very few rivalries show trends of decreasing severity or duration. Over half of their rivalries, then, show largely flat patterns of dispute severity and duration, offering little evidence of any systematic trends and offering support for a basic rivalry level approach.

Similarly, Hensel (1996a) finds that relations between rivals do not consistently fit a pattern of ever-increasing conflict severity in every dimension studied. For example, there is little systematic difference over time in the tendency for rival states to reach decisive, compromise, or stalemated outcomes in their militarized disputes. Hensel (1996a) also finds little systematic tendency for disputes between rival states to become consistently more escalatory in later rivalry phases. Disputes between proto-rivals become significantly more escalatory between the early and intermediate rivalry phases, but there is little systematic difference in escalation levels for eventual enduring rivals.

On the basis of the above results, it seems clear that not all rivalries show evolution in the sense of ever-increasing conflict severity, at least with the indicators that have been studied so far. More likely, there are probably several different patterns of evolution, each involving different dynamics and having different effects on conflict severity. It may be, for example, that major power rivalries involve different dynamics than do minor power rivalries. It may also be that rivalries involving certain types of issues (perhaps those involving territorial issues) are especially likely to show rapid escalation in their early years and throughout the period of rivalry, while rivalries over less inflammatory stakes may take longer to reach high levels of escalation (if they reach these levels at all).

It may also be that evolution in conflict behavior only takes place under certain circumstances. Leng (1983), for example, suggests that states should be most likely to adopt more coercive strategies after a previous crisis that ended in an unsuccessful outcome. Huth (1988a) suggests that the outcomes and bargaining strategies of previous deterrence crises affect escalation in future crises. Gochman and Leng (1983) and Hensel (1996b) also show that the issues at stake in a given confrontation can exert a great influence on escalation levels. Such studies suggest that a more meaningful analysis of possible evolution in

crisis escalation levels must consider the effects of additional factors beyond simply the rivalry phase in which conflict occurs. Even if the current research finds little evidence of evolution in crisis escalation, evolutionary trends may be identified in the aftermath of certain types of dispute outcomes. Also, otherwise strong evolutionary trends may be repressed when highly salient issues like territory are at stake – in which case the rivals may begin at high escalation levels, leaving little room for subsequent change.

We must also consider that evolution may not occur in every dimension of international relations. It is very possible that certain types of behavior may show evidence of evolution, while other types of behavior may show little such evidence or may even show opposite trends. Several studies of dynamics within rivalries support this suggestion. That is, although the evidence presented above suggests that rivals do not show a systematic tendency toward ever-increasing conflict severity, several studies offer evidence that evolution does occur within ongoing rivalries.

Focusing on relations below the threshold of militarized conflict, Hensel (1997) finds that non-militarized interaction between rivals shows evolution in several ways. First, a disaggregated analysis of the conflictual and cooperative dimensions of interstate relations reveals that relations between rivals become both more intensely cooperative and more intensely conflictual in later phases of rivalry. Also, consistent with much of the existing work cited earlier, overall relations between rivals become much more conflictual in later phases of rivalry, from the non-militarized phase and the early phase to the intermediate and advanced rivalry phases. Overall, the increase in conflictual relations thus seems to outweigh the increase in cooperative relations.

Hensel (1996a) also finds evidence of evolution in militarized interaction along the path to rivalry. In particular, two adversaries are more likely to become involved in recurrent conflict after the conclusion of one militarized dispute when they have a longer history of past conflict. Recurrent conflict occurs after around half of all disputes in the early phase of rivalry (54.1 per cent), as compared to 71.1 per cent of all disputes in the intermediate phase of rivalry and 89.0 per cent of all disputes in the advanced phase. The likelihood of experiencing a tenth dispute after the conclusion of the ninth dispute between the same two adversaries is thus much greater than the likelihood of a fourth dispute after the conclusion of a third, which in turn is greater than the likelihood of a second dispute between two adversaries that have just concluded their first confrontation. A longer legacy of conflict thus contributes greatly to the renewal of conflict, making it more difficult over time to resolve the contentious issues, tension, and hostility that separate two adversaries.

Hensel (1996a; Hensel 1997) attempts to account for the evolution of adversaries toward full-fledged enduring rivalry. Several factors identified by previous studies (Maoz, 1984; Hensel, 1994a) are found to affect evolution towards rivalry. As with these previous studies, the recurrence of conflict is much more likely after a dispute that ended in a stalemated outcome than after a dispute that ended in a compromise or decisive outcome. Conflict recurrence is also much more likely after a dispute that involved territorial issues than after a dispute over non-territorial issues. Hensel (1996a) also finds several control variables to be important influences on the recurrence of conflict and thus the evolution of rivalry. Recurrence is much more likely between two adversaries characterized by military parity, for example, and much less likely between two adversaries that are both classified as political democracies.

Supporting the earlier bivariate analyses of rivalry phase and dispute recurrence, Hensel's (1996a) multivariate analyses of dispute recurrence also find rivalry phase to be an especially important influence on the likelihood of recurrence. Thus, even after controlling for the impact of dispute outcomes, contentious issues, military capabilities, and political regime type, dispute recurrence is much more likely in the intermediate and – especially – advanced phases of rivalry than in the early phase. This finding greatly increases our confidence in the earlier bivariate results, which did not take such factors into account. Similarly, the analyses of Hensel (1997) find the same impact of evolutionary rivalry phases on dispute recurrence while considering the effect of non-militarized events, which further adds to our understanding of conflict recurrence. The more conflictual the non-militarized relationship between two states, the more likely those states are to become involved in renewed militarized conflict. Conversely, the more cooperative the basic relationship between two states, the less likely they are to resort to renewed militarized force in pursuit of their goals.

Focusing more on the evolution of perceptions and preferences than on the recurrence of militarized conflict, Maoz and Mor (1996a, 1996b, 1996c) test several propositions derived from their game-theoretic model of the evolution of rivalry. Maoz and Mor (1996a, 1996b) apply their model to the early portions of four rivalries, attempting to identify the rivals' preferences at key points in the rivalry and seeking to trace changes in these preferences over time. They find that conflictual games

dominate the early years of the four rivalries being studied. They also find that one or both states' perceptions of the game changed at most of the points where their model had predicted that learning should occur, although half of these changes were not in the expected direction and many changes occurred where their model would not predict any learning (Maoz and Mor, 1996a).[2]

Maoz and Mor's findings offer some suggestions about the early paths taken by states that eventually reach rivalry. The prevalence of conflictual games, especially Deadlock (where both players prefer a conflictual DD outcome to a cooperative CC outcome), suggests that a peaceful resolution of differences is difficult for eventual rivals to reach. Even games with a cooperative CC equilibrium outcome tend to be followed by (or tend to lead to) highly conflictual games. To Maoz and Mor (1996a:156), this indicates that 'in the early stages of rivalries there is a constant motivation to renew the conflict (and with a vengeance), even during periods of relative calm.' Maoz and Mor (1996c) also find statistical support for the implications of their model, with militarized conflict being much more likely when the adversaries' preferences place them in a conflictual game.

In short, there is evidence that conflict behavior does evolve on certain dimensions within ongoing rivalries or potential rivalry relationships. The existing studies in this area, though, are best regarded as preliminary, offering an early overview of a new topic but not resolving their research questions definitively. Goertz and Diehl (1995b), for example, argue that the conflict level between two rivals at any given point in time can be divided into two parts: one determined by the adversaries' basic rivalry level, and one determined by characteristics of the individual disputes or the individual adversaries. Studies such as that of Goertz and Diehl (1995b) focus on the former part, while studies such as those of Hensel (1996a; Hensel 1997) and Maoz and Mor (1996a, 1996b, 1996c) focus on the latter. Future research might profitably try to integrate both parts, and might even attempt to identify the factors that produce the basic rivalry level itself. Goertz and Diehl (1995b), for example, suggest that the disputed issues between two states or the structure of the international system might contribute heavily to this basic rivalry level, although they do not study this issue explicitly.

A final topic related to the evolution of rivalry is the termination of rivalry, which has been addressed by several recent studies. Goertz and Diehl (1995a) see rivalries as continuous, essentially stable interstate relationships, which become deeply ingrained in domestic and international political life. A political shock, or 'a dramatic change in the international system or its subsystems that fundamentally alters the processes, relationships, and expectations that drive nation-state interactions' (Goertz and Diehl, 1995a:31), is seen as virtually necessary to interrupt this stability and end a period of rivalry. Goertz and Diehl identify five types of political shocks at the levels of the interstate system and the nation-state: world wars, periods of widespread global territorial change, periods of rapid change in the global power distribution, newfound state independence, and civil war.

Bennett (1993, 1995) also studies the termination of ongoing rivalries, focusing on political, economic, and security conditions within the rivalry. Bennett (1993) suggests that domestic economic factors, such as a weak domestic economy and a high military burden on the economy, should increase the likelihood of rivalry termination because these factors tend to be difficult to overcome without ending a rivalry. Bennett (1993) also suggests that military threats to one or both of the rivals, such as a threat to one or both from actors outside of the rivalry itself, should increase the likelihood of rivalry termination, because of the incentive to improve a state's military security by resolving at least one of its serious threats. Bennett (1995) focuses on domestic politics within the rivalry, applying the democratic peace proposition to the termination of rivalry. He expects that domestic political change within the rivalry should increase the likelihood of rivalry termination, particularly if the change pushes one or both states toward greater democracy or if it creates a situation where both rivals are political democracies.

Goertz and Diehl (1995a) find that political shocks do seem to be closely related to the process of rivalry termination. Over 90 per cent of the enduring rivalries that had ended within their period of study did so shortly after a political shock. World wars in the interstate system and civil war in one of the rival states seem to have the strongest impact on rivalry termination. Major power rivalries tend to be more sensitive to system-level shocks, while minor power rivalries tend to be more sensitive to shocks at the nation-state level. Furthermore, full enduring rivalries are entrenched more deeply, with proto-rivalries being more vulnerable to disruption by political shocks.

Bennett (1993, 1995) also finds support for several hypotheses on the termination of rivalry. A worsening security situation in one or both rivals is closely associated with the end of rivalries, as is the magnitude of mutual threats facing both rivals (Bennett, 1993). Each rival's domestic economic situation has a weak and inconsistent effect

on the likelihood of rivalry termination, as does the salience of issues at stake in the rivalry; high military burdens and high expected war costs seem to have little systematic impact (Bennett, 1993). Polity change in one of the rivals and the level of democracy in the two rivals also seem closely associated with rivalry termination, despite somewhat inconsistent results (Bennett, 1995).

In conclusion, recent research on the recurrence of conflict and the evolution of rivalry has extended our understanding of the sources and consequences of rivalry. Just as the research on rivalry discussed above indicates that the conflict behavior of rivals differs from that of other adversaries, evolutionary studies have shown that conflict behavior is not necessarily constant over time within the same dyad types. Relations between the same adversaries tend to become more conflict-prone over time.

Research using an evolutionary approach has also helped to account for the origins and early development of rivalry. As two adversaries accumulate a history of past conflict, they become increasingly likely to become involved in even more conflict in the future. Evolutionary research has identified some of the factors that contribute to this recurrence of conflict, including the outcomes of past confrontations and the issues at stake. Such research thus helps to account for certain dyads' movement toward rivalry, which offers the possibility of identifying likely enduring rivals and perhaps offering policy prescriptions that can help such adversaries resolve their differences before reaching the most dangerous levels of full-fledged rivalry.

THE IMPORTANCE OF RIVALRY: EMPIRICAL ANALYSES

The remainder of this chapter presents a series of original analyses on the importance of rivalry. These analyses begin with the prominence of rivalry as a context for the occurrence of interstate conflict, in terms of militarized interstate disputes, interstate wars, territorial changes, and international crises. The analyses of the aftermath of conflict then examine the impact of past conflict on the likelihood of future conflict between the former adversaries. The analyses of conflict aftermath involve the evolutionary approach to rivalry, examining how the impact of one confrontation on subsequent relations changes as a rivalry relationship evolves.

As noted earlier, the present study uses a recently updated version of the COW militarized dispute data that covers a longer time period

and includes roughly twice as many cases as previous versions of the data set. This study thus allows us to reexamine some of the most important findings from the current published research on rivalry. Similarly, much of the research on protracted conflicts was based on older versions of the International Crisis Behavior (ICB) Project's crisis data. Brecher's (1984) study covered the time through 1975, while Brecher and James (1988) went up to 1979. The present chapter employs a recently updated version of the ICB crisis data that runs through 1988.

Research using the ICB crisis data has also employed the ICB Project's designation of certain cases as protracted conflicts (Brecher, 1993), which does not overlap completely with the COW-based measures of interstate rivalry used by Goertz and Diehl, Maoz and Mor, Hensel, and others. The present chapter merges the ICB crisis data with the COW-based list of interstate rivalries, in order to maximize the consistency of the empirical analyses. Thus, both ICB crises and COW disputes, wars, and territorial changes are studied with the same measure of rivalry, rather than using a COW rivalry measure for some analyses and the ICB protracted conflict indicator for others.

Spatial-Temporal Domain

The analyses presented in this chapter examine the conflict behavior of members of the modern interstate system (Small and Singer, 1982) over the past two centuries. The analyses based on militarized interstate disputes and interstate wars cover the years 1816–1992, using the latest version of the COW militarized dispute data set. Analyses based on the COW territorial change data cover 1816–1980, which is the current temporal limit of that data set. Analyses based on the ICB crisis data set cover 1946–88, which is the domain covered by the dyadic crisis data employed in this chapter (see Diehl, et al., 1996).

Operationalization of Variables

Rivalry

The present study operationalizes rivalry through the occurrence of militarized conflict between two states. A focus on militarized conflict allows us to capture the major theoretical dimensions of rivalry identified in the scholarly literature (Hensel, 1996a; Goertz and Diehl, 1993): regular interaction, competitive relations, threat perception, and a temporal dimension. The occurrence of militarized conflict between two states demonstrates an important degree of both interaction and competition

between them; the adversaries took the risks of a militarized confrontation because they disagreed over something that at least one considered important. Militarized confrontations reflect the existence of hostility and the perception of threat between the adversaries, especially if the same adversaries become involved in multiple disputes over a relatively short period of time.[3] Furthermore, we can see the entrance of the temporal dimension of relations between adversaries as more confrontations occur over time – or the absence of this dimension if no later confrontations follow the first.[4]

Periods of interstate rivalry and evolutionary phases within ongoing rivalries are identified by the occurrence of a sufficient number of COW militarized interstate disputes.[5] Following Goertz and Diehl (1995a), an 'isolated conflict' relationship involves one or two militarized disputes, a proto-rivalry involves three to five disputes, and an enduring rivalry involves six or more disputes. Given these thresholds, though, a temporal cutoff is needed to determine when a period of rivalry ends. After a sufficiently long time elapses after the end of one dispute without the recurrence of militarized conflict, the lack of a subsequent dispute can be taken as evidence that the militarized portion of that particular period of rivalry has ended (even if relations between the former rivals are not necessarily cooperative or friendly). Each rivalry (and each evolutionary rivalry phase) is thus considered to have ended after a 15-year gap with no further disputes (Hensel, 1996a). After such a gap, the dyad returns to the status of 'non-militarized interaction' and any subsequent disputes would mark the beginning of a new period of rivalry. This definition identifies 885 periods of isolated conflict, 195 periods of proto-rivalry, and 103 periods of enduring rivalry between 1816–1992 (ranging from six to 53 disputes per enduring rivalry). Further details on this data set are provided in discussing this study's analyses, and the rivalry data set is discussed in greater length by Hensel (1996a).

In the evolutionary sense, all potential interstate rivalries start in the early rivalry phase, which begins with the outbreak of the first militarized dispute between two adversaries. Once the early phase of rivalry has begun, further militarized disputes between the same adversaries extend the period of rivalry as they occur, and may advance the dyad to the next phase of rivalry.[6] For the purposes of the present study, movement between the different rivalry phases is based on the frequency of militarized conflict. If the dyad eventually engages in three or more militarized disputes, then the dyadic rivalry relationship enters the 'intermediate phase' with the outbreak of the third dispute. Finally, if the dyad eventually engages in six or more disputes, then the 'advanced phase' of rivalry begins with the outbreak of the sixth dispute.

As Hensel (1996a) points out, this study's evolutionary conception of early, intermediate, and advanced phases of rivalry is roughly analogous to Goertz and Diehl's (1992b, 1993) contexts of isolated conflict, proto-rivalry, and enduring rivalry, except that the evolutionary approach focuses on changes of context within a given rivalry as the adversaries' relationship evolves over time. A relationship that Goertz and Diehl would classify as 'isolated conflict' never advances past the early stage of rivalry in this evolutionary classification, but more severe forms of rivalry pass through several phases. What Goertz and Diehl classify as a 'proto-rivalry' begins in the early stage of a rivalry relationship, and the remainder of their relationship after the third dispute is classified as occurring in the intermediate rivalry phase. Similarly, a Goertz and Diehl 'enduring rivalry' must spend time in both the early and intermediate phases of the rivalry relationship before the adversaries engage in a sixth dispute and their subsequent relations are classified as the advanced phase.

Interstate Conflict

This study examines the frequency of four different forms of interstate conflict. The first is militarized interstate disputes, as described earlier. The second form of conflict is interstate wars, as identified by the COW Project. Interstate wars are militarized disputes that involve extended combat between the regular armed forces of two or more states, resulting in at least 1000 battle deaths among the participants (Small and Singer, 1982).

The third form of conflict is international crises, as defined and collected by the ICB Project. ICB crises are defined as involving (1) a 'distortion in the type and an increase in the intensity of disruptive interactions between two or more adversaries, with an accompanying high probability of military hostilities, or, during a war an adverse change in military balance, and (2) a challenge to the existing structure of an international system . . . posed by the higher than normal conflict interactions' (Wilkenfeld, Brecher, and Moser, 1988:3). In order to study crises in the context of dyadic rivalries (and for consistency with the existing research on rivalry), the ICB crisis data set was broken up into crisis dyads, producing a set of 262 dyadic crisis adversaries in the period 1946–88.[7] I also examine a subset of these cases, violent international crises, which are ICB crises that are classified as

involving 'serious clashes' or 'full-scale war' instead of 'no violence' or 'minor clashes.'

The final form of conflict involved in the present study involves territorial changes, as identified by the Correlates of War Project. Territorial changes are defined as the formal transfer of territorial sovereignty between two members of the interstate system. I also examine a sub-class of these exchanges, violent territorial changes, which are territorial changes that involve armed conflict between organized forces of the two participants within one year prior to the transfer (Goertz and Diehl, 1992a). I limit the population of territorial changes in this study to those exchanges involving the transfer of homeland territory between two members of the interstate system, in order to avoid distorting the results by including transfers of colonial territory that may not have the same salience to states as transfers of their own homeland territory.

Conflict Aftermath

This study's analysis of the aftermath of militarized conflict focuses on the recurrence of militarized conflict after a given confrontation. Conflict recurrence refers to whether or not another militarized dispute occurs between the same adversaries in the aftermath of a given dispute. Because it might be misleading to consider two confrontations to be connected, it is necessary to set a temporal limit for the later confrontation to be considered an example of 'recurrent' conflict.[8] Drawing from previous work (Hensel, 1996a) and consistent with the measure of rivalry developed earlier, this limit is set at 15 years, after which any further confrontations are considered to be sufficiently unrelated that they do not represent recurrent conflict.[9]

Previous research (Maoz, 1984; Hensel, 1994a) has shown that the likelihood of recurrent conflict is affected by characteristics of the initial confrontation, particularly the outcome of the confrontation and the issues at stake between the disputants. In order to examine the effects of the evolution of rivalry, this study goes beyond the likelihood of recurrence to see whether evolution also affects patterns of recurrence, in terms of the effects of dispute outcomes or contentious issues on dispute recurrence.

Dispute outcomes are included in the updated version of the Correlates of War militarized dispute data set, and are described briefly by Hensel (1996a). This chapter's analyses compare the effects of three general types of outcomes: decisive outcomes, compromises, and stalemates. A decisive outcome is one in which the dispute had a clear

Table 7.1 Frequency of militarized interstate disputes and wars

Rivalry type	*Number of disputes*		*Number of wars*	
Isolated conflict	1078	(35.4%)	186	(54.4%)
Proto-rivalry	709	(23.3%)	73	(21.4%)
Enduring rivalry	1259	(41.3%)	83	(24.3%)
Total	3046		342	

winner and loser, either through a battlefield victory or by the loser backing down or granting concessions without the large-scale use of military force.[10] Compromise outcomes involve mutually acceptable agreements between the adversaries. Stalemated outcomes reflect the absence of either of these forms of settlement – i.e., the dispute ended without either a clear victor or a negotiated compromise.

Contentious issues refer to the stakes over which two or more parties are contending, which can range from territory to specific governmental policies like immigration policy or support for terrorists. It should be noted that any given dispute is not necessarily limited to one type of issue. Thus, the same dispute could involve elements of contention over both territory and one or more governmental policies, as long as each element is under explicit contention in the dispute. Following previous research in this area (Hensel, 1994a, 1996a), the issues at stake in a dispute are coded dichotomously, indicating the presence or absence of explicit contention over some territorial issue(s) in the dispute.

The Frequency of Militarized Conflict

Rivalry and Conflict Frequency

Tables 7.1 to 7.3 summarize the frequency of a number of forms of interstate conflict, broken down by the rivalry status that the adversaries eventually reached (enduring rivalry, proto-rivalry, or only isolated conflict). As Table 7.1 shows, only around one-third of all militarized disputes occur between adversaries involved in isolated conflict. The remaining two-thirds occur between adversaries that would qualify as proto-rivals (23.3 per cent) or enduring rivals (41.3 per cent). Around half of all interstate wars occur between adversaries in isolated conflict, with the remaining half occurring between proto-rivals (21.4 per cent) or enduring rivals (24.3 per cent).

Using a very different data set, Table 7.2 reveals similar patterns in the distribution of international crises, as reported by the ICB Project. About half of all ICB crises (50.4 per cent) occur between eventual

Table 7.2 Frequency of international crises

Rivalry type	*Number of crises*		*Number of violent crises*	
Isolated conflict	92	(35.1%)	64	(37.0%)
Proto-rivalry	38	(14.5%)	25	(14.5%)
Enduring rivalry	132	(50.4%)	84	(48.6%)
Total	262		173	

enduring rivals, with barely one-third (35.1 per cent) taking place between isolated conflict adversaries. About half of all violent ICB crises (48.6 per cent) also take place between enduring rivals, with another 14.5 per cent occurring between proto-rivals.

Territorial changes have been less concentrated in the realm of rivalry than either militarized disputes or interstate wars. Table 7.3 shows that 70 per cent of all territorial changes since 1816 have occurred between states involved in isolated conflict (or those that were not involved in any militarized conflict), with only 5.1 per cent occurring between proto-rivals and 25 per cent occurring between enduring rivals. Territorial changes, though, are not necessarily conflictual in nature: many of the changes in the data set involve small transfers of territory as minor border adjustments between friendly states. As a result, it should not be very surprising that the fraction of all territorial changes accounted for by rival adversaries should be so low. Violent territorial changes are much more conflictual by nature, and – not too surprisingly – the fraction occurring between rivals is much higher. Around half of all violent territorial changes have taken place in isolated conflict or conflict-free dyads, with another 8.1 per cent occurring between proto-rivals and 38.7 per cent between enduring rivals.

In examining the frequency of conflict in Tables 7.1 to 7.3 we should remember that rival adversaries represent a very small fraction of all dyads in the interstate system or of all dyads that have been involved in militarized conflict. In the data used for this study, a total of 1183 dyads became involved in at least one militarized dispute between 1816 and 1992, and there were many thousands of possible dyads in the interstate system in the same time frame that could have engaged in conflict. Of these dyads, though, only 195 qualify as proto-rivalries and 103 more reach enduring rivalry status. Rivalry, then, accounts for a disproportionate fraction of all militarized interstate disputes, interstate wars, and violent territorial changes, considering the small number of dyads that qualify as rivals.

Table 7.3 Frequency of homeland territorial changes

Rivalry type	*Number of changes*		*Number of violent changes*	
Isolated conflict	305	(70.0%)	59	(53.2%)
Proto-rivalry	22	(5.1%)	9	(8.1%)
Enduring rivalry	109	(25.0%)	43	(38.7%)
Total	436		43	

These results complement the findings of previous research on rivalry. Using an older version of the COW militarized dispute data and a somewhat different definition of rivalry, for example, Goertz and Diehl (1992b) find that rivals account for the majority of all militarized disputes, wars, and violent territorial changes. Between revisions to the previously existing data and the addition of a further 16 years of temporal coverage, the updated militarized dispute data set employed in the present study contains nearly twice as many dyadic disputes as the older data set used by Goertz and Diehl. Despite the large number of changes to the data set, though, this study's results closely follow those of Goertz and Diehl, which helps to increase our confidence in the results of both studies.

This confidence level is increased even further by the finding that ICB crises and COW territorial changes produce results that are very similar to COW militarized disputes and wars. It may seem unsurprising that a large fraction of all militarized disputes occur between enduring rivals, because the frequency of disputes is a central component in most empirical definitions of rivalry. Yet only 103 dyadic relationships qualify as enduring rivals under the present study's definition, out of tens of thousands of dyads in the history of the interstate system. Considering that only 103 dyads out of tens of thousands account for such a large proportion of interstate conflict over the past two centuries, these results do appear to make a meaningful statement about the importance of rivalry. Furthermore, ICB crises and COW territorial changes represent very different forms of interstate interaction that were collected for very different purposes than the militarized dispute data, and that are not represented in this study's measure of rivalry. The similarity in patterns of militarized dispute, war, crisis, and territorial change involvement suggests that the importance of rivalry goes well beyond the possibility of tautology due to a dispute-based definition.

Evolution and Conflict Frequency

Tables 7.4 to 7.6 reexamine the frequency of conflict through evolutionary lenses. In order to give a meaningful depiction of how conflict behavior in the same set of dyads changes over time, these tables are limited to the 103 dyads that eventually reached the status of enduring rivalry. These tables thus show the conflict behavior of these 103 enduring rival dyads in all three evolutionary phases, allowing us to compare how their conflict behavior changed as they evolved through the different phases of rivalry.[11]

For all six forms of conflict, the majority of events occurred in the advanced phase of rivalry. That is, enduring rivals engaged in 59.1 per cent of all of their militarized disputes, 57.8 per cent of their wars, 53.0 per cent of their international crises, 48.8 per cent of their violent international crises, 50.5 per cent of their territorial changes, and 51.2 per cent of their violent territorial changes in the advanced phase of their rivalries. The remaining events were generally split evenly between the early and intermediate phases. Just as many cases of interstate conflict in general occur between eventual rival adversaries, most cases of conflict between these eventual rival adversaries occur after they have already reached the advanced phase of rivalry and qualified as enduring rivals. As before, this finding is especially meaningful because five of the six types of conflict were not used in identifying the time frame for each rivalry phase.

The results presented in Tables 7.4 to 7.6 suggest that the evolution of rivalry is an important topic to study. The definition of rivalry used in the present chapter does not include any requirement about the frequency of conflict between two adversaries once they reach the advanced phase and qualify as full-fledged enduring rivals; an enduring rivalry could end after the sixth dispute or could go on through dozens of additional confrontations. Yet once the enduring rivals studied in Tables 7.4 to 7.6 reached the advanced phase, they typically continued to engage in frequent episodes of conflict, with more disputes, wars, and territorial changes occurring in the advanced phase itself than in the early and intermediate phases combined. In fact, only 25 of the enduring rivalries in the present study stopped after six disputes, with 39 going on to become involved in at least twenty militarized disputes each (up to a maximum of 53 disputes).

Particularly in light of earlier research on escalation patterns in recurrent crises, this frequency of conflict in the advanced phase of rivalry seems especially dangerous and worthy of further study. As noted earlier, Leng (1983) found a tendency for bargaining strategies to become increasingly coercive and war-prone in recurrent crises between the same adversaries, and Diehl (1985b) found that arms races were only likely to lead to war between previous adversaries with histories of recent conflict. By the advanced phase of rivalry, a given pair of adversaries has engaged in a number of previous confrontations, and the observed tendency toward more coercive or escalatory crisis-bargaining in recurrent crises suggests that it is even more important for policy-makers and academics to prevent the occurrence of further, potentially dangerous confrontations in the future. The next section of this chapter examines this likelihood of renewed confrontation, in order to explore whether or not the evolutionary phase of rivalry affects relations between two adversaries in the aftermath of a militarized confrontation.

Table 7.4 Frequency of militarized interstate disputes and wars in enduring rivalries

Rivalry phase	*Number of disputes*		*Number of wars*	
Early phase	206	(16.4%)	19	(22.9%)
Intermediate phase	309	(24.5%)	16	(19.3%)
Advanced phase	744	(59.1%)	48	(57.8%)
Total	1259		83	

Table 7.5 Frequency of international crises in enduring rivalries

Rivalry phase	*Number of crises*		*Number of violent crises*	
Early phase	30	(22.7%)	26	(31.0%)
Intermediate phase	32	(24.2%)	17	(20.2%)
Advanced phase	70	(53.0%)	41	(48.8%)
Total	132		84	

Table 7.6 Frequency of homeland territorial changes in enduring rivalries

Rivalry type	*Number of changes*		*Number of violent changes*	
Early phase	29	(26.6%)	11	(25.6%)
Intermediate phase	25	(22.9%)	10	(23.3%)
Advanced phase	55	(50.5%)	22	(51.2%)
Total	109		43	

Table 7.7 Militarized dispute recurrence

Rivalry type	*Followed by recurrent dispute*		*Last dispute in rivalry*	*Total*
Early phase	789	(47.1%)	885	1674
Intermediate phase	433	(68.9%)	195	628
Advanced phase	641	(86.2%)	103	744
Total	1863	(61.2%)	1183	3046
$X^2 = 350.40$ (2 d.f., $p < .001$)				

The Aftermath of Militarized Conflict

Evolution and Militarized Conflict Recurrence

The remaining analyses examine the recurrence of militarized conflict in the aftermath of a given confrontation. Table 7.7 examines the impact of a given dyad's evolutionary rivalry status on the likelihood of dispute recurrence between the same adversaries within 15 years. As noted earlier, this table (and the subsequent tables on conflict recurrence) includes all conflictual dyads in the present study, rather than simply those that would eventually qualify as enduring rivalries. The results presented in Table 7.7 indicate that the likelihood of conflict recurrence increases greatly across the three rivalry phases. Of the 1674 militarized disputes that occurred in the early phase of rivalry, 789 (47.1 per cent) were soon followed by another dispute between the same adversaries. This figure increased to 433 of 628 (68.9 per cent) for disputes in the intermediate phase of rivalry, and to 641 of 744 (86.2 per cent) for disputes in the advanced phase.[12] Beyond the substantive or theoretical significance of this trend, the results presented in Table 7.7 are also highly statistically significant ($X^2 = 350.40$, 2 d.f., $p < .001$).[13]

Tables 7.8 and 7.9 examine the impact of evolution on the bivariate relationships between dispute outcomes or contentious issues and conflict recurrence. Earlier research (Hensel, 1994a) has found both outcomes and issues to have a substantial impact on the likelihood of conflict recurrence, although that earlier work did not consider the impact of the rivalry context between two adversaries at the time of their previous dispute. The results presented in these two tables indicate that the effects of both outcomes and issues change substantially from one rivalry phase to the next. Although important differences remain between different types of dispute outcomes or different types of contentious issues, the overall likelihood of recurrent conflict increases as

Table 7.8 Dispute outcomes and militarized dispute recurrence

A. Decisive Outcomes

Rivalry type	*Followed by recurrent dispute*		*Last dispute in rivalry*	*Total*
Early phase	121	(28.9%)	298	419
Intermediate phase	62	(54.4%)	52	114
Advanced phase	89	(85.6%)	15	104
Total	272	(42.7%)	365	637
$X^2 = 117.22$ (2 d.f., $p < .001$)				

B. Compromise Outcomes

Rivalry type	*Followed by recurrent dispute*		*Last dispute in rivalry*	*Total*
Early phase	56	(49.6%)	57	113
Intermediate phase	35	(77.8%)	10	45
Advanced phase	22	(75.9%)	7	29
Total	113	(60.4%)	74	187
$X^2 = 14.14$ (2 d.f., $p < .001$)				

C. Stalemate Outcomes

Rivalry type	*Followed by recurrent dispute*		*Last dispute in rivalry*	*Total*
Early phase	465	(58.3%)	333	798
Intermediate phase	276	(73.0%)	102	378
Advanced phase	435	(86.3%)	69	504
Total	1176	(70.0%)	504	1680
$X^2 = 117.76$ (2 d.f., $p < .001$)				

rivalry evolves, regardless of the issues at stake in the dispute or the type of outcome that was reached.

Recurrent conflict becomes much more likely to occur in later rivalry phases, regardless of the type of dispute outcome or contentious issues that were involved in the previous confrontation. As Table 7.8 reveals, the likelihood of recurrent conflict increases by about 30 to 40 per cent for each outcome type between the early and advanced rivalry phases. Even compromise outcomes – the least likely to be followed by recurrent conflict – are followed by another dispute 75.9 per cent of the time in the advanced phase. Similarly, Table 7.9 reveals corresponding increases in the likelihood of recurrent conflict in later rivalry phases, regardless of the types of issues at stake in an earlier confrontation. Each of these increases is highly statistically

Table 7.9 Contentious issues and militarized dispute recurrence

A. Territorial Issues

Rivalry type	*Followed by recurrent dispute*		*Last dispute in rivalry*	*Total*
Early phase	208	(55.8%)	165	373
Intermediate phase	121	(77.6%)	35	156
Advanced phase	240	(89.9%)	27	267
Total	569	(71.5%)	227	796

$X^2 = 92.41$ (2 d.f., $p < .001$)

B. Non-Territorial Issues

Rivalry type	*Followed by recurrent dispute*		*Last dispute in rivalry*	*Total*
Early phase	581	(44.7%)	720	1301
Intermediate phase	312	(66.1%)	160	472
Advanced phase	401	(84.1%)	76	477
Total	1294	(57.5%)	956	2250

$X^2 = 239.87$ (2 d.f., $p < .001$)

significant at the .001 level, indicating that the differences revealed in these tables are much greater than we would expect by chance alone if there were no relationship between rivalry phase and dispute recurrence. In fact, both Tables 7.8 and 7.9 show that the least conflict-prone outcome or issue type in one rivalry phase is more likely to be followed by recurrent conflict than the most conflict-prone outcome or issue type in the previous phase. For example, 58.3 per cent of stalemates in the early phase of rivalry were followed by recurrent conflict, but by the advanced phase all three outcome types were more likely to lead to further conflict (ranging from 68.9 per cent for decisive outcomes to 77.8 per cent for compromises).

Together, Tables 7.7 to 7.9 show a clear impact of rivalry phase on dispute recurrence, which offers strong evidence in favour of evolution in rivalry and conflict behaviour. As two adversaries accumulate a longer history of confrontation, they become much more likely to engage in renewed conflict in the immediate future. In other words, conflict begets conflict, and adversaries that are not careful to resolve their differences early face a great risk of becoming trapped in a protracted string of conflict.

Table 7.10 Logistic regression analysis of militarized dispute recurrence

Variable	*Est. (S.E.)*		*X^2 (p)*		*Odds ratio*
Intercept	0.13	(0.07)	3.78	(.05)	–
Intermediate phase	0.82	(0.11)	54.13	(.001)	2.276
Advanced phase	1.69	(0.13)	171.91	(.001)	5.422
Decisive outcome	–1.10	(0.10)	110.60	(.001)	0.334
Compromise outcome	–0.34	(0.17)	4.13	(.04)	0.711
Territorial issues	0.64	(0.11)	36.49	(.001)	1.906

N:	2504
Log likelihood (null model):	3317.17
Log likelihood (full model):	2890.94
Improvement:	426.23
Significance:	$p < .001$ (5 d.f.)

Logistic Regression Analysis of Militarized Conflict Recurrence

Table 7.10 presents the results of a logistic regression analysis of militarized dispute recurrence, incorporating the effects of dispute outcomes and contentious issues in a multivariate model along with the evolutionary rivalry phase indicators.[14] The model as a whole fits the data very well, producing a highly significant improvement over a baseline model ($X^2 = 426.23$, 5 d.f., $p < .001$). With regard to the individual covariates being studied, the model produces positive and highly significant coefficients for both the intermediate ($X^2 = 54.13$, $p < .001$) and advanced phases of rivalry ($X^2 = 171.91$, $p < .001$). Recurrence is thus much more likely in each of these phases than in the early phase of rivalry. The control variables in the model also produce the expected effects. Dispute recurrence is significant less likely after disputes that ended in a decisive outcome ($X^2 = 110.60$, $p < .001$) or a compromise ($X^2 = 4.13$, $p < .04$), and significant more likely when territorial issues are at stake ($X^2 = 36.49$, $p < .001$).

Beyond statistical significance, the odds ratio column in Table 7.10 allows us to evaluate the practical or substantive significance of each element of the model.[15] The odds ratio (OR) values in Table 7.10 reveal that the different variables included in this model all carry great substantive significance. The odds of militarized dispute recurrence are over twice as great (OR = 2.276) after a dispute in the intermediate phase and over five times as great (OR = 5.422) after a dispute in the advanced phase of rivalry, even when controlling for the impact of dispute outcomes and territorial issues. The odds of dispute recurrence are nearly twice as great (OR = 1.906) when territorial issues were

involved in the dispute. Furthermore, the odds are one-third as great (OR = 0.334) after a dispute that ended in a decisive outcome and are somewhat lower (OR = 0.711) after a compromise outcome.

Another way to evaluate the impact of variables or combinations of variables is to examine their marginal impact on the expected probability of the dependent variable, while holding all other variables in the model to their mean values or to some theoretically meaningful values. If all other variables are held to their means, then a dispute in the intermediate phase of rivalry increases the expected probability of dispute recurrence from 0.60 to 0.78, and a dispute in the advanced phase increases the expected probability from 0.55 to 0.87. Both of these changes are substantial, and help to demonstrate the impact of rivalry phase on two states' conflict behavior. The overall expected probability of dispute recurrence in this model is 0.65, but this probability varies widely with rivalry phase and the control variables included in the model. Thus, a dispute in the early phase of rivalry that involved non-territorial issues and ended in a decisive outcome is much less likely to be followed by another dispute, with a probability of 0.28 that recurrent conflict will erupt. After a dispute in the advanced phase of rivalry over territorial issues that ended in stalemate, though, this probability rises to 0.92 – a virtual certainty that future conflict will arise.

Taken together, the results presented in Table 7.10 offer strong evidence of the importance of rivalry in processes of conflict recurrence. Dispute outcomes and territorial issues continue to have a strong impact on recurrent conflict, as in previous studies. Even after controlling for their effects, though, the evidence presented in this table reveals that the rivalry context in which a confrontation occurs has a large effect on subsequent relations between the adversaries. Recurrence is much more likely between two adversaries who have reached the intermediate phase of rivalry, and even more likely between adversaries in the advanced phase.

CONCLUSIONS

This chapter's empirical results, along with the earlier discussion of the contributions of existing research in this area, offer a number of implications for future research. Many current studies of rivalry, particularly those on the evolution of rivalry, have suggested promising new paths of research to follow up on their findings. This chapter concludes by summarizing the previous research on rivalry and the empirical analyses presented herein, and by suggesting some new directions for research related to rivalry.

The first half of this chapter reviewed current research on interstate rivalry, organized by three different uses of the rivalry concept. Research using rivalry as a case selection mechanism has shown the value of the rivalry concept in testing other propositions about interstate conflict. Research employing rivalry as an independent variable has shown that conflict behavior differs along a number of dimensions between rivals and non-rival adversaries. Research using rivalry as a dependent variable has shown that conflict behavior changes over time along many dimensions as rivalry evolves, particularly with respect to the aftermath of conflict and the likelihood or timing of future conflict between the same adversaries.

The empirical analyses presented in the second half of the chapter support and extend many of these previous research findings discussed above. Rival adversaries are found to account for a highly disproportionate fraction of all interstate conflict, given the small number of rivalries in the modern interstate system and the large number of confrontations between them. This finding holds across six different measures of interstate conflict, including both peaceful and violent exchanges of territory, militarized disputes, both low-level and violent international crises, and full-fledged interstate wars. This finding remains equally impressive when rivalry is considered from an evolutionary perspective. The majority of each of the six forms of conflict occurs after two adversaries have reached the advanced phase of interstate rivalry, although only one of these six measures is actually used to define the different phases of rivalry.

Analysis of conflict aftermath shows even stronger results for the importance of an evolutionary approach to rivalry. The likelihood of conflict recurrence increases dramatically in each subsequent rivalry phase, both overall and after each individual type of outcome or contentious issue examined. A logistic regression analysis also showed similar results while controlling for both past dispute outcomes and contentious issues, with the statistical odds of recurrence in a given year more than doubling in the intermediate phase and being over five times greater in the advanced phase of rivalry. Clearly, then, the aftermath of conflict behavior between two adversaries shows important signs of evolution over time as their rivalry continues.

The review and analyses presented in this chapter suggest a number of new directions for future research. The use of rivalry as a case

selection mechanism has aided in the analysis of a number of concepts such as arms races, power transitions, and general deterrence. Future research on each of these topics could benefit from an extension of the domain of cases studied, in order to determine the extent to which the results depend on the use of rivalry to identify cases for analysis. Wayman (1989), for example, found that the effects of capability shifts or rapid approaches were only statistically significant for rivalries, with much weaker results when the same tests were run on a population of non-rival adversaries. Our understanding of these topics, and our confidence in the empirical results, should be much greater upon determining the extent to which each proposition holds for non-rival adversaries as well as for rivalries.

Studies using rivalry as a case selection mechanism could also be improved by considering the evolution of rivalry. If arms races, power transitions, and similar concepts are argued to have their strongest effects on conflict behavior between enduring rivals, then their effects might be expected to change over time as rivalry evolves. According to the evolutionary approach to rivalry proposed by Hensel and by Maoz and Mor, enduring rivals do not recognize each other as long-term rivals until a number of crises have occurred between them, and after they have accumulated substantial levels of suspicion, tension, or grievances because of this history of conflict. Empirical relationships depending on a history of rivalry might thus be expected to begin with weak results in the early phase of rivalry, becoming stronger in later phases of the relationship. Research using rivalry as a case selection mechanism would do well to consider this possibility.

Studies using rivalry as an independent variable have shown that rivalries differ from non-rivalry relationships along many dimensions of conflict behavior. Studies using rivalry as a dependent variable have also shown that conflict behavior changes over time within ongoing rivalries as the relationships between rivals evolve. Empirical studies of both types have generally been preliminary, though, and have typically been more concerned with identifying differences between different types of dyads or different phases of rivalry than with accounting for these differences.

Studies using rivalry as either a dependent variable or an independent variable could benefit from a more sophisticated analysis to help account for the observed differences. Empirical analyses of conflict recurrence and rivalry evolution have attempted to account for the recurrence of militarized conflict with dispute outcomes, contentious issues, relative capabilities, political regime types, and other variables

as well as the evolutionary rivalry phase (e.g. Hensel, 1996a). Yet analyses of conflict escalation have focused primarily on the type of rivalry relationship or the evolutionary rivalry phase, without much consideration of other factors affecting escalation behavior. Future research should examine such factors as well as rivalry type or rivalry phase, in order to see whether the largely bivariate relationships observed so far change in more sophisticated analyses.

Additional factors should also be examined in future research on rivalry. Nincic (1989) and Vasquez (1993), among others, discuss at great length the importance of domestic political factors in establishing and maintaining interstate rivalries. With the exception of political regime type, though, domestic factors have been overlooked in most current research on rivalry. Hensel (1996a), for example, did not examine any domestic factors besides regime type in his statistical analyses of rivalry, but after examining several case studies of rivalry Hensel (1996a) concludes that domestic factors seem to have helped to prolong or exacerbate the rivalries being studied. Several potentially important domestic factors that might profitably be examined in future research on rivalry includes public opinion, domestic economic conditions, or societal militarization (e.g. Holsti, 1992; Russett, 1990; Bremer, 1992).

Similarly, research on topics such as external conflict management, political shocks, and the growth of external threats to one or both rivals has typically been conducted separately, in isolation from the evolutionary analyses discussed above. Future research on rivalry – and particularly future research attempting to account for the evolution of rivalry – could benefit from an effort to integrate these previously separate strands of research. If dispute outcomes, contentious issues, conflict management attempts, political shocks, and external military threats are all important individually, then we could presumably learn even more about rivalry from studying them in combination.

In conclusion, this chapter has reviewed the existing literature on interstate rivalry, and has supplemented this review with original analyses on rivalry. Rivalry has been found to make many contributions to the study of interstate conflict, from improving research designs (when used as a case selection mechanism) to improving our understanding of the connections between recurrent confrontations (when used as an independent variable). Nonetheless, the study of rivalry is still a relatively new topic, and much remains to be done. Throughout the text, and particularly in the concluding remarks, I have suggested a number of ways that future research can make continued improvements.

NOTES

1. Anderson and McKeown also investigated the possibility that subsequent conflict would be more likely between states that had prior interaction of either a cooperative or conflictual nature. For the purposes of this chapter, I focus on conflictual interactions, because of the similarity of this approach to the notions of rivalry and of evolution.
2. Many of the unexpected or unpredicted changes occur in the presence of exogenous changes in one or both rivals, particularly changes in capabilities resulting from wars, foreign military aid, or domestic politics.
3. A single militarized confrontation is obviously an insufficient basis for a full-fledged enduring rivalry relationship. In the continuous view of rivalry employed in this study, though, the outbreak of militarized conflict between two states represents an important break from non-militarized relations between states (as mentioned earlier), and can be seen as moving the adversaries along the rivalry continuum toward the extreme of enduring rivalry.
4. Some scholars (e.g. Thompson, 1995) have called for a more detailed measure of rivalry, possibly incorporating some explicit identification of each side's perceptions of the other as a primary security threat or a 'principal rival.' Nonetheless, such a measure would make the study of more than a few rivalries an unmanageable task, and an operational measure based on dispute involvement – such as has been used in the existing systematic research on rivalry – is sufficient for the purposes of the present study.
5. A militarized interstate dispute is defined as a set of overt, explicit, nonaccidental, and government-sanctioned incidents involving the threat, display, or use of military force between two or more states (Gochman and Maoz, 1984).
6. The present study treats all militarized disputes as equivalent for identifying rivalries or phases of rivalry. This is consistent with much of the published research on rivalry (Gochman and Maoz, 1984; Goertz and Diehl, 1992b, 1993, 1995a). It could be argued, though, that some disputes have a greater impact than others. A full-scale interstate war, for example, might be expected to produce a greater long-term impact on relations between the protagonists than might a minor border incident. To maximize consistency with the previous published research relevant to this study's analyses (Goertz and Diehl, 1992b; Maoz, 1984; Hensel, 1994a), the present study continues treating each dispute as equivalent for the purposes of identifying rivalries. Future research, though, could certainly benefit from a closer examination and reconsideration of this approach, perhaps weighting the impact of each dispute by some severity criterion or requiring disputes to reach a certain severity threshold before counting toward a dyad's rivalry status.
7. For more details see Diehl, et al. (1996).
8. It might be argued that recurrent conflict can only meaningfully be studied in terms of contentious issues. Hensel (1994a), for example, examined both recurrent conflict overall and recurrent conflict over the same contentious issues that were involved in a previous dispute. Viewed from a rivalry perspective, though, issue consistency does not seem to be a vital condition for two disputes to be considered 'connected' to each other. Goertz and Diehl (1993) note that a given rivalry can involve numerous contentious issues, and that the specific issues at stake in a given rivalry can change over time. Even if the Cuban Missile Crisis and the various Berlin crises during the Cold War technically involved separate issues and separate geographic locations, it would be difficult to argue that these crises were not related to each other. Future researchers, of course, can always attempt to identify the specific issues involved in each dispute for the purpose of studying issue consistency. For the purposes of the present study, though, issue consistency is left to future research and is not considered theoretically vital to the study of recurrent conflict in evolving rivalries.
9. Fifteen years is a common threshold in empirical definitions of rivalry. If a gap of more than 15 years elapses without the recurrence of militarized conflict, many definitions of rivalry would consider the rivalry in question to have ended (Goertz and Diehl, 1992b, 1993). Yet because this figure of 15 years may appear somewhat arbitrary, further analyses were run with 20- and 25-year thresholds for the ending of rivalry, as well as with no threshold (leaving an unlimited temporal horizon). These alternative thresholds did not produce any substantially different results.
10. This 'decisive' category is produced by combining four separate outcome types from the dispute data set: victory by side A, victory by side B, yield by A, and yield by B. These categories are combined because I have no good theoretical reason to distinguish between these different forms of decisive outcomes. Furthermore, keeping them separate would leave many of the analyses with an insufficient number of cases to allow meaningful interpretation of the results.
11. Hensel (1996a) presented similar evolutionary analyses for all of the dyads in the dispute data set, rather than just those that eventually qualified as enduring rivals; the results did not change substantially.
12. Some readers might question the treatment of all dyads as equivalent in Tables 7.7 through 7.10, regardless of their eventual rivalry status. That is, if a given dyad's period of conflict ended after one or two disputes, it could be argued that the dyad should not be considered to have been in the early phase of rivalry (since there were no later rivalry phases in that dyadic relationship). When viewed in an evolutionary sense, though, this decision appears reasonable. Under an evolutionary approach to rivalry, two states do not know with certainty what their eventual rivalry status will be. Thus, in the first two disputes in a given dyad (i.e., the early phase of rivalry), the potential rivals do not know whether their conflictual relationship will end or whether it will continue on to the intermediate or advanced phase. As a result, it appears reasonable to study all dyads that have engaged in one dispute to see whether they become involved in a second, or to study all dyads that have engaged in four disputes to see whether they become involved in a fifth.
13. The chi-square (χ^2) statistic indicates the statistical significance of the relationship between rivalry phase and recurrence, or the likelihood that the distribution of cases in the table could have arisen by chance if the variables are statistically independent (Reynolds, 1984; Phillips, 1992).

14. Logistic regression (or logit analysis) is appropriate for studying discrete dependent variables, such as the outbreak or avoidance of recurrent conflict, which cause problems for traditional methods such as OLS regression (Aldrich and Nelson, 1984; Liao, 1994).
15. The odds ratio presents the ratio of the statistical odds of a certain dependent variable, given a certain value of the independent variable. An odds ratio of 1.0 would tell us that the odds of recurrence after a dispute in the advanced phase, for example, are identical to the odds of dispute recurrence after a dispute in either of the earlier rivalry phases. Odds ratios above 1.0 indicate how much greater are the odds of dispute recurrence when the independent variable is present, while odds ratios below 1.0 indicate how much lower are the odds of dispute recurrence in the presence of the independent variable (Liao, 1994).