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Testing Dynamic Theories of Conflict: Power Cycles, Power Transitions, Foreign Policy Crises and Militarized Interstate Disputes

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Explaining the causes of international strife is one of the most important problems in the social sciences. A wide range of theories have been created to account for conflict, crisis, and war that in some way relate to the dynamics of power. Two of the most prominent are Doran's power cycle and Organski's power transition. Each provides a useful framework within which to examine great power involvement in international conflict, crisis and war.

The study unfolds in six sections. The first sets out the paper's agenda. The second section briefly describes modified versions of Doran's power cycle theory and Organski's power transition theory. The third presents hypotheses about the likely effects of the power cycle and power transition on crises and disputes. Fourth, measurements are developed for the crucial ingredients, meaning disputes, crises, critical points, and transitions in relative capabilities for the great powers. The fifth section uses MID and ICB data from 1816 to 1991 to test the hypotheses. Results are mixed for both theories and suggest that further work is needed in terms of the cases selected for application. Sixth, and finally, the findings are reviewed and some general comments concerning the future direction of research on power cycle and power transition theory are offered.

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THE DYNAMICS OF INTERNATIONAL CONFLICT

Explaining the causes of international strife is one of the most important problems in the social sciences. A wide range of theories have been created to account for conflict, crisis and war that in some way relate to the dynamics of power. Doran's power cycle and Organski's power transition both provide useful frameworks within which to examine great power involvement in international conflict, crisis, and war. Doran's (1971, 1985, 1989, 1991a, 1995, 2000; Doran and Parsons, 1980) power cycle theory, which introduces time as an important element within capability-based research, already has been tested successfully on several occasions with data on war (Doran and Parsons, 1980; Doran, 1985; 1989; 1991b; Anderson and McKeown, 1978; and Houweling and Siccama, 1991), international crises (Hebron and James, 1997), and most recently in other domains such as the politics of trade (James and Lusztig, 2002).[1]

Power transition theory (Organski, 1958; Organski and Kugler, 1980; Kugler and Lemke, 1996), which asserts that parity and dissatisifaction between great powers create a lethal combination that drastically increases the propensity for war, also has been tested successfully (Organski and Kugler, 1980; Anderson and McKeown, 1987; Houweling and Siccama, 1988; Kugler and Lemke, 1996; Geller, 1998). The theory has been elaborated to incorporate issues such as nuclear deterrence (Kugler and Zagare, 1990), alliances (Kim, 1991), arms races (Werner and Kugler, 1996), the democratic peace (Lemke and Reed, 1996), and regional subsystems in the developing world (Lemke, 2002). The above-noted studies enhance our understanding of the relationship between the structural positions of leading states within the international system and involvement in war and show the potential of both power cycle and power transition theory to explain other aspects of international politics as well.

This study attempts to assess the robustness of findings through an extension, with a different data set *and* addition of a new theory, of the crisis-based analysis by Hebron and James (1997). Hypotheses from that study about the relationship between a state's power cycle position and its tendency to engage in international conflict are once again tested, but this

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[1]   A special issue of the *International Political Science Review* (Doran, 2002) reveals an even wider range of successful applications for the power cycle than in the past, including both conflict processes and political economy. The latest innovation in the research program is triangulation of its main theoretical positions through analysis of the power cycle's effects in relation to Bayesian decision-making (Doran and Doran, 2005).

time with Militarized Interstate Dispute (MID) data. Further dimensions distinguish this study from others; power transition theory also is elaborated and tested with both ICB and MID data sets. The further dimension added to power transition theory reintroduces the power transition variable that is generally ignored in more recent iterations of the theory (Dicicco and Levy, 1999). While the power transition variable receives mixed support for predicting war (Organiski and Kugler, 1980; Kim, 1991), its findings for MIDs and crises are less well known. Theories that are complementary rather than contradictory should also be noted. They rely on similar types of variables, but are measured at different levels of aggregation: systemic (power cycle) and dyadic (power transition). Thus no direct comparison of predictions by the respective theories is in order here.[2]

This study is divided into five additional sections. For ease of exposition, the first three include material from Hebron and James (1997). The first section briefly describes modified versions of Doran's power cycle theory and Organski's power transition theory. The second presents hypotheses about the likely effect of the power cycle and power transition on crises and disputes. Third, measurements are developed for the crucial ingredients, meaning disputes, crises, critical points and transitions in relative capabilities for the great powers. The fourth section uses MID and ICB data from 1816 to 1991 to test the hypotheses. Fifth, and finally, the findings are reviewed and some general comments concerning the future direction of research on power cycle and power transition theory are offered.

Power Cycles and Great Powers

Two components combine to form the theoretical foundation of the power cycle: (1) changes in relative capabilities and (2) critical points. The theory posits that a state's evolution involves a generalized, cyclical pattern of ascent, maturation, and descent. This pattern of growth and decline is explained by differing rates of international economic and political development. Although every state theoretically is subject to the full cycle of growth, maturation and decay, many have traversed only a small section of the curve in their entire existence.

Power cycle theory asserts that the ability of a state to influence international politics and play a principal foreign policy role is determined in large part by its stage of evolution. Accordingly, as a state gains power in comparison with others, its capacity to exercise leadership expands; as it falls behind, its ability to influence international politics diminishes. The role of the state is conceptualized within the international system, i.e., as a state's

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[2]   The theories have different conceptual assumptions and operationalizations. An excellent analysis of sources of conceptual, operational and interpretive divergence appears in Kohout (2003).

cycle progresses and its role changes, significant and often stressful adjustments are required of the government and the society (Doran and Parsons, 1980, pp. 947, 949). Although it is based on the concept of the state cycle of relative power, the theory in essence also focuses on system-level, evolutionary change. Collectively, the evolving power cycles of the leading states define the structure of the international system, including efforts toward redefinition (Doran, 1983b: 427).

Critical points constitute the second essential component of power cycle theory. At four junctures along each curve — known sequentially as the lower turning (**l**), rising inflection (**r**), upper turning (**u**), and declining inflection (**d**) points — a discrepancy develops between a state's ambitions and pursuits on the one hand and its tangible efficacy on the other, because of the deviation between the linearity of the former and non-linearity of the latter (Doran, 1983). The result is that a state's capacity to forecast its relative capability breaks down because the trend lines shift abruptly either in direction or rate of growth.

At these points the state must reassess its relative position, base of national capability, foreign policy goals, and capacity to reach those objectives (Taylor, 1979). This is not a simple or casual undertaking. Besides cutting into what is essential in foreign policy, it also involves adjusting and reformulating strategies for the future position of the government within the international system (Doran, 1985, p. 303). As a consequence, national leaders must either contemplate a change in foreign policy role (Thompson, 1983, p. 154) or attempt the slow and difficult task of trying to alter the trajectory of relative power.

Critical points, then, are significant because a change in slope entails a different role and creates the need to adjust to a sudden, massive change in projected ability to exercise influence within the international system (Hebron and James, 1997). Furthermore, because the foreign policy stakes at these points are viewed as extremely high — involving core values about power, status and security — the state is more susceptible to entanglement in major war (Doran, 1985, p. 294). According to the theory, at critical points the government is especially vulnerable to the over-reaction, misperception and aggravated use of force that can generate massive war (Doran and Parsons, 1980, p. 949). Its propensity to initiate or respond to aggressive actions is much greater than at other times. In sum, the core of the theory is that a dynamic, cyclical pattern underlies international relations, an idea that appears in a number of other contexts.

While the basic idea behind the impact of a critical point is consistent with intuition, the causal mechanism requires elaboration. How, in specific terms, should an agent within a system respond to fundamental change in structure? Doran (1991a) postulates that participation in interstate clashes, most notably war, can be foreseen when a great power's capabilities and self-perceived role are out of synch. This expectation is heightened if other

great powers also are at or near critical points. But what kind of activity should be expected from either a great power in transition or its peers? Is each type of critical point anticipated to have the same impact on foreign policy? Is a state in transition more likely to initiate or become the target of hostilities? (Thompson, 1983, p. 157; see also Cashman, 1993, p. 271) Furthermore, although critical points are derived by comparing rates of growth and decline, the consequent behavioral expectations are not geared to the positional movements of competitors (Thompson, 1983, p. 157).

Questions such as these can be answered only through a more elaborate treatment of the interests and goals of the individual state. The first-order proposition about war and proximity to critical points, which is supported by studies noted earlier, must be complemented by second-order propositions that expand the range of explanation. As a step toward achieving that goal, the first of the general areas of concern — unit-system linkage — will be met through the introduction of insights from the agency-structure framework.

Two key components of the agency-structure framework are the concepts of opportunity and willingness developed by Starr and his collaborators (Most and Starr, 1989; Siverson and Starr, 1991; Cioffi-Revilla and Starr, 1995; Friedman and Starr, 1999). Opportunity refers to the realm of possibility as determined by the international milieu in which a state actor must maneuver. In like manner, willingness deals with the goals and motivations of states as derived from cost-benefit analysis based on objective factors as well as perceptions and emotions. In sum, "the opportunities of international actors are constrained (or enabled) in various ways at various levels of analysis and that these constraints affect their willingness to act" (Starr, 1999).

By providing the meaning of critical points with greater precision, the incorporation of the agency-structure framework with the power cycle allows us to generate hypotheses about actions and roles among the great powers in conflict with greater accuracy.[3]

Power Transitions and Great Powers

Power transition theory also has two basic components that form its theoretical foundation: (1) the level of dyadic power parity between great powers and (2) the challenger's level of dissatisfaction with the status quo. Based on these elements, Organski (1958) attempted to explain why great powers go to war. With a pyramid as a metaphor, Organski describes the international system in terms of power distribution, with a few powerful states at the top and many weak states at the bottom (Organski, 1958). The strongest state, the dominant power, establishes and maintains the status quo to further its

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[3] Questions about timing of cause and effect are raised by Cashman (1993, p. 270) and answered by Hebron and James (1997).

ways from the series of studies by Doran and associates: The first, as discussed above, is further precision in hypothesis testing resulting from the incorporation of the agency-structure framework. A second departure is the selection of dependent variables. Whereas Doran focused on the causes of war, this study concentrates on the experiences of great powers when disputes occur. Finally, in contrast to Doran's designation of the critical interval (i.e., a period of fundamental change in a state's relative capabilities) as a causal factor, this inquiry employs the critical point (i.e., the actual point of transition).

Notwithstanding the denunciation it sometimes receives for being subjective, the concept of a great power subset or central subsystem is an indispensable component of world politics in general and power cycle theory in particular (Holsti, 1991). For any great power, relative capabilities change gradually (Doran and Parsons, 1980, p. 947). Attention, therefore, must be directed not to short-term fluctuation, but rather to long-term development of positional standing (Waltz, 1979; Grieco, 1988, 1990; James, 1993). Expectations of states, deduced from system-level knowledge, are created by the evolving proportion of capabilities each holds. The rise and decline of a state, therefore, is anticipated to affect both the quantity and type of its activity in disputes. In particular, two distinct dispute-related effects are anticipated: The first is that critical points will be identified with the overall frequency of involvement in these confrontations. The second is that trends are expected to influence a state's role and experiences in disputes and crises, referring to whether it is a challenger or defender and the outcome of events.

Each of the four critical points is expected to have an effect on a great power's dispute activity. Every point should generate a modification in orientation to the system because expectations about the future are altered. In addition, as a great power approaches and recedes from its critical points, other states have reasons to perceive and react differently. Taken together, the critical points increase the prospect that conflicts of interest will emerge. These transitional phases will be discussed initially in general terms, to be followed by a series of more exact, phase-related propositions.

Since the basic properties of the power cycle and critical points are explained in detail by Doran (1991a) and Hebron and James (1997), only an abbreviated presentation will appear. Consider a great power, which holds a given share of capabilities among its peers, ranging from a designated minimum to a theoretical maximum of 100%. (The latter instance, of course, would correspond to unipolarity.) The proportion of capabilities changes in the manner of a disturbed or irregular sine wave; the periodicity and amplitude will vary from one cycle to the next. Symmetry is unlikely. Taken together, the cycles of the great powers define the evolution of system structure.

A great power's risk propensity is expected to vary according to its shifts in position along the cycle. Morrow (1987, p. 426, 433) defines a state's risk propensity as "its ability to maintain the current resolution of the issues that it wants to preserve," while autonomy refers to "its ability to pursue the

internal and international policies that it wants." Based on this definition, a state's propensity for risk can be understood as the marginal utility of autonomy relative to security.

Time is measured in decades and critical points are not depicted as instantaneous transformations. Instead, the area demarcated around each critical point represents a phase in which consciousness of fundamental change waxes and wanes. Since capabilities are multidimensional (Small and Singer, 1982) and information is both imperfect and incomplete (especially about other states), awareness of a change or reversal in trend will not arise all at once.

Factors related to the critical points combine to produce the following hypothesis:

> H_1: Overall dispute activity will be greater when in proximity to a great power's critical points.[4]

Although both types of critical points have an impact on states, turning points affect great powers differently than do inflection points. It is therefore appropriate to test H_1 in two separate ways: including (1) all critical points; and (2) only turning points. At l, awareness of enhancement in relative standing may engender greater confidence and a more aggressive foreign policy orientation and behavior. In like manner, realization of decline at u may beget illogical misgivings and anxiety over a state's future role and ensuing stature within the international system (Doran, 1985, p. 303). Points of inflection (r and d), in contrast, embrace more subtle changes and effects, which may be less significant and/or relevant to both a great power and its peers.

Throughout each stage of the power cycle, there are expectations regarding a great power's specific role in disputes. When it triggers a dispute by questioning the status quo, a state assumes the challenger role. The defender role falls on a state that perceives a threat to one or more favorable aspects of the existing order.

Cycles of capability generate two predictions about the roles occupied by a great power in a MID. The first concerns aggregate differences between upward and downward cycles:

> H_{2a}: The disputes in which a great power is the challenger will account for a greater proportion of its activity during the upward rather than downward phase of its power cycle.

All other things being equal, relative improvement in position creates a rational basis for the pursuit of further gains. Expectations are favorable and

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[4]   Proximity is defined here as the three-year interval immediately preceding and the twelve-year interval following the critical point. The sixteen-year critical point interval has been operationalized according to the definition provided by Doran and Parsons (1980, p. 959).

optimism predominates. By contrast, relative decline encourages predatory behavior by others. Thus, in the aggregate, each cycle is expected to produce a different mixture of dispute roles. Experience and learning, of course, provide the underlying basis for these expectations.

Expectations about changing roles along the power cycle produce a second and more specific proposition about phases and disputes:

> H_{2b}: As its relative capabilities increase (decrease), the disputes initiated by a great power will represent a higher (lower) proportion of those in which it is involved as compared to elsewhere along its power cycle.

From the lower turning point to the upper turning point, a great power is in a position to expand its range of interests and influence. Since its relative power position is on the rise, a state's willingness to engage should be heightened to take advantage of this opportunity afforded by its stature. In like manner, the quest for advancement may trigger an increase in dispute involvement for the great power since this "upstart" now will be viewed as a potential threat by the "establishment." Specifically, as a great power scales up its power cycle, its role as challenger can be expected to become more frequent.

From the upper turning point to the lower turning point, the opposite situation exists. At first the great power itself will be triggering most of the disputes in which it is involved. Confronted by the prospect of a decline in its power position, the great power can be anticipated to become more aggressive in arresting the attendant effects within the system. However, as its proportion of capabilities declines, the great power becomes increasingly challenged as that process invites the initiation of disputes by other states. Hence a greater proportion of this great power's involvement in disputes will be in the defender role.

Jervis (1989) presents corroborating evidence supporting this line of reasoning about risk propensity, especially in relation to losses. Furthermore, states have exhibited a willingness to adopt risk-acceptant behavior in an effort to stifle geostrategic deterioration. Great power efforts to hold on to their colonies provide an excellent example of this aversion to loss (Ross, 1984: p. 247; James and Harvey, 1989, 1992; see also Pickering, 1999).

Expectations about the outcomes of disputes are derived from the trend in relative capabilities for an individual great power:

> H_3: The proportion of international disputes in which a great power experiences victory will be greater during ascent than decline.

A great power has a universal inclination to augment its international horizons from l to u of its power cycle irrespective of its role as challenger, defender or other participant in an international dispute (Petersen, 1986; Organski and Kugler, 1980). Time is regarded as an ally; positions defended or attained are likely to remain viable. Higher motivation, tenacity, and

resultant satisfaction with outcomes therefore are expected. Logically, the situation is reversed as a great power maneuvers from u to l along its power cycle. As Jervis (1992) notes, "the specter of losses activates, energizes, and drives actors, producing great (and often misguided) efforts that risk — and frequently lead to — greater losses." This process winds down with relative standing; as its position progressively diminishes, a great power is confronted with the realization (via more frequent setbacks) that it no longer can prevent undesirable changes. The underlying logic, of course, is that relative standing and dispute outcomes are mutually reinforcing. Defeat and dissatisfaction reflect (at least in part), respectively, the knowledge and belief that relative standing is diminished by the events concerned. Victory and satisfaction reflect experience and beliefs to the opposite effect.

Power Transitions

For this study, the major theoretical attributes of power transition theory remain intact. The two key assumptions, dyadic power parity and dissatisfaction, stay in place. Organski and Kugler (1980) found the presence of a power transition to significantly increase the probability of conflict, yet recent work on power transition theory has neglected the importance of power transitions. Therefore, a transition of power between two great powers also should increase the likelihood of conflict since the rising/challenging power is looking to solidify its new-found power and the dominant power is looking to slow down this process.

For power transition theory, two events must take place for the likelihood of conflict to increase: relative power parity and dissatisfaction of the challenger with status quo. While both variables appear to be good independent predictors of conflict, synergy can be expected when both are present (Lemke, 2002).

Factors related to the basic theory of power transition combine to produce the following hypothesis:

> H_4: Overall dispute/crisis activity will be greater when either power parity or dissatisfaction with the status quo exist and increase further when both are present.

Dicicco and Levy (1999) argue that the inclusion of second variable, the presence of a power transition, is critical to growth for research program. Therefore, the focus on of power transitions produces the following hypothesis:

> H_5: The likelihood of a dispute/crisis increases when a power transition occurs.

We test these five hypotheses using the latest version of the MID data from the Correlates of War (COW) Project and crisis data from the International Crisis Behavior (ICB) dataset (Brecher and Wilkenfeld, 1997). A MID is

defined "as a set of interactions between or among states involving threats to use military force, displays of military force, or actual uses of military force. To be included, these acts must be explicit, overt, nonaccidental, and government sanctioned" (Gochman and Maoz, 1984, p. 587). A "foreign policy crisis is a situation with three necessary and sufficient conditions deriving from a change in the state's internal or external environment" (Brecher and Wilkenfeld, 1997, p. 3). These three conditions are 1) a threat to one or more of the state's basic values, 2) an awareness of finite time for response to the value threat, and 3) a heightened probability of involvement in military hostilities.

DATA AND MEASUREMENT

Capabilities and Critical Points of Power Cycle

As in the case of Hebron and James (1997) and numerous other studies of the power cycle, Doran's index is used to measure great power capability. Its two basic dimensions are size and development and the index is described in detail by Doran (1991a).[5]

Data on critical points also are available from Doran (1991a, 1995; see also Hebron and James, 1997). Two points about the data set should be clarified. First, the data are the population of great power foreign policy disputes and, therefore, statistical significance is not paramount (Hebron and James, 1997). For each of the periods identified in Table 1A in relation to critical points (e.g., up to 1963, its upper turning point, as ascent for the United States), the total number of disputes is computed on an individual basis. These data then are aggregated over all great powers. Second, given the centrality of roles in this analysis, the MID data has been modified to reflect a more precise accounting of involvement in a dispute.

A measurement of the proximity of events to critical points is needed to test proposition H_1. A distinction is expected between decades near the critical points and those that are not. Equation 1 provides a basic assessment of the degree to which events are centered on a given year:

$$d_{it} = \sum_{j=1}^{n} (t - e_{ij})^2 / n_i \qquad (1)$$

where d_{it} = displacement from year t of disputes involving great power g_i (i = 1,…,n); n_i = number of disputes involving g_i; e_{ij} = year in which dispute

TABLE 1A Critical Points for the Great Powers, 1816—1985

Year[#]	Type of Critical Point[*]	Great Power
1816[a]	upper turning point	Britain
1838[b]	lower turning point	Germany
1842[c]	upper turning point	Austria-Hungary
1854[d]	declining inflection point	Russia
1861[e]	upper turning point	Italy
1867[f]	rising inflection point	Germany
1885[g]	declining inflection point	Austria-Hungary
1887[h]	declining inflection point	Italy
1897[i]	lower turning point	Russia
1903[j]	declining inflection point	Britain
1905[k]	upper turning point	Germany
1910[l]	lower turning point	Italy
1913[m]	rising inflection point	United States
1914[n]	declining inflection point	France
1936[o]	declining inflection point	Germany
1937[p]	rising inflection point	Italy
1942[q]	rising inflection point	Japan
1947[r]	lower turning point	China
1963[s]	upper turning point	United States
1963[t]	rising inflection point	Soviet Union
1966[u]	lower turning point	Germany
1968[v]	rising inflection point[@]	Japan

[*]The 22 critical points listed cover the entire duration of Doran's data set. The ten (Doran, 1989) and 13 (Doran and Parsons, 1980) points disputed by Houweling and Siccama (1991, p. 644) appear in the twentieth century.
[#]The superscripted letter refers to the critical point for each state.
[@]The logic behind Japan's consecutive inflection points is explained in Hebron and James (1997).
Sources: Doran (1991a, p. 133) and Hebron and James (1997).

j ($j = 1,\ldots,n_i$) occurred. The distance of a given year from a specific event is squared and the sum of these elements then is averaged. This quantity, d_{it}, reaches a minimum for the year around which g_i's disputes are most closely centered. The components are squared in order to give more weight to especially large differences.

Perfection would demand that d_{it}'s minimum be very small and that t turns out to be g_i's critical point. Since that is an unrealistic standard to impose, proximity instead is interpreted as a decade, that is, five years before and after the critical point. The earlier discussion of imperfect and incomplete information further establishes the need for a more forgiving standard for evaluation of H_1.

Assessment of H_1 requires a systemic analogue for d_{it}, which is represented by Equation 2:

$$d_t = \sum_{i=1}^{n} \sum_{j=1}^{n_i} (t - e_{ij})^2 / (n * n_i) \qquad (2)$$

where d_t = displacement from year t of the crises (disputes) involving great powers. This averaged quantity, d_t, is anticipated to approximate a minimum for the year around which the collection of critical points appears to be centered. The central tendency among the critical points is calculated as follows:

$$h_t = \sum_{i=1}^{n} \frac{(t - c_i)^2}{n} \qquad (3)$$

where h_t = displacement from year t of the nearest critical point for each great power; c_i = year in which g_i's critical point occurred. It is anticipated that the minima for d_t and h_t will be relatively close together. In other words, the more crisis- or dispute-prone the period, the more likely it is to be near critical points.

These state- and system-level measurements of proximity are a step beyond previous testing of the power cycle in connection to war. Doran (1991a) notes that both World Wars I and II are preceded by critical points, but the assessment here is more precise and creates a more severe test for the theory. The wider range of events at issue requires something more than visual assessment of proximity.

The operationalization of challenger and defender roles, along with objective outcomes, is needed in order to test propositions H_{2a}, H_{2b}, and H_3. As considered above, the defender is the state that perceives a foreign policy crisis, while the challenger is the state regarded to be responsible (James, 1988). Based on this orientation, the single most important criterion in designating roles is the source of an attempt to alter the international status quo. Victory, compromise, stalemate, and defeat constitute potential objective outcomes.[6]

Power Transition, Parity and Dissatisfaction

Our hypotheses about power transition are tested with the MID and ICB datasets. All dyadic relationships between great powers from 1821 to 2000 are examined. The dyads and periods are very similar to those used by Kim (1991).[7] We follow procedures from (a) Organski and Kugler and (b) Lemke (2002), respectively. For the first procedure, the entire period is divided into 20-year periods. Then, in each 20-year segment, great power dyads are created

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[6] Consider a set of examples involving the United States as a crisis initiator: it experienced victory in the invasion of Grenada in 1983; the Iran hostage crisis of 1980 resulted in a compromise; invasion of Cambodia in 1970 ended in a stalemate; and involvement in the Angolan war produced defeat in 1975 (Wilkenfeld and Brecher, et al., 1988).

[7] The respective great powers and time periods are available in the *International Interactions* Website.

between all of the great powers in their corresponding periods. This procedure creates 129 dyadic observations for the MID dataset and 51 for ICB dataset. The second procedure divides the period into 10- instead of 20-year periods. This produces 248 MID dyads and 92 ICB dyads. The argument to employ the latter method is that both disputes and crises are much more common than wars and hence do not need as long a time period as do wars. States that are both relatively equal in power and dissatisfied are much more likely to experience conflict. While it may take longer for states to commit to war to end the dispute, disputes and crises do not require that same level of commitment.[8]

We use Eugene software to generate these dyads as well as assemble all other data for the dyads, including CINC scores, tau-b, disputes and crises. We generated the power parity variable by employing Composite Index of National Capabilities (CINC) scores to measure the relative power of each state. The lesser power is divided by the greater power to generate a power ratio. The maximum power ratio from each period is used and the variable is kept in ratio form.[9]

Organski maintains that while satisfaction is a relative term, a state is said to be satisfied if it is happy with workings and rules of the present international order if they believe it offers them the best chance at obtaining specific goals (Organski, 1958; Kim, 1991) Therefore, if a state likes (dislikes) the status quo, then it is satisfied. Since the dominant state sets the rules of the international system, it always is satisfied. States that are dissatisfied tend not to benefit from the present system and will not likely be allied with the dominant state. Therefore, the tau-b coefficient used to measure similarity in alliance portfolios also can be used to measure dissatisfaction.[10]

As argued by Kim (1991), while both parity and dissatisfaction are significant predictors of conflict, the combination of the two conflates the situation. Therefore, we generate an interaction variable to account for this affect by multiplying the parity variable and the dissatisfaction variable.

Transition is a dummy variable that controls for a power transition within a period. If a power transition (a change in the dominant state in a dyad) occurs within a period, then the transition variable is coded one. If no transition occurs, then the variable is zero.

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[8]   Both twenty- and ten-year test periods are used. The states in the ten-year periods are taken from the twenty-year period and divided into two. The final period from 1996–2000 is not included in this analysis. The periods noted above are used for the MID dataset; the ICB dataset uses the same states and periods starting in 1921.
[9]   Several studies have used dummy variables for power parity but we believe a large variance allows for a more accurate model. The maximum power ratio is used instead of the average power ratio because this is the highest point of parity between the two states during this period. Organski maintains that the closer states are to parity, the more likely conflict will occur.
[10]   This measure of dissatisfaction also is used by Kim (1991). He maintains that the variable is used as an indicator of leadership preference and provides a thorough explanation of the use of tau-b for measurement of dissatisfaction.

DATA ANALYSIS

Test results for the power cycle hypotheses are presented in Tables 1b, 2a and 2b, 3, 4a and 4b and 5. In addition, Tables 6, 7, 8a, 8b and 9 compare results between the MID and ICB data.[11] Both the ten-year interval noted earlier and the 16-year interval made standard by Doran and Parsons (1980, p. 959) will be used to assess the results.

H_1 was tested in two ways: In the first test, we compared the 16-year interval against the entire data set. We also checked the 16-year interval against the a 20-year interval (16-year plus 20 years). The main reason for this second test is to see how strong the correlation between critical point interval and MID. It is expected that states would experience fewer MIDs the further they get from their 16-year interval. Results for H_1, which focuses on proximity of disputes to respective critical points, generally confirm our expectations. In 12 of 22 cases, the probability of a MID occurring within the critical point period, 16 years around the critical point interval, is higher than the following years after the critical point interval. Further, when the 16-year critical point interval is compared with a 20-year interval, the results are even stronger, with 16 of 22 cases conforming to our expectations. The second test for H_1, which focuses on the proximity of disputes to respective critical points, generally confirms our expectations. In 15 of 22 cases, the probability of a MID occurring within the critical point interval, 16 years around the MID, is higher than the following 20 years after the MID.

Table 2a and 2b provide results for H_{2a}, which pertains to the proportion of challenger roles during upward and downward phases, with a focus on individual great powers. Table 2a presents MID frequency for states in the upward slope of their power cycle. For the 10-year interval, Germany (**r** = 1867), Italy (**r** = 1937), Russia (**l** = 1897), the Soviet Union (**r** = 1963), and the United States (**r** = 1913) all support the proposition that states more frequently will be the challenger due to the increase in their capabilities. Furthermore, it is interesting to note that, with the exception of Russia, the states that behaved as predicted did so during the rising inflection point phase of their power cycle. In the aggregate, the findings for the ten-year interval are at best mixed. We found only a 50% confirmation rate for the proposition in the upward (i.e., 5/10 cases) phase.[12] For the 16-year interval, China (**l** = 1947), Germany (**l** = 1838), Italy (**l** = 1910 and **r** = 1937), Russia (**l** = 1897), the Soviet Union (**r** = 1963), and the United States (**r** = 1913) all support the

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[11]   Hebron and James (1997) conducted a parallel analysis for the ICB data, as noted earlier, so there is value — from the standpoint of cumulation — in seeing whether MIDs produce similar or different patterns.

[12]   There actually are 11 cases for the upward phase, but during one of the critical points for Germany (l = 1966) it was not involved in any MIDs.

TABLE 1B MID Frequency

Great Power[#]	16-year interval	Total interval[%]	20-year interval[^]	16-year percentage
Austria-Hungary[c]	11	16[%^]		69[+!]
Austria-Hungary[g]	4	18[%^]		22
Britain[a]	3	74[%]		4
			23[^]	13
Britain[j]	20	139[%]		14
			37[^]	54[+]
China[r]	47	115[%]		41
			96[^]	49
France[n]	25	70[%]		36
			38[^]	66[+]
Germany[b]	3	5[%^]		60[+!]
Germany[f]	10	24[%^]		42
Germany[k]	34	40[%^]		85[+!]
Germany[o]	84	84[%^]		100[+!]
Germany[u]	0	1[%]		0
			0[^]	0
Italy[e]	5	9[%^]		56[+!]
Italy[h]	12	15[%^]		80[+!]
Italy[l]	22	30[%^]		73[+!]
Italy[p]	33	48[%]		69[!]
			41[^]	80[+!]
Japan[q]	39	58[%^]		67[+!]
Japan[v]	12	22[%^]		55[+!]
Russia[d]	5	19[%]		3
			18[^]	3
Russia[i]	18	138[%]		13
			53[^]	34
Soviet Union[t]	61	107[%^]		57[+!]
United States[m]	24	71[%]		34
			37[^]	65[+]
United States[s]	63	117[%^]		54[+!]

[#]The superscript by each state refers to its critical interval which can be found in Tables 2A/2B.
[%]The total interval includes all years until the next critical point interval.
[^]20-year interval includes the 16-year interval plus 20 years.
[!]The data conforms to the predicted outcome for the 16-year interval.
[+]The data conforms to the predicted outcome for the 20-year interval.

proposition that states more frequently will be the challenger due to their increased capabilities. It is interesting to note that predictability of state behavior is more or less evenly split between turning points and inflection points — that is, a state's slope rather than it critical point stage appears to be the key determinant of its actions. In the aggregate, the findings for the 16-year interval are somewhat supportive of the proposition, with confirmation rates of 78% (7/9) for the upward phase and 45% (5/11) for the downward phase.

Table 2b presents MID frequency for states in the downward slope of their power cycle. For the ten-year interval, France (**d** = 1914), Germany (**u** = 1905), Italy (**d** = 1887), and the United States (**u** = 1963) all support the

TABLE 2A MID Frequency: Upward Phase

Country[#]	Role (10-year/16-year) Challenger	Role (10-year/16-year) Defender	Total (10-year/16-year)	10-year interval	16-year interval
China[r]	5/25	10/22	15/47[+]	1942–1952	1944–1960
Germany[b]	0/2	1/1	1/3[+]	1833–1843	1835–1851
Germany[f]	5/5	4/5	9[+]/10	1862–1872	1864–1880
Germany[u]	0/0	0/0	0/0	1961–1971	1963–1979
Italy[l]	4/12	6/10	10/22[+]	1905–1915	1907–1923
Italy[p]	18/18	10/15	28[+]/33[+]	1932–1942	1934–1950
Japan[q]	8/3	30/36	38/39	1937–1947	1939–1955
Japan[v]	0/0	11/12	11/12	1963–1973	1965–1981
Russia[i]	8/14	3/4	11[+]/18[+]	1892–1902	1894–1910
Soviet Union[t]	31/32	25/29	56[+]/61[+]	1958–1968	1960–1976
United States[m]	15/16	7/8	22[+]/24[+]	1908–1918	1910–1926

[#]The superscript by each state refers to its critical point, which can be found in Table 1A.
[+]The data conforms to the predicted outcome.

TABLE 2B MID Frequency: Downward Phase

Country[#]	Role (10-year/16-year) Challenger	Role (10-year/16-year) Defender	Total (10-year/16-year)	10-year interval	16-year interval
Austria-Hungary[c]	1/5	1/6	2/11[+]	1837–1847	1839–1855
Austria-Hungary[g]	2/4	1/0	3/4	1880–1890	1882–1898
Britain[a]	0/3	0/0	0/3	1811–1821	1813–1829
Britain[j]	10/13	2/7	12/20	1898–1908	1900–1916
France[n]	7/15	8/10	15[+]/25	1909–1919	1911–1927
Germany[k]	1/13	3/21	4[+]/34[+]	1900–1910	1902–1918
Germany[o]	35/53	11/31	46/84	1931–1941	1933–1949
Italy[e]	3/3	2/2	5/5	1856–1866	1858–1974
Italy[h]	3/5	4/7	7[+]/12[+]	1882–1892	1884–1900
Russia[d]	2/2	2/3	4/5[+]	1849–1859	1851–1867
United States[s]	11/21	39/42	50[+]/63[+]	1958–1968	1960–1976

[#]The superscript by each state refers to its critical point, which can be found in Table 1A.
[+]The data conforms to the predicted outcome.

proposition that states more frequently will be the defender due to the decline in their capabilities. In this case, however, predictability of state behavior is evenly split between turning points and inflection points — that is, the fact of a state's change in slope rather than its critical point stage appears to be the key determinant of its actions. In the aggregate, we found only a 50% confirmation rate of the proposition in the downward (4/8)

phase.[13] For the 16-year interval, Austria-Hungary (u = 1842), Germany (u = 1905), Italy (**d** = 1887), Russia (**d** = 1854), and the United States (**u** = 1963) all support the proposition that states more frequently will be the defender due to the decline in their capabilities. Much like the results for the upward slope, predictability of state behavior is more or less evenly split between turning points and inflection points. In the aggregate, the findings for the 16-year interval were disappointing, with a confirmation rate of only 45% (5/11) for the downward phase.

The results for Proposition H_{2a} are reported for great powers in the aggregate in Table 3. For the ten-year interval the dispute participant takes the role of defender 49.3% (i.e., 73 cases) of the time during its downward slope. For the 16-year interval the dispute participant takes the role of defender 48.5% (129) of the time during its downward slope. These results are not in accord with the argument that the disputes in which a great power is the defender will account for a greater proportion of its activity during the downward phase of its power cycle.

It is interesting to note that, regardless of phase, great powers occupy the role of defender most of the time. (This finding reinforces Gilpin's (1981) assumption that major wars (or, for that matter, disputes) result from an attempt by the dominant state to defend the structural status quo.) This difference in frequency indirectly justifies the designation of great power status. For states at or near the apex of power, most efforts toward change in the system are likely to be perceived as threatening rather than reinforcing. The very range of established interests virtually guarantees a higher absolute frequency of defender roles. Given this factor and the presence of a population of cases, the most relevant comparison might even be the

TABLE 3 Position on Power Cycle and MID Role

Phase	Role (10-year/16-year)	
	Challenger	Defender
Upward	94/127 (46.8%)/(47.2%)	107/142 (53.2%)/(52.8%)
Downward	75/137 (50.7%)/(51.5%)	73/129 (49.3%)/(48.5%)

Chi Square	Value	DF	Significance
10-year Pearson	7.6	1	0.005
16-year Pearson	.73151	1	0.39

[13] There are 11 cases in the downward phase, but three are deemed inconclusive because either (a) the state was not involved in any MIDs (Austria-Hungary, **u** = 1848) or (b) it was involved as both challenger and defender equally (Britain, **u** = 1816, and Russia, **r** = 1854).

absolute number of challenger roles: 94 versus 75 (10-year) 127 versus 137 (16-year) during the upward and downward phases, respectively.

Proposition H_{2b} focuses on change in relative frequency of dispute roles along the power cycle. Thus the proper unit of analysis is the individual great power. Table 4A compares the average distance in years for disputes that feature challenger and defender roles, respectively, from the nearest critical point during their upward slope. For example, the average distance of Russian cases (10-year) from the lower turning point (**l** = 1897) is 12.1 and 1.3 years for, in turn, challenger and defender roles. On the upward slope, the greater the distance from the critical point, the greater the capability of the state, since it is moving toward the upper turning point of its cycle. Thus the Russian data is consistent with H_{2b}. However, the outcome for the Soviet Union does not conform to predictions. Overall, for the ten-year interval, four states — Germany (**r** = 1867), Italy (**l** = 1910), Japan (**r** = 1968), and Russia (**l** = 1897) — behave as predicted. In other words, for those states, the central tendency for challenger roles is higher along the upward curve as compared to defender roles. For the 16-year interval, overall, four states (and five cases) — China (**l** = 1947), Germany (**l** = 1838, **r** = 1867), Italy (**l** = 1910), and Russia (**l** = 1897) — are as predicted. In other

TABLE 4A Great Power Roles and Critical Points: Upward Phase

State[#]	Role	Distance From Critical Point (10-year/16-year)
China[r]	Challenger	0.6/8.4[+]
	Defender	1.0/5.8
Germany[b]	Challenger	0.0/11.0[+]
	Defender	2.0/2.0
Germany[f]	Challenger	21.4[+]/18.2[+]
	Defender	10.3/10.8
Germany[u]	Challenger	0.0/0.0
	Defender	0.0/0.0
Italy[l]	Challenger	6.3[+]/8.8[+]
	Defender	4.7/6.3
Italy[p]	Challenger	5.7/5.7
	Defender	5.8/5.8
Japan[q]	Challenger	−3.6/−2.0
	Defender	0.4/2.8
Japan[v]	Challenger	18.5[+]/0.0
	Defender	0.0/12.4
Russia[i]	Challenger	12.1[+]/10.9[+]
	Defender	1.3/2.8
Soviet Union[t]	Challenger	25.5/15.1
	Defender	29.8/19.7
United States[m]	Challenger	−0.1/2.3
	Defender	3.7/4.0

[#]The superscript by each state refers to its critical point, which can be found in Table 1A.
[+]The data conforms to the predicted outcome.

words, for these cases, the central tendency for challenger roles is higher along the upward curve as compared to defender roles.

For the ten-year interval, Table 4B reveals that three out of the ten cases — Austria-Hungary (**d** = 1885) and Germany (**u** = 1905, **d** = 1936) on the downward slope — behave as predicted.[14] For the 16-year interval, Table 4b reveals that three out of the ten cases — Germany (**u** = 1905, **d** = 1936) and Italy (**d** = 1887) on the downward slope behave as predicted.[15] In other words, the central tendency for the challenger role, as compared to the defender role, is closer to the outset of the downward curve.

Mixed and somewhat discouraging results for H_{2a} and H_{2b} suggest the possibility of causal forces operating in both directions, with effects that cancel each other out. It could be argued that a state in decline may initiate more disputes than it defends against; further study is warranted.

For H_3, the ten-year interval, as shown in Table 5, reveals that dispute participants achieve victory more frequently during upward (7.1%) than

TABLE 4B Great Power Roles and Critical Points: Downward Phase

State[#]	Role	Distance From Critical Point (10-year/16-year)
Austria-Hungary[c]	Challenger	5.0/8.4
	Defender	−2.0/6.7
Austria-Hungary[g]	Challenger	21.0[+]/16.3
	Defender	38.0/0.0
Britain[a]	Challenger	0.0/10.0
	Defender	0.0/0.0
Britain[j]	Challenger	58.8/25.6
	Defender	44.0/20.3
France[n]	Challenger	2.7/5.7
	Defender	0.9/2.9
Germany[k]	Challenger	4.0[+]/9.3[+]
	Defender	33.7/11.7
Germany[o]	Challenger	3.5[+]/4.5[+]
	Defender	5.4/6.9
Italy[e]	Challenger	−1.3/−1.3
	Defender	2.0/2.0
Italy[h]	Challenger	16.7/11.8[+]
	Defender	12.8/12.3
Russia[d]	Challenger	−3.0/3.0
	Defender	0.5/2.3
United States[s]	Challenger	27.5/15.5
	Defender	21.3/11.9

[#]The superscript by each state refers to its critical point, which can be found in Table 1A.
[+]The data conforms to the predicted outcome.

[14] Although eleven cases are listed, Germany (**l** = 1966) was not involved in any MIDs and therefore is excluded.
[15] See note 13 regarding the exclusion of Germany here as well.

TABLE 5 Position on Power Cycle and Objective Outcome

	Outcome	
Phase	Other	Victory
Downward	179/307 (93.2%)/(94.5%)	13/18 (6.8%)/(5.5)
Upward	156/208 (92.9%)/(94.1%)	12/13 (7.1%)/(5.9)

Chi-Square	Value	DF	Significance
10 year Pearson	0.019	1	0.88
16-year Pearson	0.02905	1	0.8646

downward (6.8%) phases. For the 16-year interval, as shown in Table 5, dispute participants also achieve victory more frequently during upward (5.9%) than downward (5.5%) phases. In general the positional results regarding rising and declining states are much less convincing than the results of position vis-à-vis the critical points. The latter is regarded as more germane to the theory, of course, so perhaps the lack of support for the third hypothesis should be seen in that light. These findings are consistent with the argument that the proportion of cases in which a great power experiences victory will be greater during the upward than the downward phase, although it should be acknowledged that the margins are quite small.

A comparison of results between MID and ICB data is provided in a further series of tables, with the latter findings being taken from Hebron and James (1997). With regard to H_1 (frequency and proximity), Table 6 reveals similar results in three (Germany, Italy and the Soviet Union) of the six common cases. In Table 7, however, contradictory results appear for position and role. The results for ICB data are consistent with the hypothesis that states will be the challenger (defender) during the upward (downward) phase of their power cycle. The results for MID data, however, reveal the opposite pattern. In this context the challenger (defender) role is more

TABLE 6 MID and ICB Frequency

	Role (10-year)		
Country [#]	Challenger MID/ICB	Defender MID/ICB	Total MID/ICB
China[r]	5/9	10/7	15/16[+]
Germany[o]	35/20	11/3	46[+]/23[+&]
Italy[p]	18/9	10/4	28[+]/13[+&]
Japan[q]	8/8	30/7	38/15[+]
Soviet Union[t]	31/21	25/8	56[+]/29[+&]
United States[m]	15/3	7/18	22[+]/21

[#]The superscript by each state refers to its critical point, which can be found in Table 1A.
[+]The data conforms to the predicted outcome.
[&]Same results.

TABLE 7 Position on Power Cycle and MID Role

	Role	
Phase	Defender MID/ICB	Challenger MID/ICB
Downward	73/101	75/35
	(49.3%)/(74.3%)	(50.7%)/(25.7%)
Upward	107/89	94/56
	(53.2%)/(61.4%)	(46.8%)/(38.6%)

Chi-Square	Value	DF	Significance
MID Pearson	7.60	1	0.005
ICB Pearson	5.32	1	0.02

likely during the downward (upward) phase. A comparison between distance from critical point and role is presented in Tables 8A and 8B. The results indicate one overlap in Outcomes — Russia during the upward slope and Germany for the downward phase.

Finally, an examination of position and objective outcome indicates that the results for the MID data are consistent with the results from ICB. Table 9 reveals that in both cases the outcome is that predicted by the model — greater prevalence for victory during the upward phase.

Table 10 reveals the testing for the three hypotheses from power transition theory. The testing regime here is somewhat different than for power cycle theory and takes the form of a logistic regression analysis. The left side of the table shows the results for disputes and the right side for crises.

TABLE 8A Great Power Roles and Critical Points: Upward Phase

State[#]	Role	Distance From Critical Point (ICB/MID10 year)
China[r]	Challenger	0.6/26.3[+]
	Defender	1.0/2.2
Italy[p]	Challenger	5.7/25.8
	Defender	5.8/27.0
Japan[q]	Challenger	−3.6/7.7[+]
	Defender	0.4/0.0
Japan[v]	Challenger	18.5[+]/0.0
	Defender	0.0/0.0
Russia[i]	Challenger	12.1[+]/44.0[+&]
	Defender	1.3/43.8
SovietUnion[m]	Challenger	25.5/14.7
	Defender	29.8/16.0
United States[g]	Challenger	−0.1/16.1[+]
	Defender	3.7/10.4

[#]The superscript by each state refers to its critical point, which can be found in Table 1A.
[+]The data conforms to the predicted outcome.
[&]Same results.

TABLE 8B Great Power Roles and Critical Points: Downward Phase

State[#]	Role	Distance From Critical Point (ICB/MID10 year)
Britain[j]	Challenger	58.8/37.0[+]
	Defender	44.0/44.7
France[n]	Challenger	2.7/8.0[+]
	Defender	0.9/8.5
Germany[o]	Challenger	3.5[+]/32.7[+&]
	Defender	5.4/34.1
United States[s]	Challenger	27.5/16.7
	Defender	21.3/8.8

[#]The superscript by each state refers to its critical point, which can be found in Table 1A.
[+]The data conforms to the predicted outcome.
[&]Same results.

TABLE 9 Position on Power Cycle and Objective Outcome

	Outcome	
Phase	Other MID/ICB	Victory MID/ICB
Downward	179/86	13/50
	(93.2%)/(63.2%)	(6.8%)/(36.8%)
Upward	156/81	32/64
	(92.9%)/(55.9%)	(7.1%)/(44.1%)

Chi-Square	Value	DF	Significance
MID Pearson	0.019	1	0.88
ICB Pearson	1.58	1	0.21

Models vary by whether they include the interaction term for parity and dissatisfaction and a ten-versus ten-year time interval, which creates a total of eight analyses in the table. Each of the three hypotheses is discussed in turn, followed by some more encompassing characteristics of the data analysis.

H_4, which pertains to the effects of power parity and dissatisfaction, receives strong support. Although it is understood that significance levels are advisory when using a population of cases, parity is statistically significant in all models. Dissatisfaction is significant in six of eight, the exceptions being the 20-year interval for disputes and crises alike when the interaction term is included. The interaction term for parity and dissatisfaction, included out of a belief in the possibility of synergy, is never significant.

Transition, the focus of H_5, is significant in just the last two models. Surprisingly, the result is opposite from what is expected. Dyads with even capabilities or experiencing a transition should be more prone to crises and disputes, but in the two crisis-based scenarios where there is a significant connection, it is precisely the opposite of that expected. Perhaps transitions produce more crises, but at a lower level of intensity than such events when they occur in general — a topic for further investigation.

TABLE 10 Logistic Regression Analysis of Power Transition and Great Powers with 10- and 20-Year Intervals[#]

	Dependent variable MID onset				Crisis onset			
Interval	10	10	20	20	10	10	20	20
Covariate	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)	Coefficient (SE)
Constant	-1.919*** (.6593)	-1.778*** (.6924)	-1.697*** (.9278)	-1.611*** (1.011)	-1.831***	-1.701***	-1.684**	-1.733*
Parity	2.500*** (.6924)	2.245***	3.264**** (.9278)	3.118*** (1.011)	2.173** (1.021)	1.851* (1.077)	3.110** (1.439)	3.200** (1.602)
Dissatisfaction	-1.522*** (.4951)	-3.022*** (1.458)	-1.572** (.7064)	-2.228 (1.995)	-2.415** (.9641)	-6.648** (3.337)	-2.306* (1.268)	-1.922 (3.218)
Parity*Dissat		2.245 (1.998)		.9474 (2.673)		5.812 (4.070)		-.5423 (4.209)
Transition	.0213 (.4947)	.0240 (.4899)	-.3073 (.6278)	-.3077 (.6257)	-.7994 (.8939)	-.7421 (.8746)	-2.884** (1.326)	-2.915** (1.352)
Observations	248	248	129	129	92	92	51	51
Model chi-squared	30.61***	31.92***	21.42*** [2]	1.54**	12.83**	15.22***	12.07**	12.09**
Pseudo R2	.0964	.1005	.1198	.1205	.1192	.1414	.1823	18.25
Correct prediction:								
Overall:	66.13%	68.55%	68.99%	68.99%	73.91%	73.91%	66.67%	66.67%
Conflict:	50.00%	54.90%	68.12%	67.12%	54.55%	57.14%	54.55%	54.55%
Non conflict:	70.20%	71.57%	70.00%	71.43%	76.54%	75.29%	70.00%	70.00%

Notes:

[1]*p < 0.10 **p < 0.05 ***p < 0.01.

[2]All predictions are calculated if the predicted probability of conflict ≥.5.

[3]A variable used to measure the average rate of change in power parity was also included in this study but due to space limitations and the generally inconsistent results generated by this variable, it was cut from the analysis. The parity change variable is calculated by subtracting the present parity ratio from the previous year's parity ratio. The average change over the period is used to calculate the parity change within the dyad.

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Overall, several additional characteristics stand out in Table 10. Models for the 20-year span had a better pseudo R^2 but a worse Chi-squared than the 10-year span. While the models using 10-year periods have more observations, this is not necessarily the only reason for such a difference. Testing the model at lower levels of conflict may be better suited for ten-year periods. The dispute models have better Chi-squared, but worse pseudo R^2, than the crisis models. Finally, what is the "best" overall model? To generalize, the best model for either dataset is the 10-year with interaction term, although the term itself lacks significance. Additional data analysis with a revised model will be in order, given the surprising results for the final hypothesis.

CONCLUSIONS AND FUTURE RESEARCH

What conclusions follow from the data analysis? How well do the dynamic theories evaluated here explain interstate disputes and crises? The results, in an overall sense, are mixed. Each theory receives some support from the data, which bodes well when reminded of the specificity and generally high level of difficulty entailed by the tests imposed here. The events at issue, crises and disputes, also are somewhat removed from the 'home base' for each theory, that is, interstate war. Perhaps the most interesting individual finding, which tends to encourage further research on both theories, is that power parity and dissatisfaction are a dangerous combination. This resonates with the emphasis placed by both dynamic theories tested here on the dangers posed by great powers who seek dramatic change to the status quo.

Several ideas come to mind with respect to future research. This paper focuses almost exclusively on power and further work pertaining to the role status quo evaluations would be valuable. In addition, following Lemke's (2002) example with power transition theory, regional effects might be explored for both theories. The equivocal results of this study also would seem to encourage a focus on a subset of cases where power cycle and power transition theory previously have been at their very best, namely, interstate wars. A future study might look at disputes and crises that are more severe than those in general while falling short of war itself or possibly escalation from a MID or crisis event to interstate war.

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