

CHAPTER 7

A Punctuated Equilibrium Model of Enduring Rivalries

Our project consists of two connected parts, the first is a new way of thinking about international conflict—the rivalry approach; the second involves exploring an important class of conflict phenomena suggested by the rivalry approach—enduring rivalries. In part 1, we focused on the rivalry approach by defining the core concept of international militarized rivalry and then looking at the theoretical and methodological implications of investigating international conflict phenomena using this theoretical framework. We found that the rivalry approach had major implications for thinking about and conducting research on questions of deterrence, crisis behavior, the democratic peace, and other aspects of war and peace.

In this second part of the book, we concentrate our efforts on enduring rivalries as empirical phenomena. The empirical patterns noted in chapter 3 indicate that enduring rivalries encompass a large portion (in some cases a majority) of the most violent international conflict over the past two centuries. Thus, in some sense, understanding enduring rivalries becomes a central component of understanding international conflict in general. Furthermore, to the extent that policy relevant guidelines can be derived from analyses of international conflict, those that help ameliorate the most deleterious aspects of enduring rivalries must have the highest priority on any research agenda.

Until recently enduring rivalries as conflict phenomena have escaped study by students of international war. The first part of this book showed that the rivalry approach sheds new light on many theories of war. Now, we argue that one needs a *model of enduring rivalries*.

By replacing “war” with “enduring rivalry,” we fundamentally change the research and theoretical enterprise. For the last 30 years conflict research has used war or dispute occurrence as the consensus dependent variable. With the rivalry approach, we suggest that other aspects of international and militarized conflict deserve attention. When we move to enduring rivalries as the focus,

we no longer have just one dependent variable, but multiple ones. Using the life-cycle metaphor, we find that there are three major categories of dependent variables. The first involves (enduring) rivalry birth. Here the two key questions are “why do rivalries start?” and “why do some rivalries become enduring?” Symmetrically, a second class of questions inquires about enduring rivalry termination and conflict resolution: why and when do enduring rivalries end? The third, large and heterogeneous, class consists of questions about the growth, development, and evolution of enduring rivalries.

We examine aspects of those three dimensions of the enduring rivalry life-cycle. Although we present more specific hypotheses about the beginning, evolution, and termination of enduring rivalries, we do so within a general model that encompasses all three and what we call the *punctuated equilibrium model of enduring rivalries*. We use the *punctuated equilibrium* label because our model shares many characteristics with the biological theory of punctuated equilibrium. The biological theory stresses the very uneven rates of species evolution, arguing that it occurs in spurts followed by long periods of stasis and no change. Species evolve rapidly, change little, and then go extinct quickly. This, we will argue, is the dominant pattern in enduring rivalries. States rapidly lock-in to enduring rivalries, which then change little until their rapid demise.

In the second half of this book, we propose the punctuated equilibrium model of enduring rivalries and use it as a guide to analyze several aspects of enduring rivalries. In adopting this biological framework, we borrow from the models that have revolutionized the study of evolutionary biology over the past several decades, but we also profit from the insights gained by using such models to understand political phenomena, mostly notably studies of public policy formation in the United States. Our contention is not that biological systems are identical to those occasioned by enduring rivalries, but rather that the punctuated equilibrium model in biology offers a useful and heuristic analogy by which to understand the dynamics of enduring rivalries. In describing this model, we begin by briefly discussing the biological aspects of the punctuated equilibrium model—particularly those of relevance to us—and then move to discuss its application to public policymaking. With this groundwork, we then discuss its general application to enduring rivalries. We leave specific applications, hypotheses, and empirical analyses to the four substantive chapters in this part of the book.

The Punctuated Equilibrium Model and Its Biological Origins

For decades—since the 1940s—what Julian Huxley identified as “the modern synthesis” dominated the thinking of evolutionary biologists. Prior to this synthesis, a “bewildering array of evolutionary process theories existed, each touted by a different biological discipline seemingly bent upon establishing the primacy of its own phenomena and its own insights” (Eldredge 1985, 3). The

modern synthesis combined Darwin's theory of natural selection with the discovery of how genes produce variation upon which natural selection can work. Perhaps most elegantly summarized by Gould (1983, 13), the synthesis emphasized "gradual, adaptive change produced by natural selection acting exclusively upon organisms [i.e., not species]." The standard theory thus saw evolution occurring everywhere, all the time, and in an incremental fashion.

It was from a group of paleontologists outside the core of evolutionary theory (often formal and mathematical) that arose the challenge to the gradualist vision of natural selection (see Eldredge 1995 for an account of the admission of paleontologists to the "high table" of evolutionary theory). The fossil record produces little evidence for the incrementalist position. That is, the literal geological record was more supportive of abrupt changes: most fossil species disappear looking much the same as when they appeared, while new species in any local area appear abruptly and fully formed. Traditionally—starting with Darwin—this was deemed the result of the rarity and poor quality of the fossil record.

In 1972, Eldredge and Gould proposed the punctuated equilibrium model, which instead of explaining away discrepancies between data and the standard theory devised a theory that matched more directly the fossil record (see Eldredge 1995 for a survey and overview). The punctuated equilibrium model portrays evolution as primarily the product of rapid speciation. The model suggests a process characterized by long periods of stasis punctuated by the sudden appearance of new, qualitatively different species. Unlike the standard model, the punctuated equilibrium model regards speciation and evolution as rare, occurring in specific and unusual circumstances.

As Gould recounts (1987, 37), scholars working in the modern synthesis only looked for gradualist evolution in choosing their cases for study. "Over and over again in my career I have bashed my head against this wall of non-reporting [of null results]. When Niles Eldredge and I proposed the theory of punctuated equilibrium in evolution, we did so to grant stasis in phylogenetic lineages the status of worth reporting—for stasis had previously been ignored as nonevidence of nonevolution, though all paleontologists knew its high frequency." With the punctuated equilibrium model in hand, biologists began to "see" long-term stasis in species as well as periods of rapid speciation.

The most novel of the rare speciation propositions was the suggestion that the birth and death of most species occur during periods of major environmental change and shock. The most famous of these is the claim that a large asteroid hit the earth about 60 million years ago, causing the extinction of 65–70 percent of all existing species (Raup 1992). The evolutionary window of opportunity that this event opened resulted in the rise of thousands of new species.

The punctuated equilibrium model also stresses that speciation comes about through geographic isolation: "a small segment of the ancestral population is isolated at the periphery of the ancestral range. Large, stable central

populations exert a strong homogenizing influence. New and favorable mutations are diluted by the sheer bulk of the population through which they must be spread. They must build slowly in frequency, but changing environments usually cancel their selective value long before they reach fixation. . . . [Still] small, peripherally isolated groups are cut off from parental stock. They live as tiny populations in geographic corners of the ancestral range. Selective pressures are usually intense because peripheries mark the edge of ecological tolerance for ancestral forms. Favorable variations spread quickly [speciation]. Small, peripheral isolates are a laboratory of evolutionary change” (Gould 1983, 183–84). This, however, was already part of the modern synthesis, particularly due to the work of Mayr (1970). Today, almost three decades after it was first introduced, the punctuated equilibrium model has been accepted by a majority of evolutionary biologists (Gould and Eldredge 1993).

For us the essential elements of the biological version of punctuated equilibrium are that species do not necessarily evolve in a linear and incremental fashion, but experience long periods of stability and experience change in a rapid and sometimes unpredictable fashion. Massive shocks are needed to upset that stability and provide windows of opportunity for new species to arise. Such notions have influenced a number of studies that seek to understand how policy agendas are formulated and alternatives selected in American policy-making.

Punctuated Equilibrium in Public Policy Studies

Just as the gradualist model has dominated biological thinking on evolution, so too has incrementalist thought held the center stage in research on U.S. domestic policy and budgeting. Wildavsky’s (1975) work has perhaps been the most influential in establishing the incremental model. In his study of organizational behavior, he found that incrementalism (linear change) described the behavior of bureaucracies well.

Just as the punctuated equilibrium approach questioned traditional biological models, so has the incremental model been challenged by those that note large shifts in the policy process (Tucker 1982). John Kingdon (1984) authored among the first and most influential of these studies. Kingdon’s research suggested that the agenda-setting component is best conceptualized as independent streams of problems, policies, and politics awaiting periodic, albeit fleeting, opportunities for policy choice (this is largely based on the “garbage can model” of Cohen, March, and Olsen 1972). Within this organized anarchy, problems frequently chase solutions and vice versa. Moreover, the availability and popularity of particular solutions—not any inherent priority or urgency of public problems—help determine which subjects come up for consideration on the decision agenda. The likelihood of a particular condition becoming a public problem worthy of action, and for one policy solution to arise from amid the primeval soup of possible alternatives to address it, is increased if a coupling

or linking of the problem, policy, and political streams occurs. When this confluence occurs, government action is taken against a problem. For this to happen, policy windows occasioned by problem opportunities must open, and viable solutions must be available and then be coupled to the problem by entrepreneurs operating within policy communities. The political environment (e.g., the national mood or partisan predispositions in the U.S. Congress) also must be amenable to policy change (for applications beyond the American political context, see Zahariadis 1996).

For Kingdon, the specific policy alternatives considered viable for selection within the policy stream remain incremental. In describing the dynamics of the policy stream, he argues that alternatives become viable for consideration only after undergoing a prolonged “softening” process. As a result of softening, an alternative’s workability, affordability, and legitimacy are established within the relevant policy communities. If alternatives change, they develop more through recombination than by mutation. In sum, Kingdon’s overview of the agenda-setting component portrays a decidedly nonincremental ebb and flow of agenda items that appear and disappear with striking rapidity. In contrast, the set of policy alternatives available for addressing these items is portrayed as distinctly incremental, with alternatives evolving out of previous policy options or combinations thereof. “There may be no new thing under the sun at the same time that there may be dramatic change and innovation” (Kingdon 1984, 210).

Kingdon’s model of the policymaking process brought the idea of rapid change to the forefront, although he did not use the label *punctuated equilibrium* and still regarded policy alternatives as arising incrementally. Other scholars were soon to challenge those ideas and rely more heavily on the punctuated equilibrium analogy. Durant and Diehl (1989) explicitly adopted the moniker of punctuated equilibrium and argued that the elements of the foreign policy process can be characterized by rapid change and “pure mutation.” Thus, some foreign policies, in their view, can be understood only by reference to a punctuated equilibrium process. Consistent with this is the idea that foreign policy attitudes of leaders and elites are relatively stable over time and are disrupted only by dramatic shocks (Russett 1990).

Other analyses of policymaking began to contain language and descriptions consistent with punctuated equilibrium. As conceptualized by Yehezkel Dror (1984), policymaking as “fuzzy gambling” refers to decision contexts characterized by unknowable consequences, problematic probabilities, and disruptive discontinuities or jumps. In his words, policymaking is “an unstable casino where the rules of the game, their mixes of chance and skill, and [their] payoffs change in unpredictable ways during the game itself, where unforeseeable forms of external ‘wildcards’ may appear suddenly” (9) and where “it is impossible to draw conclusions on the quality of policy making from its results”

(13). In short, fuzzy gambling scenarios are notable for the uncertainty, unpredictability, and surprise associated with the decision environment itself, with specific policy alternatives, and with disparate policy outcomes.

We noted above that scholars of evolution traditionally did not look for stasis because their theories emphasized change. A parallel has occurred in the policy literature. Wildavsky (1975) himself noted that occasionally large shifts occurred in budgeting forcing him to reestimate regression lines. Nevertheless, given his incrementalist framework, he made little of this phenomenon.

Starting from a punctuated equilibrium position, Baumgartner and Jones (1993) describe the policy process as one that is characterized by rapid changes and long periods of stasis. "Rather than making moderate adaptive adjustments to an ever-changing environment, political decision making is characterized sometimes by stasis, when existing decision designs are routinely employed, and sometimes by punctuations, when a slowly growing condition suddenly bursts onto agendas of a new set of policymakers or when existing decision makers shift attention to new attributes or dimensions of the existing situation. Complex interactive political systems do not react slowly and automatically to changing perceptions or conditions; rather, it takes increasing pressure and sometimes a crisis atmosphere to dislodge established ways of thinking about policies. The result is periods of stability interspersed with occasional, unpredictable, and dramatic change" (Jones, Baumgartner, and True 1998, 2). Thus, they find that the incrementalist or gradualist story is not so much wrong as partially true. Incrementalism and stasis describe long periods of the policy process. For Baumgartner and Jones (1993), many of the punctuations that prompt policy change are exogenous. Nevertheless, they also recognize that positive feedback mechanisms endogenous to the institutions of government can prompt such dramatic changes as well. They also make reference to new institutional actors and new ways of conceiving the relevant issue or problem as sources of change.

Jones, Baumgartner, and True (1998) tested their punctuated equilibrium model by analyzing U.S. budget allocations in the post-World War II era. They report dramatic changes at three points in the 48-year period studied, with largely incremental change occurring otherwise. Importantly, the punctuated equilibrium model is compelling, even controlling for three rival explanations. Overall, they argue that stability interrupted by dramatic change is characteristic of processes throughout national government and not confined to a few programs or subsystems. They are not alone; others (Casstevens 1980; Mayhew 1991; Peters and Hogwood 1985) have found that short periods of intense policy activity leave a substantial institutional legacy.

Military budgets provide one link between the domestic literature on policy and the concerns of international relations scholars. Here, as with other budgets, if one examines (peacetime) spending, one tends to find incremental change. But a number of scholars (Russett 1970; Diehl and Goertz 1985) have

noted a ratchet effect in military spending due to major wars: military spending increased dramatically during war, but rarely does spending return to the prewar levels in the aftermath of that war.

As in evolutionary biology, studies of public policymaking have shifted away from approaches that emphasize gradualist processes and incremental change to those of the punctuated equilibrium model. We now attempt to make a further extension of that model to international conflict processes.

Punctuated Equilibrium and Enduring Rivalries

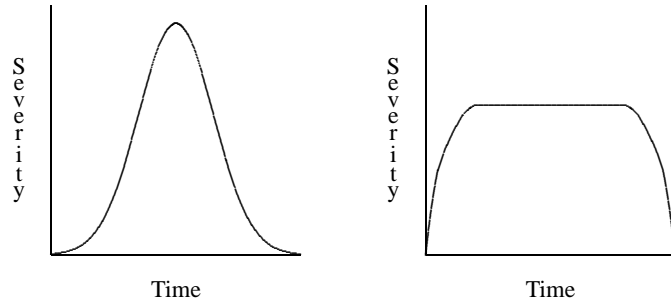
As with punctuated equilibrium in biology and policy studies, the rivalry approach points out aspects of international political life that scholars “knew,” but that were never acknowledged, largely because of the lack of a theoretical framework that could make sense of them and the general tendency toward linear thinking. The rivalry approach remarks that many international conflicts are linked together in an ongoing relationship. This appears particularly obvious in the case of enduring rivalries. Yet, with rare exceptions, students of war have treated these conflicts as isolated cases.

The punctuated equilibrium model in biology emphasizes the stability of most species throughout most of their lives. The punctuated equilibrium framework for rivalries does likewise. Once we shift the focus of analysis from crisis and war to militarized relationships, we can see that enduring rivalries in particular evidence a great stability. The emphasis on stability and stasis was novel in biology, and it is also not part of any standard international relations theory of war. Except for the (neo)realists, who make broad assumptions about the perpetuity of international anarchy, little in international conflict theory stresses issues of stability (though see Goertz 1994 for an extended analysis).

There are some interesting potential links between organizational theories of foreign policy and rivalries. As the result of Allison’s (1971) work in the 1970s, the organizational model was an important approach to foreign policy. In the mid-1970s, however, this approach lost momentum, although it has not disappeared. For example, Rhodes (1994) found that the U.S. Navy has followed a 15-capital-ship policy since the Washington Naval Treaty of 1922. In a different framework, these issues have resurfaced recently in “cultural” approaches to international relations (Katzenstein 1996; Legro 1994; Rhodes 1994). For example, if one compares the treatment of the Red Cross by the French military in the period 1860–1920 (Hutchinson 1996) with Kier’s discussion (1995) of French interwar military culture, one cannot help but notice many commonalities. Legro (1997) also discusses the organizational resistance to change in World War II.

From our point of view, however, both foreign policy organizational models in the Allison tradition and the social constructivist literature, like their incrementalist domestic politics cousins, stress stasis but do not include the rapid change component so important in the punctuated equilibrium model.

FIGURE 7.1: Punctuated Equilibrium and Incrementalist Models

Figure 7.1a:
Incrementalist ModelFigure 7.1b:
Punctuated Equilibrium Model

The application of the punctuated equilibrium model to enduring rivalries rests on the ideas that enduring rivalries, once established, are relatively stable phenomena over time until they are dislodged by environmental shocks. Figure 7.1 illustrates the difference between the traditional view of biological evolution and the punctuated equilibrium model, and the corresponding differences between a punctuated equilibrium approach to enduring rivalries and a gradualist one. Figure 7.1a shows the gradual rise of the species/rivalry followed by a gradual decline. Figure 7.1b contrasts this with evolutionary change that is rapid at the beginning, followed by a long period of stasis, and ending with rapid death.

The first characteristic of the punctuated equilibrium model is stability. We argue that enduring rivalries exhibit consistent patterns over their lifetimes, and there is no secular trend in conflict behavior within the rivalry. Chapter 9 tests such a proposition as we examine patterns of conflict behavior that are consistent with this expectation as well as those suggested by alternative formulations. Chapter 10 looks at conflict management in enduring rivalries. A punctuated equilibrium suggests that attempts to manage conflict by exogenous forces are likely to have limited impact on the stable processes of enduring rivalries, and we empirically examine this proposition. Further expectations derived from the punctuated equilibrium model are explored in these two chapters on rivalry stability.

Although the punctuated equilibrium model predicts stasis for most of the life of a species/policy/enduring rivalry, it does expect rapid change at the beginning and end of the process. Much work in paleontology has confirmed this in the biological context, and the U.S. domestic policy literature contains similar findings. If one examines a policy at random for a short period of time, one is likely to find stasis or incremental change. It is necessary to examine the long term or focus on specific beginning or end periods to evaluate the punctuated equilibrium model. Jones, Baumgartner, and True's (1998) recent work

on budgeting illustrates this: they have looked at budgeting over a much longer period than previous studies because one cannot evaluate the punctuated equilibrium model otherwise. Only when one examines budgets over the very long term does the punctuated equilibrium pattern emerge. In the case of military budgets, it is only when one compares prewar with postwar budgets that the punctuated equilibrium effect appears.

The same holds true for enduring rivalries. If one chooses isolated crises, more or less at random, or puts all disputes in one statistical hopper (a cross-sectional analysis), then one cannot evaluate the punctuated equilibrium framework. Because the punctuated equilibrium model predicts rapid change at the beginning and end of enduring rivalries, we shall focus special attention on these periods.

All this makes sense only once one is using the rivalry as the object of analysis. Within biology, one notable aspect of the punctuated equilibrium model was to refocus attention on the species level of analysis. In standard, mathematical, or genetic models of evolution, species played no real role, as evolution was changing genetic makeup. Punctuated equilibrium stressed evolution at the species level. Genes, of course, are involved but *within* the species. Not surprisingly, there have been sharp exchanges between Gould and Eldredge, on one hand and biologists like Dawkins, on the other, who see evolution taking place only at the genetic level (not surprisingly, Dawkins's best-known book is called *The Selfish Gene*, 1989).

The parallel with the rivalry approach is clear. We emphasized in the first part of this volume that new research questions and issues arise when one moves from the dispute as the object of analysis to the rivalry as the focus. Rivalry as the level of analysis corresponds, then, to the species and the individual dispute to the gene. At the core of the rivalry approach is the idea that we cannot understand key aspects of war and peace by looking only at wars and disputes (genes) taken in isolation from the rivalry relationships (species) in which they are embedded. We can find a similar situation in the study of (domestic) policy. A "policy" almost by definition implies multiple "decisions," as the policy is implemented over time. One can focus on the policy or on the individual decisions made "within" the policy. To simplify, *policy* implies multiple decisions over the long term, while *decisions* are onetime actions. Rational actor models privilege the decision, while organizational models stress the policy. Both are instrumental, but they imply quite a different view of government behavior. Not surprisingly, because enduring rivalries involve long-term conflictual relationships, we emphasize a policy model of state behavior. The punctuated equilibrium approach suggests that states make relatively long-term policy commitments and then stick with them, until some change in the environment dislodges those preferences and policy choices. We find it natural, then, to link our punctuated equilibrium model of enduring rivalries to Baumgartner and Jones's (1993) punctuated equilibrium model of domestic policy. For us,

enduring rivalries are a special case, international politics, of the policymaking pattern common in domestic politics.

Another prominent characteristic of the punctuated equilibrium model, besides stasis, is the stress on environmental shocks as a key factor in the rise and decline of species. Massive environmental change—such as a large asteroid striking the earth—kills off many species and at the same time provides opportunities for new ones to evolve. The flip side of this pattern is that species are generally quite resistant to a wide range of environmental conditions and changes. We apply a similar logic to enduring rivalries. Under a wide range of system changes, enduring rivalries prove to be quite robust. This casts serious doubt on realism, neorealism, and other theories that imply that states always respond rapidly to system changes. As subsequent chapters illustrate, many rivalries survive large- and small-scale environmental changes. On the other hand, when rivalries do emerge and die off, they do so in association with massive political shocks. Similar to the biological theory, we stress system-level shocks such as world wars. Unlike the biological theory, however, we also include political shocks endogenous to the rivals, such as regime change and civil war. The commonality is that large shocks set the stage for enduring rivalries to emerge, but also provide the occasion for their termination. Chapter 10 investigates the relationship between political shocks and the birth and death of enduring rivalries.

The window-of-opportunity concept lies at the core of Kingdon's (1984) agenda-setting model. A major reason why things move rapidly in his model comes from the opening and closing of policy windows. Although policy solutions change incrementally, windows open and shut quickly. It is usually the opening of a window that changes the likelihood of agenda success from near zero to near certainty. Within the biological and enduring rivalry versions of the punctuated equilibrium model, large shocks create windows of opportunity for change. We use the same logic as Kingdon: the opening of a window is a necessary, but not sufficient, condition for the rise or fall of an enduring rivalry. Kingdon quite clearly states that without an open window the chances of agenda success are near zero: "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" (1995, 166). Similarly, we propose that only when a window of opportunity is opened by a political shock will enduring rivalries begin or end.

Continuing with the biological analogy, enduring rivalries, like individual species, do not exist in isolation, but rather interact in various competitive and cooperative ways. Chapter 12 introduces the concept of *rivalry linkage*; this refers to the influence that (enduring) rivalries have on each other. The dynamics of an enduring rivalry may depend, at least in part, on its connection with other rivalries. Most notably linkage with a major-major power rivalry makes the enduring rivalry more severe than would otherwise be the case.

We have seen a trend in conflict studies from the system-level studies of the 1970s to an emphasis on dyads in the 1990s. The punctuated equilibrium model suggests that characteristics of the actors/rivalry matter. Something about the rivals and their relationships makes them relatively insensitive to changes in the international environment. Yet the emphasis on political shocks and linkage means system-level factors play an important role in the life cycle of rivalries.

In chapter 4, we argued that taking rivalries as a new object of analysis means that new aspects of international war and peace become visible. Thinking about international conflict in terms of rivalries allows us to observe new facets of international relations, which then incite new theory development. The punctuated equilibrium model is our response to that empirical and theoretical challenge. In the chapters to follow, we shall frequently contrast gradualist models (e.g., Hensel 1996) of enduring rivalry with those proposed by the punctuated equilibrium framework. Our goal in this second part is thus to sketch out the broad outlines of the punctuated equilibrium model and to subject them to empirical analysis.

In the coming chapters, we focus on stasis and other patterns in enduring rivalries, and the importance of shocks to the origins and ends of rivalries. We end with an examination of the importance of the linkage between enduring rivalries as a factor in explaining how severe the enduring rivalry becomes. We consider this but an introductory survey of some of the many important facets of the phenomenon of enduring rivalries. Many others remain on the research agenda, for example the organizational decision-making model on which the punctuated equilibrium model rests. We return to this and others issues in our discussion of the future research agenda in the final chapter.

Before we begin to describe more fully and test the punctuated equilibrium model in the context of enduring rivalries, we provide a broad overview of enduring rivalries in the next chapter, extending what we did for rivalries in general in chapter 3. We also review the limited extant empirical literature on enduring rivalries as it relates to the concerns of the second part of this book and the validity of the punctuated equilibrium model.

