

CHAPTER 11

Breaking the Stability of Rivalries: The Impact of Political Shocks

Over the previous two chapters we have emphasized the stability of enduring rivalries, but enduring rivalries also begin and end. The same is true of all biological species: they develop and eventually go extinct. The punctuated equilibrium model, both in biology and in its enduring rivalry version, argues that major shocks set the stage for enduring rivalries or species to arise and are also part of the explanation of their demise. If we examine the idea of stability or equilibrium, it *means* relative insensitivity to perturbation. A measure of stability, for example, in the natural sciences, is based on the size of the force needed to destroy the equilibrium. Hence, the natural flip-side of our emphasis on stability of enduring rivalries is the proposition that large forces and shocks are required to disrupt enduring rivalry stability.

By political shock, we mean a dramatic change in the international system or its subsystems that fundamentally alters the processes, relationships, and expectations that drive nation-state interactions. For example, the end of the Cold War was a major political shock in international relations. In the 1980s, none thought the end of the Cold War would come soon, a reflection of the incremental thinking so common in international relations. The domestic political revolution in the USSR not only ended the U.S.-Soviet rivalry, but many of the conflicts in the Third World that were fueled by this rivalry as well. At the same time the end of the Cold War has also provided the setting for the rise of some new rivalries.

If enduring rivalries are the result of well-entrenched causes, then the end of a particular rivalry or the beginning of a new rivalry should be associated with some dramatic change in the environment or the actors. These shocks may be exogenous to the rivalry, such as the occurrence of a world war, or endogenous, such as the change in the administration or regime of one of the rivals following a civil war. Therefore, in assessing the effects of political shocks on

enduring rivalries, we consider dramatic changes at two levels of analysis: domestic and international.

In the biological model of punctuated equilibrium, it is predominantly environmental shocks—such as massive climatic change—that cause the extinction of species. In an analogous manner, we argue that huge changes in the international political system make rivalry initiation and termination possible. For example, in line with neorealist thought, we suggest that dramatic power rearrangements in the major-power system constitute one kind of environmental shock important to the rise and decline of enduring rivalries.

Unlike the biological model, however, we also include political shocks endogenous to the rivals. By this we mean major changes in the domestic politics of one or both of the rivals. Environmental shocks influence the opportunity structure of states, whereas domestic political changes introduce new ideas, values, and foreign policy goals. Thus, although we consider both external and internal shocks as important, the role that these shocks play can differ significantly.

Looking at political shocks necessitates a move away from traditional linear thinking. Instead, the punctuated equilibrium model considers dramatic change as a key independent variable but also expects that many relationships will remain stable over time in the absence of shocks and in some cases in spite of them. In contrast to chaos theory, which examines how small changes have great effects, the punctuated equilibrium model emphasizes large changes that have large potential impact. With respect to enduring rivalries, we conceptualize their initiation and termination as occurring in a nonlinear fashion during favorable conditions created by abrupt political shocks of various sorts. Shocks make rivalry initiation and termination *possible*; that is, those shocks are necessary conditions for dramatic changes in what are normally stable relationships.

In summary, our punctuated equilibrium model proposes that massive political shock at the system or state/domestic level opens a window of opportunity for rivalries to begin and end.¹ Not all windows of opportunity are jumped through, and not all political shocks result in rivalry or its termination. Nevertheless, we shall see that few rivalries can break through closed windows.

¹It might be argued that under some circumstances political shocks contribute to the maintenance of a rivalry. Yet, this is contrary to the punctuated equilibrium model, and we do not investigate that possibility, although it might deserve a place on a future research agenda. Nevertheless, it is highly unlikely that shocks are anything approaching necessary conditions for the continuation of rivalries.

Political Shocks and Enduring Rivalries

System Shocks

Much of international relations theory stresses the importance of system-level factors on state behavior. This theoretical specification ranges from neorealism (Waltz 1979) to agent-structure perspectives (Dessler 1989). The punctuated equilibrium model—similar to its biological ancestor—is very much an agent-structure framework. Unfortunately, neither the neorealist nor the agent-structure literature has produced many specific theoretical propositions that have clearly testable implications.

We can contrast the punctuated equilibrium model, which emphasizes dramatic change, with the relatively static or gradualist perspectives of neorealism or agent-structure theory. For example, Waltz borrowed heavily from natural selection models through their use in economics. He argued that states would be “socialized” through an—implicitly gradual—process by which power-maximizing realist states would prosper while other kinds of states would fail (see Cederman 1996 for a formal simulation that uses a gradual evolutionary model). By implication, these changes do not occur rapidly. The agent-structure literature is less clear, but it does not recognize radical structural change as a key factor.

The punctuated equilibrium model directly links system changes to state behavior. In the quantitative literature, it is relatively rare to find analyses that employ variables at multiple levels of analysis. The overwhelming tendency is to employ the same level of analysis for *all* variables. For example, systemic change as a predictive factor was employed in Singer, Bremer, and Stuckey 1972 using capability distribution and in Bueno de Mesquita 1978 using polarity tightness as system-level dependent variables respectively. Yet empirical studies rarely look at the effect of systemic factors at levels of analysis other than the system. The difficulty arises in specifying the mechanisms that link system characteristics (here system shocks) with lower-level processes. The punctuated equilibrium framework uses variables from at least two levels of analysis; the environmental shocks are system-level variables, which then influence state-level rivalry behavior. Unlike neorealism, which has little dynamic about it, the punctuated equilibrium model stresses the importance of change as much as the power distribution itself.

With respect to enduring rivalries, system shocks influence them in at least two ways. First, system shocks transform the environment in which international relations occur. This transformation opens up new opportunities for conflict, such as the possibility of a U.S.-Soviet rivalry in the new bipolar world after World War II. While some windows of opportunity are opened, a system shock may also change the environment such that some rivalries come to an end; France and Germany cease to be rivals (and even become allies) after 1945. Second, and related in some ways, systemic changes have a dramatic

impact on some bilateral or multilateral relationships. Thus, “opportunities” occasioned by the political shocks are differentially distributed across the units of the system (Most and Starr 1989). The end of the Cold War, for example, led to a severing of many patron-client relationships between the Soviet Union and Third World countries. This has led some proxy conflicts to wither away in the absence of the military and political support previously provided by the superpowers. Thus, system shocks alter the general environment for the formation and continuation of enduring rivalries, but they also directly influence some state-level relationships that affect rivalry processes.

In this chapter, we explore three types of system-level shocks: (1) those occasioned by world wars, (2) dramatic changes in territorial sovereignty, and (3) rapid shifts in the power distribution. World wars are considered to be system-defining events. They tend to sweep away existing patterns of international interactions and encourage new patterns to emerge. Specifically, we anticipate that world wars will alter many of the sources of contention between rivals; in effect, world wars may be a culmination of several disputes and rivalries (Midlarsky 1988). Similarly, world wars may change the structure of the system, perhaps transforming a system from a bipolar to a multipolar one or influencing the tightness of that system type. In either case, some states will find themselves in opposing coalitions or in conflict over issues or concerns occasioned by the new world order. Therefore, we expect that as some enduring rivalries end with a world war, others will begin.

A second shock to the system involves dramatic alterations in the territorial sovereignty of the system. Systemic territorial change derives from many transfers of territory, which may help resolve existing rivalries or give rise to new ones. In addition, massive territorial change may give rise to the emergence of new states in the system, which not only disrupts patterns of interactions, but creates more opportunities (Most and Starr 1989) for rivalries as the number of possible rivalry dyads increases. Thus, one might expect that the dramatic increase in the number of states around 1960 might be associated with the onset of new rivalries.

Third, alterations in the prevailing power distribution among the major powers could shock the system and lead some rivalries to end while others begin. The neorealist framework will give primacy to this explanation for changes in rivalry patterns. Some major power rivalries may end because one rival will be unable to compete in the changed environment; correspondingly, the emergence of new major powers may create new opportunities for rivalries. In addition, a change in the power distribution among major powers may shift traditional allegiances, and one’s former rival may now become an ally against a new threat. The balance-of-power argument assumes just such a change. Minor powers could also feel the impact of capability shifts among the major powers. Existing patron-client relationships could shift, ending some rivalries that were “subsidized” by the major powers, or facilitating the rise of other proxy

conflicts. This is particularly the case if rivalries are “linked” to one another, as we demonstrate in the next chapter. The overriding assumption is that the power distribution conditions the form and structure of international relations, including enduring rivalries. Dramatic changes occurring in that distribution will influence state and dyadic behavior.

We anticipate that shocks at the system level will have an impact on all enduring rivalries. We should note that the three types of system shocks investigated here are not mutually exclusive. There is some overlap, but the collinearity of the three is far from perfect, and operationally we attempt to keep them distinct as much as possible. For example, world wars result in significant territorial change and power redistribution, but there are periods of great territorial transfer and power change independent of world wars (Goertz and Diehl 1992b).

Roughly speaking then, environmental shocks focus on opportunity factors in the birth and death of (enduring) rivalries. When Most and Starr (1989) proposed the opportunity-and-willingness framework, they were motivated by Sprout and Sprout’s (1965) model of “environmental possibilism,” which located opportunity at the system level. The punctuated equilibrium model focuses on three particular environmental factors: dramatic changes in power, massive systemwide wars, and dramatic changes in the configuration of territorial sovereignty.

State Shocks

The punctuated equilibrium model includes a particular view of the foreign policy process. As we have seen in the previous two chapters, it emphasizes the stability of policy in terms of an organizational model of government. The beginning and end of an enduring rivalry represent policy changes of major magnitude. Traditional realist thought attributes radical policy shifts to large changes in the international system. We agree with that formulation, but add that this view is incomplete. New policies also come with new leadership and forms of government representing new interests and ideas.

A brief survey of the literature on U.S. domestic policy indicates that major policy shifts occur with new leadership. We can recall that the Depression in the United States existed for several years before a presidential election brought in Roosevelt and his New Deal policies. Even the incrementalist policy literature supports this view. Hence, unlike many views of international relations, we find that the characters of the government and of its leaders do matter, because when they undergo radical change, so often too does foreign policy. We focus on *militarized* international rivalries, and quite clearly some systems of government (e.g., military dictatorships) and some political leaders prefer the military instruments of foreign policy. This generates and continues (enduring) rivalries. We limit our analyses to the most radical kinds of domestic political shocks, but the same logic leads to an inclusion of domestic and governmental variables as keys in understanding rivalries in general.

We have already examined one potential form of domestic political shock in our analysis of the democratic peace in chapter 6. More generally, we believe that four political shocks in domestic politics may affect potential or existing rivalries: (1) the achievement of independence, (2) the occurrence of a civil war, (3) the shift of either rival to a democracy, and (4) regime change in either rival. All of these imply a clear change in the character and personnel of the government in a rival state.

By our definition, an interstate rivalry cannot involve a state that has not achieved its independence. The emergence of a reorganized, new member of the international system can have several effects that promote the formation of rivalries. First is the mere increase in the number of interactions that stems from having another state in the area or system. Second, a new state is a shock to neighboring states who have been accustomed to a set pattern of interactions with their neighbors; most new states are former dependent territories and as such have had relatively peaceful relations with their neighbors. Third, a new state changes, almost by definition, the balance of power in the immediate area, which raises uncertainty. Fourth, newly independent states may feel a need to gain international legitimacy or status through conflict (Maoz 1989). Finally there is the threat that the new state will be the victim of other states that opposed independence and that seek to return to the status quo ante or see the new state as a weak target, capable of little resistance. Thus, we expect that when a state gains its independence it will be more likely to become involved in rivalries shortly thereafter. Along these lines, Maoz (1989) found that some newly independent states were more likely to become involved in militarized disputes.

Previous work on the connection between civil and interstate conflict has focused on the effect of the former during that period of domestic unrest. Here we hypothesize that civil war may also influence the conduct of rivalries. First, we anticipate that some ongoing rivalries will end as the state in a civil war turns its attention and resources to consolidation of power and to domestic problems. At the same time, however, the regime may seek legitimacy by initiating conflict against a foreign enemy, seeking to rally public support and distract attention from lingering domestic problems. Distraction or diversion (Levy 1989; Miller 1995) might be the response to a civil war, with the ending of ongoing enduring rivalries for some states and the beginning of conflicts for others.

The effects of civil wars may be magnified if the opposition is victorious in the war and a regime change occurs (Maoz 1989). The change in regimes can prompt different alliance configurations and ideological affinities. A regime change may also precipitate new hostilities with former allies who had been ardent supporters of the old regime. In effect, it is presumed that a regime change, not merely a leadership change, indicates a deep alteration in the preference structure of that state's foreign policy. This may lead to new disputes with states or end what may be long-standing competitions between historical enemies.

As we demonstrated in chapter 6, when a state becomes a democracy it may alter its rivalry patterns with a democratic rival, such that the rivalry is prone to end shortly thereafter. This is consistent with Bennett's (1997a) finding that rivalry termination is associated with movement toward democracy by the rivals. Thus, a fourth endogenous shock to a rivalry could be the shift of one rival to democracy just prior to the beginning or end of the rivalry. Yet the shift to democracy may also signal the beginning of a rivalry, in that such a shift may lead to a greater number of "mixed dyads," pairs of potential rivalries with one state's being democratic and the other nondemocratic. According to some recent evidence, such dyads are thought to have the greatest propensity for conflict. Explanations sometimes focus on psychological perceptions such as "in-group, out-group" models to explain this increased propensity (Herrmann and Kegley 1995). We should note, however, that we did not find such an effect among "mixed" rivalries in chapter 6.

In summary, the four state-level shocks—democracy, independence, regime change, and civil war—are expected to make states more likely to enter a rivalry, and to terminate ongoing ones (except for independence). For the time being, we do not consider the impact of state-level shocks on states outside the dyad, although we recognize that state-level shocks (e.g., a civil war) may affect the calculations and positions of other states in the area. Models of contagion (Most, Starr, and Siverson 1989) and conflict interdependence models (Muncaster and Zinnes 1993) do make such assumptions.

The Nature of the Effects of Political Shocks

We should emphasize that not every political shock will produce a new rivalry or end existing ones. There are many conditions (not all known or specified here) for the start or conclusion of a rivalry, and a political shock is only one of them. Furthermore, there are several varieties of political shock that could have an impact on the beginning and termination of rivalries. We propose that a shock opens a window of opportunity for the beginning and end of enduring rivalries. While not often realized, window-of-opportunity explanations imply necessary condition hypotheses. In the U.S. domestic politics literature, Kingdon's (1995, 166) influential use of the window-of-opportunity metaphor gets more concretely expressed in terms of necessary conditions: "In space shots, the window presents the opportunity for a launch. The target planets are in proper alignment, but will not stay that way for long. Thus the launch must take place when the window is open, lest the opportunity slip away. Once lost, the opportunity may recur, but in the interim, astronauts and space engineers must wait until the window reopens. Similarly, windows open in policy systems. These policy windows, the opportunities for action on given initiatives, present themselves and stay open for only short periods. If the participants cannot or do not take advantage of these opportunities, they must bide their time until the next opportunity comes along." Hence the possibility of policy change

when a window of opportunity does not exist is almost zero: an open window is necessary but not sufficient.

Thus, we expect that some political shock is a *necessary* condition for the initiation and termination of an enduring rivalry. It is not a sufficient condition, as, for example, not all independences lead to an enduring rivalry. Overall, we expect that few rivalries will begin or end without close temporal proximity to some political shock. In other words, a political shock opens a window of opportunity for rivalry initiation and termination, but whether governments exploit this opportunity—sufficiency—depends on other factors as well.

Despite the general effects of political shocks, they do not necessarily affect different types of conflict with the same magnitude. We do anticipate, however, that there will be little difference between proto- and enduring rivalries with respect to their initiation. Political shocks will produce new conflicts that may or may not mature into enduring rivalry. There are a variety of other factors, most unconnected with political shocks, that seem to influence whether a proto-rivalry will become an enduring one. These include the dynamics and outcome of disputes in the rivalry, moderate shifts in capability between the rivals, and the rise of other, potentially supportive rivalries involving the two states in question. In contrast, political shocks should have a differential impact on the termination of proto- and enduring rivalries. Shocks should have a strong influence on both, but enduring rivalries should be more resistant to individual shocks. We have noted earlier that enduring rivalries represent a kind of stability in international affairs that is not easily subject to change. In that sense, they are more stable than proto-rivalries and better able to weather the occurrence of political shocks. Thus, we anticipate that an enduring rivalry will end with some political shock, but it may be less likely to end with one specific shock than proto-rivalries.

The Empirical Analysis of Political Shocks

Operationalizing the Political Shock Concept

In keeping with the hierarchical theory of political shocks, we propose to examine shocks at the system and state levels. Because of this hierarchy, there is some overlap, and we are sensitive to this duplication in our coding. Guiding our consideration is the desire to reflect accurately the importance of the shock without needlessly and theoretically unjustified duplication of shocks. In coding shocks, we tried to code only the first system shock in the causal sequence (e.g., a world war) and not also a consequential shock deriving from that initial shock (e.g., dramatic change in the power distribution). A related concern is the assumption that shocks are relatively rare. We could easily prove our hypotheses if we identify a large number of shocks. This is particularly crucial in that by coding too many shocks we risk having a trivial necessary condition.

By reducing the number of shocks to a minimum, we provide a more rigorous test of our expectations.²

At the system level, the measurement of world wars is a straightforward one. World War I (1914–18) and World War II (1939–45) are the only wars involving all the major powers, and the magnitude of those two wars (in terms of duration, intensity, and severity) is far greater than any other conflicts in the period.

The magnitude of territorial changes is measured according to the aggregate area, in square kilometers, exchanged multiplied by the number of exchanges for all territorial changes involving the major powers (Goertz and Diehl, 1992b). We determine the threshold for a territorial shock inductively, by identifying extreme values in the distribution of total territorial changes across time, in the same fashion as one identifies world wars as extreme outliers in the Small and Singer (1982) list of wars. We decided that, for a territorial shock to occur then, there must be a minimum of eight territorial exchanges totaling at least five million square kilometers. The two cases that fit these criteria are the race for colonies in the late nineteenth century (1884–94) and decolonization around 1960 (1956–62). In these cases, we code the systemic shock as affecting only European states.³ The acquisition of colonies in the late nineteenth century was carried out almost exclusively by European states and had little effect on the Western Hemisphere (the only other region with a significant number of independent states at the time). Similarly, the decolonization process largely influenced those same European states, which saw their empires wither away. Of course, decolonization directly affected states in Africa and Asia. Yet these shocks are felt mostly at the state level and will appear as state-level shocks through independences (see below).

Shifts in the systemic power distribution are measured according to the sum of the changes in the capability shares among major powers, along the military and economic dimensions (Singer, Bremer, and Stuckey 1972). The level of shock is the sum of all changes for all countries for all indicators compared to the previous 10 years. We assume that a shock must last more than one year, representing a permanent change in international affairs. Again inductively, the average index score was approximately 100, and there were only three periods (excluding the world wars) when there was a pronounced and sustained shock, indicated by values around 400 to 600. The first such shock was the period surrounding the Italian and German unifications in the nineteenth century (1859–71). This is coded only as a system shock for Europe, given that the changes occurred on that continent and likely had less impact globally; again, it is also the case that the global system was largely Eurocentric at the time. The other

²A shock is coded for the year(s) of the actual shock plus 10 years. For example, if the beginning of a rivalry occurs within the period 1939–55, then it is said to coincide with the World War II shock.

³Turkey is considered part of Europe for these purposes.

two power shocks have broader global origins and impacts. The period 1890–1901 not only involves power restructuring in Europe, but is the period in which the United States and Japan join the club of major powers, with profound consequences for Asia, the Americas, and the rest of the world. The third shock occurs in 1989–92 with the breakup of the Soviet Union and has clear global implications.⁴

State independence cases are identified through consulting Goertz and Diehl's (1992b) list of territorial changes (as revised and reported in Tir et al. 1998) and selecting the subcategory of cases involving national independence. Civil war is defined according to the Small and Singer (1982) criteria and involves internal conflicts with at least one thousand battle-related fatalities.

For measures of democracy and regime, we again rely on the Polity III data (Jaggers and Gurr 1996) that we utilized in chapter 6. There are 10 dimensions of democratic and authoritarian rule. Examining a histogram of dyadic regime changes for enduring rivalries over the full period of the study, we decided to code a regime change as occurring when there was a shift on six of 10 dimensions, indicating both the large magnitude of shift and across many dimensions. For a democratic regime shift, the empirical distribution suggested a cutoff of seven and in the direction of democracy. Thus, the regime change variable is designed to capture dramatic internal political changes in either rival, whereas the democracy variable is specifically concerned with dramatic regime in one particular direction—toward democracy. In the case of overlap, we coded the democracy variable rather than a duplicate regime change shock.

A summary of all the shocks at each level of analysis during the period 1816–1992 is given below. We note that all constitute a major change in a political system, either national or system-level.

Beginning and Endpoints of Enduring Rivalries

As we noted in chapter 2, determining the beginning and end dates for rivalries poses difficult problems. The first behavioral indicator that a rivalry exists is the beginning of the first militarized dispute in the rivalry. Analogously, the last behavioral indicator for the end of the rivalry is the end of the last militarized dispute. Our position (see chapter 2 for details) is that the rivalry begins “sometime” in the 10 years before the first dispute and ends sometime in the 10 years following the last dispute in the rivalry. It is evident that it is difficult to pinpoint the exact date of rivalry termination, much as it is difficult to point with certitude that cancer has been cured. Just as rivalries may have no concrete starting or ending point, so too do political shocks occur over time. For example, we can say with some degree of validity that the USSR collapsed around 1991, but specifying a month or a day would be false and misleading.

⁴Note that the shocks and their geographic impact are more narrowly defined than in an earlier study, Goertz and Diehl 1995b. This was done in order to make a more accurate specification. The narrower operational definition also provides a more stringent test of our claims about the relationship between such shocks and the initiation and termination of rivalries.

TABLE 11.1: Political Shocks, 1816–1992

System Level
World Wars
World War I, 1914–1918
World War II, 1939–1945
Territorial
1884–1894
1956–1962
Power Distribution
1859–1871
1890–1901
1989–1992

State Level
National independence
Civil war
Regime change
Democratization

Furthermore, it will normally take time for the effects of the political shock to work their way through the political process.

Because we consider the rivalry to have begun sometime in the 10 years prior to the first dispute, we look for political shocks during that period. We include the first dispute in this as well since, for example, a world war might be simultaneously a shock and the first dispute in the enduring rivalry. Similarly for rivalry termination, we see if a shock occurs simultaneously with the last dispute or in the following 10 years. For example, the last dispute in the Franco-German rivalry was World War II, which is one of our system shocks; hence, we consider this case to support our hypothesis. One did not really know that the rivalry was over until the U.S. occupation of Germany was completed and the Germans regained control over their government. Given the character of political shocks and the fuzziness of beginning and end dates, we believe that our procedure provides an acceptable compromise, as it does not impose specific dates on phenomena that have none.

Empirical Results

In looking at the effects of political shocks on enduring rivalries, we consider the impact on the beginning and end of rivalries as well as how the effects vary in comparison to proto-rivalries.

TABLE 11.2: Political Shocks at the Beginning of Enduring Rivalries

Necessity			
	No shock	Shock	
	4.8%	95.2%	
	(3)	(60)	
Confidence interval for $\hat{p} = .952$ (3/63) is [.87,.99]			
Trivialness			
	No shock	Shock	Total
No initiation	167	648	815
Rivalry initiation	3	60	63
Total	170	708	878

Note: Pearson $\chi^2(1) = 9.27$, $p = 0.002$.

Fisher's exact test = 0.001.

One-sided Fisher's exact test = 0.001.

Ns in parentheses.

The Beginning of Enduring Rivalries

In looking at the beginning of enduring rivalries, we anticipate that they will be conditioned by a political shock sometime in the previous 10 years. Yet because there is a variety of shocks and individually they are infrequent, not all rivalries will begin with the same shock. We first look at the aggregate results to see how many enduring rivalries began following a shock of any sort; these results are given in table 11.1. Over 95 percent of enduring rivalries begin within the 10 years following any of the political shocks. The only three enduring rivalries not proximate to a political shock at their outset were those between the United States and United Kingdom, Brazil and the United Kingdom, and France and Germany in the militarized rivalry beginning in 1911. This strong finding largely confirms our argument that political shocks are virtual necessary conditions for the onset of rivalries.

We need to open a methodological parenthesis here concerning our hypothesis and the means to test it. We have proposed that a political shock opens a window of opportunity for the initiation of enduring rivalries: it provides a necessary condition for their initiation. This is similar in content and form to Kingdon's (1984) hypothesis that a favorable political context is a necessary condition for an item to make it onto the agenda.⁵ The hypothesis states: given that the rivalry has begun, we will find a political shock associated with it. This

⁵Kingdon (1984) does not use the exact words *necessary condition*, but he frequently says that the probability of an item making it onto the agenda is very low without a window of opportunity. This in substance is a necessary condition.

means that we need examine only the beginnings of enduring rivalries. This is a key point because it appears that we are selecting on the dependent variable. In fact, we are. As Dion (1998) demonstrates, this is legitimate in the case of necessary condition hypotheses. This works here because of the statistical form of the hypothesis: *given* that rivalries begin, we find them preceded or accompanied by political shocks. In statistical terms, this means that we are looking at the independent variable given dependent variable, the reverse of the usual specification. Substantively, we view political shocks as part of the cause of rivalry initiation and termination, but given the form of our hypothesis, a necessary condition, the methodology for testing changes significantly (for details see Dion 1998; Braumoeller and Goertz 1997; and Harvey 1998).

A second key methodological point is that the null hypothesis here is that rivalry initiation is always associated with political shocks. Our hypothesis is that a political shock is a necessary condition for rivalry initiation; this is then the null hypothesis, and (in terms of table 11.1) the shock-within-ten-years column should be 1.00.⁶ The appropriate statistical test is thus a *p*-test that the proportion of position cases is 1.00. As Braumoeller and Goertz (1997) demonstrate at length, however, necessary condition hypotheses are never tested correctly in this fashion (e.g., Bueno de Mesquita 1981). They also discuss the problems with using the 1.00 standard as the null hypothesis and suggest using .95 instead. They propose as a statistical test that one construct a confidence interval around the observed proportion, and if that interval includes .95, then the necessary condition or null hypothesis is accepted. We note that this test is a much tougher one to pass than the usual, and incorrect, 2×2 measures of association (e.g., Yule's *Q* in the case of Bueno de Mesquita).⁷

As table 11.1 indicates, we find that the political shock hypothesis is supported by the data for rivalry initiation. The observed proportions of shocks within 10 years is .952 (3/60); hence a confidence interval constructed around this certainly includes the null hypothesis value of .95. Thus, one has no reason to reject the necessary condition hypothesis. We find that political shocks do set the stage, opening a window of opportunity for the initiation of enduring rivalries.

We believe that the above results demonstrate that shocks are necessary conditions for the initiation of rivalries. Nevertheless, one criticism may be that we have coded so many shocks that the strong results are guaranteed, and therefore the necessary condition is a trivial one; a similar critique is made of Bueno de Mesquita (1981) by Majeski and Sylvan (1984). Here we need again to open a methodological parenthesis to discuss the concept of a "trivial" necessary condition. Although most have an intuitive notion of what this means, we

⁶Another peculiarity of necessary condition testing is that the researcher *wants* to accept the null hypothesis, contrary to the usual situation where rejection supports the substantive hypothesis.

⁷Braumoeller and Goertz (1997) require also a second test based on power considerations for necessary condition hypotheses, but this is only relevant to small-*N* (i.e., 5–10) studies. All our hypotheses pass this test.

need a concrete and statistical definition. Braumoeller and Goertz (1997) provide a conceptual analysis of trivialness and suggest a statistical measure for it. Generally, for our purposes, it revolves around seeing whether there were frequent political shocks in years in which the enduring rivalry did *not* begin and comparing that rate to the percentage of rivalries that began with shocks. The second part of table 11.1 provides this analysis. We calculated the number of years preceding the enduring rivalry when shocks did and did not occur, starting with 20 years before the beginning of the enduring rivalry.⁸ A trivial necessary condition in this context would then be that political shocks were occurring most of the time prior to the rivalry, hence not surprisingly also around the beginning point. The data in the table, however, indicate that this was not the case. Although political shocks were frequent (this is due to the 10-year impact given to each shock), both chi-square and Fisher's exact tests are significant at .002 levels. Thus, the hypothesis that political shocks are a virtual necessary condition for rivalry initiation is not "trivial," at least in the statistical sense.

It might be argued that we have only looked at enduring rivalries and not all possible dyads. Yet we did analyze the effects of shocks on all types of rivalries and found results similar to those reported above. This is not surprising in that it is often other factors beside political shocks that affect whether conflict remains isolated, evolves into a proto-rivalry, or matures to an enduring one. Thus, political shocks can be said to have an impact on the beginning of conflict, although we have not yet considered all possible dyads (including those that have not experienced conflict) for a full test of the proposition.

As another way to address the trivialness question as well as to determine the relative importance of different kinds of shocks, we disaggregate the results and examine the impact of each of the shocks at the each level of analysis. We compare the rivalry formation rate in the immediate postshock period to the 10-year period immediately preceding the shock. Because individual shocks are relatively rare, there is less of a problem in overspecifying their number. Furthermore, if shocks are important as a virtual necessary condition, then the formation rate for rivalries should be higher immediately after a shock than in earlier periods.

The results in table 11.2 exhibit a consistent pattern of enduring rivalries being more likely to begin after political shocks, although the impact varies according to the type of shock. In most cases, there is a dramatically lower formation rate for rivalries in the decade before a shock. New rivalries are far more likely in 10 years after a shock, and this is consistent for all types of shocks. If shocks were merely incidental, it seems unlikely that such a pattern would emerge across all levels of analysis and shock types.

⁸Clearly, not all countries existed as states 20 years before the enduring rivalry started; in those cases we went back as far as possible.

TABLE 11.3: Shocks and Rivalry Initiation: Comparison Across Time

Shock	0–10 Years after shock, %	0–10 Years before shock, %
World wars	39.7 (25)	9.5 (6)
Territory-system	52.4 (33)	9.5 (6)
Power-system	9.5 (6)	7.9 (5)
Independence	38.1 (24)	7.9 (5)
Civil war	31.8 (20)	19.1 (12)
Regime change	52.4 (33)	34.9 (22)
Democracy	20.6 (13)	17.5 (11)

Note: *Ns* are given in parentheses.

Most notable is the effect of some shocks at the system and state levels. World wars and territorial shocks are about five times more likely to generate new rivalries than periods without such shocks. At the state level, enduring rivalries are over four times more likely to start in the period after one state achieves its independence than in the control group time periods; 24 of the rivalries begin immediately after such a shock and only five in the previous 10-year period.

The results in table 11.2 indicate that our general results are not the product of a weak or trivial necessary condition. In all cases, we see a significant difference—sometimes dramatic—in the rate of rivalry formation immediately after a shock as compared to control group periods.⁹ This analysis guards against the claim that our table 11.1 results are spurious. Looking at individual shocks, which are relatively small in number, we see a consistent pattern across shock type and level of analysis, suggesting that shocks truly influence the formation of enduring rivalries. The result is not merely a function of an excess of coded shocks.

Overall, the results conform to our expectations. Almost all of the enduring rivalries begin after some kind of political shock, suggesting that such events are virtually necessary conditions for the onset of rivalries. The results also

⁹In an earlier study, Goertz and Diehl 1995b, we also confirmed that rivalry formation was lower in the 11 to 20-year period after the shock as the shock effect decayed and even lower in all other nonshock years, for each type of shock.

TABLE 11.4: Political Shocks and the Termination of Enduring Rivalries

	Shock	No shock
All cases	90.5%	9.5%
	(57)	(6)
Confidence interval for $\hat{p} = .905$ (6/63) is [.80,.96]		
Uncensored cases	76.9%	23.1%
	(20)	(6)
Confidence interval for $\hat{p} = .769$ (6/26) is [.56,.91]		
Quasi-censored cases	80.6%	19.4%
	(25)	(6)
Confidence interval for $\hat{p} = .769$ (6/26) is [.625,.93]		

clearly indicate that rivalries begin at a much higher rate than in other periods, suggesting that shocks really do matter.

The End of Enduring Rivalries

The results for the end of enduring rivalries mirror those for the onset of those competitions, and the empirical findings are given in table 11.3. Over 90 percent of the rivalries had their last dispute in the 10-year period after a political shock. Yet these strong results may distort the magnitude of the effect. Thirty-nine of the 65 rivalries studied here had not yet ended in 1992, when the study stops. The censored cases are treated “as if” they had ended as of their last dispute. Because the censoring date of 1992 coincides with the system shock of the end of the Cold War, all the censored cases get coded as ending with a shock. Obviously, some of the censored rivalries terminate because of the end of the Cold War; just as obviously, some will continue. If we confine our analysis to those rivalries that actually ended (uncensored cases), a more conservative comparison the impact of political shocks is still evident. Almost 77 percent of the rivalries ended with a political shock, again suggesting something like a necessary condition, albeit slightly weaker than with the beginning of rivalries. Using the Braumoeller and Goertz (1997) test, we find that the confidence interval does not include .95 (although only barely so), and hence does not support the necessary condition hypothesis.

We include in table 11.3 results with what we label *quasi-censored* rivalries, those that seem likely to have ended with the collapse of the USSR. Using this set of enduring rivalries, we find that almost 81 percent ended with political shocks. As table 11.3 indicates, even in this case the confidence interval does not cover .95, though it comes closer, ending at .93.

We found six rivalries that did not end with a political shock: with the date of their last disputes they are United States–China (1972), Brazil–United

TABLE 11.5: Shocks and Rivalry Termination: Comparison Across Time

Shock	0–10 Years after shock, %	0–10 Years before shock, %
World wars	12.7 (8)	11.1 (7)
Territory-system	6.3 (4)	4.8 (3)
Power-system	63.5 (40)	4.8 (3)
Civil war	4.8 (3)	0 (0)
Regime change	42.9 (27)	46.0 (29)
Democracy	39.7 (25)	33.3 (21)

Note: *Ns* are given in parentheses.

Kingdom (1863), United Kingdom–Germany (1921), United Kingdom–Russia (1923), Greece–Bulgaria (1952), and Jordan–Israel (1973). Of these we note that several ended in the wake of major wars, civil or international. United Kingdom–Russia and Greece–Bulgaria end following civil wars, while United Kingdom–Germany and Jordan–Israel terminate following serious international wars.¹⁰ If we consider that four of these six “exceptions” actually support the spirit of the political shock hypothesis, we arrive at 24 of 26, or 92 percent of the uncensored cases following the political shock hypothesis and 29/31 or 94% of the quasi-censored cases favoring the hypothesis. Clearly these numbers pass the necessary condition tests described above.

Again we conducted for the end of rivalries disaggregated analyses similar to those for the beginning of rivalries. The findings in table 11.5 are weakly supportive of the importance of shocks. At the system level, there is a marginal impact from world wars and territorial shocks (the latter of which may be the consequence of rivalry termination, rather than the instigator). The most notable effects are from dramatic changes in the power distribution. In that context, rivalry termination is 13 times more likely in the 10 years after the shocks than in the decade prior to the shock. We should note, however, that this may be somewhat misleading in that the shock of the end of the Cold War is said to impact all ongoing rivalries, when in fact we can expect some of those ongoing rivalries to continue into the next century. Even excluding those cases,

¹⁰The first three rivalries technically do not fit with our expectations because they experienced one, but only one, dispute after the political shock. The last case is one in which the 1973 war does not qualify as a systemic political shock, but did have a significant impact on Middle East relations.

however, the effect is still significant, and power shocks may play an important role in ending rivalries. Endogenous shocks at the state level appear weakly related to enduring rivalry termination. In most cases the direction of the results supports the punctuated equilibrium model, but rarely in a strong fashion.

In summary, we find some support for the punctuated equilibrium model and its emphasis on political shocks as important in rivalry termination. Nevertheless, the results are not as strong or consistent as for rivalry initiation. If we take only uncensored or quasi-censored cases, the data fail to pass the necessary condition statistical test. Nevertheless, if we examine the six exceptions, four of them generally support the political shock hypothesis; recoding these would make both the uncensored and quasi-censored data pass the statistical tests. Disaggregated analyses also showed a clear, but weak, pattern of more frequent rivalry termination after political shocks than in preshock periods. We conclude that political shocks are a weak necessary condition for rivalry termination. Although they appear to play a role, much remains to be explained.

Extending the Political Shock Approach to Proto-Rivalries

We have already seen that enduring rivalries are sensitive to political shocks, but the same logic might apply to proto-rivalries, not to mention what we have called isolated rivalries. With respect to the onset of rivalries, we anticipated that shocks would be “just as necessary” for proto- as for enduring rivalries. Indeed, an empirical analysis demonstrated no great difference between enduring and proto-rivalries in their formation (almost 85 percent of proto-rivalries begin with a political shock, as compared to over 95 percent of enduring rivalries). Individual shock analysis also systematically shows proto-rivalries to be slightly less inclined to begin with a shock than enduring rivalries. Political shocks only help generate militarized disputes. Whether those disputes are repeated and evolve into an enduring rivalry is determined by other factors occurring after the political shock. In that sense, political shocks are windows-of-opportunity for both enduring and proto-rivalries.

We conceive of political shocks as “more strongly necessary” for the end of enduring rivalries than the proto variety. Because enduring rivalries represent a peculiar kind of stability in international affairs, we thought that they would be more difficult to dislodge than other phenomena, hence the increased necessity of shocks. Shocks may be essential to that process, but many enduring rivalries weather those changed circumstances. Empirical findings do not, however, fully support these expectations. Overall, proto-rivalries are about as likely to end with a political shock as enduring ones (less likely for all cases, actually more likely for uncensored ones). An analysis of individual shocks indicates a pattern that proto-rivalries are indeed at least twice as likely to end in some cases as are enduring rivalries from shocks such as territorial and civil war ones. Nevertheless, in other cases the magnitude of differences, although still in the predicted direction, is small. In the case of power shocks, however, enduring

rivalries look much more vulnerable than proto-rivalries, perhaps because such power relationships play such a critical role in the most serious elements of international relations discourse.

Conclusion

The punctuated equilibrium model argues that enduring rivalries represent a peculiar kind of stability in international relations. We earlier demonstrated that such stability in international rivalries is not easily disrupted, and in this chapter hypothesized that a shock of some type was necessary to upset that continuity. In particular, we hypothesized that political shocks at the systemic and state levels would be necessary to start or end a rivalry. Our expectations have largely been confirmed. Over 95 percent of enduring rivalries began with at least one shock. Over three-quarters of the enduring rivalries that ended within the time period of study did so immediately following a political shock.

In general then, political shocks set the stage for the creation and termination of international conflict, including enduring rivalries. In that sense, they are virtual necessary conditions. Whether a conflict develops into an enduring rivalry or merely is a proto-rivalry depends a variety of factors unrelated to shocks. The same proves true for rivalry termination; after a political shock the rivalry is ripe for resolution, but other factors need to enter in to complete the set of sufficient conditions. What is clear is that shocks are vital ingredients in these processes.

Political shocks matter because they compel, sometimes at least, leaders and peoples to conclude that foreign policies need to be changed. We think this particularly true at the end of enduring rivalries; the fact that a rivalry has become enduring in some sense indicates that foreign policies have failed over a long period of time. Leng (1993) indicated how insensitive that realpolitik thought was to any kind of disconfirming evidence. The recent exchange between Vasquez (1997) and (neo)realists only confirms Leng's findings.

