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Leaders' Motivations and Actions: Explaining Government-Dissident Conflict-Cooperation Processes

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Leaders' Motivations and Actions: Explaining Government-Dissident Conflict-Cooperation Processes

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This study posits a theory to explain government and dissident sequential responses to one another and develops a statistical model to test the implied hypotheses. While competing hypotheses emerge from both formal and empirical models, the current literature lacks a single, coherent, theoretical, and empirically corroborated model of the interactive relationship between dissident and government behavior. The study seeks to fill this lacuna in the literature by developing a comprehensive theory to account for a large number of competing hypotheses within a single framework. The subsequent empirical tests enable one to find support for the various competing hypotheses under different sets of conditions. The analyses of Chile (1983–1992) and Venezuela (1987–1992) provide evidence that the model captures well the sequential responses of Chilean and Venezuelan governments and dissidents.

Keywords dissent, repression, conflict processes, cooperation

We know that regimes engage in repression and we know that opposition groups engage in protest. In contrast, we also know that governments and dissidents sometimes negotiate, make agreements, and cooperate with one another. What we are unsure of, as a discipline, are the causal factors that lead governments to repress at times and cooperate at other times as well as the causal factors that lead dissidents to use hostile tactics at times and cooperative tactics at other times. We would do well to identify these causal factors and understand their effects on government and dissident responses to one another.

While competing hypotheses emerge from both formal and empirical models, the current literature lacks a coherent, theoretical, and empirically corroborated model of the interactive relationship between dissident (D) and government (G) behavior. I seek to fill this lacuna in the literature. In this article, I develop a theory to explain action-reaction

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government-dissident behavioral dynamics as well as statistical models to test the collective set of hypotheses implied by the theory. The theory is more comprehensive than previous theories because it accounts for a large number of competing hypotheses within a single theoretical framework. Moreover, the tests allow one to find support for various competing hypotheses under different sets of conditions. The findings are largely consistent with the theory's implications.

The article begins by discussing the present state of the literature and the study's contributions. Next, I convey my theory, derive the implied hypotheses, and describe the research design. Finally, I present and discuss the results.

Contributions to the Literature

The literature I address revolves around the effects that government and dissident hostility and/or cooperation have on one another's responses to each another. The results of these studies often conflict and corroborate multiple and in many instances two pairs of diametrically opposed hypotheses. The first hypothesis states that hostility discourages hostility and encourages cooperation (e.g., Snyder & Tilly, 1972; Tilly, 1978; Moore, 1998, 2000; Francisco, 1995, 1996; Lichbach, 1987). In contrast, the second hypothesis posits that hostility encourages hostility (Gurr, 1970; Hibbs, 1973; Francisco, 1995, 1996). The third hypothesis asserts that cooperation encourages hostility (or decreases cooperation) (e.g., Rasler, 1996). Finally, the fourth hypothesis claims that cooperation encourages cooperation (e.g., Krain, 2000; Carey, 2006).

While each of the competing hypotheses garners support in the literature, no scholar develops a comprehensive theory to explain the collective set of dynamics, nor do any scholars posit designs that allow one to find support for multiple hypotheses within the same model. Most studies test the hypotheses head to head (Carey, 2006; Francisco, 1995, 1996; Moore, 1998, 2000), failing to recognize that there may be specific conditions under which we find support for one hypothesis and other conditions when we find support for its alternative. Others focus only on explaining one actor's behavior. For example, Davenport (1995) chooses to focus on the government and seeks to explain the factors that affect government repression. Likewise, Moore (1998, 2000) focuses on explaining dissident and government responses to one another separately in independent studies. And still others ignore the possibility of cooperation or fail to analyze how actors respond to cooperative initiatives (Moore, 1998, 2000; Francisco, 1995, 1996). Carey (2006) and Davis and Ward (1990) are notable exceptions. However, they choose to model cooperation and hostility as separate variables as opposed to behavioral levels on a single continuum as I do here.

I choose to model both actors' actions and reactions to both hostile and cooperative initiatives in such a way that allows for competing hypotheses to garner support within the same framework. Besides modeling the endogenous nature of government-dissident interactions and tackling the extant empirical puzzle in the literature, my study moves the current literature in a new direction by focusing on leaders, their decision-making contexts, and the sequential nature of government-dissident interactions. I discuss these features in the section below.

The Theory

Actors, Goals, and Cost Terms

My theory and model seek to explain event sequences. I focus attention on explaining the sequential response of dissidents to government actions and the sequential responses of governments to dissident actions. To explain the sequential responses, I simplify the world

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to two actors, a government, and a federation of dissident groups.[1] The government implements and defends policies, while the dissidents challenge those policies. In particular, the government wants the dissidents to stop challenging their authority to rule, and the dissidents want the government to change its policies. Thus, the government and the dissidents are viewed as *opponents* of one another. Suppose further that each entity is controlled by a rational leader and that both leaders get utility from maintaining their positions of authority.

As political figures of authority, both leaders wish to maximize their tenure in office. While the assumption is often invoked in studies of politicians (e.g., Bueno de Mesquita et al., 1999), other scholars similarly assume that dissident leaders are tenure-maximizers (e.g., Chong, 1991). Like politicians, dissident leaders must retain power over their organization or movement (Popkin, 1979; Tilly, 1978). Chong (1991, 122) states, "In any mass endeavor, it is essential that the leaders retain the confidence of the followers." If not, the movement ceases and fails to produce public goods. Dissident leaders must act in ways to maintain and increase support for the movement, much like politicians must maintain the confidence of their coalitions to maintain tenure. Yet, both leaders also face threats from one another. Both rational government and dissident leaders must sustain support from their coalitions and simultaneously guard against revolution, upheaval, and opponent violence to remain in power.

First and foremost, each leader must satisfy his or her "ruling coalition" to remain in office. Members of the winning coalition are those people whose support is required to keep the incumbent in office (Bueno de Mesquita et al., 1999). Government leaders may be replaced by members of their own coalition via myriad methods (e.g., elections, votes of no confidence, coalition splits, assassinations, and coups). Dissident leaders can also be replaced by such methods. In either situation, an individual leader's actions are not credible without a coalition backing his or her actions. How leaders behave will influence the opinions of their coalitions, which in turn will affect their security in office and their subsequent actions. If a leader "loses the loyalty of a sufficient number of members of the winning coalition, a challenger can remove or replace [him or] her in office" (Bueno de Mesquita et al., 2003, 8). Thus, *the most important goal of government and dissident leaders is to maintain the support of a winning coalition* (see Ames, 1987, 8).

The model highlights the link between government-dissident interactions and job performance. This is similar to highlighting the relationship between job performance and foreign policy success/failure. For example, interactions between a government and a dissident group take place on a public stage, and each leader's coalition judges their respective leader's performance in interactions with their opponent, much like coalitions judge their leader's foreign policy successes and failures (e.g., Chiozza & Goemans, 2004; Colaresi, 2004; Fearon, 1994). Successful confrontations in government-dissident interactions make leaders appear strong to their winning coalitions and to their rivals (Lichbach, 1995, 67), while confrontational failures make leaders appear weak to their winning coalitions. In addition, how actors respond to those failures influences the coalition's opinions of its leader. Leaders who fail to respond aggressively to failures come across as ineffectual. Leaders act to achieve success and in the event of defeat adjust their behavior accordingly to ensure their tenure. Lichbach (1995, 66) states that "past successes and failures are key indicators of the probability of future victories and losses." In particular, as dissidents win battles in the short run, the leader's coalition strengthens; potential joiners become participants, and the probability of victory in the long run increases. As for governments, victories in the short run secure the confidence of the government's coalition and guard against vulnerability.

[1]The simplifying assumption of one dissident group is made in similar studies (e.g., Lichbach, 1987; Moore, 1998, 2000).

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Coalition audiences concerned with the *poor performance* of the leader in his or her dealings with the opponent generate high *coalition audience costs* for the leader.[2] I contend that in interactions with the opponent, neither leader prefers to overcooperate (i.e., give up too much) with or undercoerce (i.e., not be forceful enough to) the opponent.[3] When this occurs, his or her supporting coalition perceives the outcome as a *failure*. Alternatively, when leaders match or exceed the others' hostility levels and match or undercut the opponent's cooperation levels, the outcome is perceived as *successful*.[4]

Leaders must worry about more than their own ruling coalition; they must also worry about their opponent. That is, in addition to the internal threats facing a leader, leaders must also protect against external threats to their tenure, such as opponent violence as it raises one's own costs by depleting resources. The opponent may remove a particular leader from office via multiple methods (i.e., coup d'état, revolution, assassination, imprisonment, or extradition). To protect against external threat, leaders must monitor the opponent's violence levels and attempt to minimize them (i.e., opponent costs).

Lichbach (1984, 310) asserts that the government must optimize political performance by minimizing violent opposition and the revolutionary change of regimes. The consequences of disorder, revolutionary actions, and upheaval may be "immediate, personal and severe" (Lichbach 1984, 309). Thus, leaders not wishing to give up their authority should attempt to minimize their *opponent costs*. *Opponent costs* refer to the level of dissident hostility directed towards the government. Since dissident hostility is costly to a government leader's tenure, they prefer cooperative dissident actions (which lower the costs of the government leader) to hostile dissident actions (which raise the leader's costs).

Much as government leaders are threatened by dissidents, dissident leaders face government threats (e.g., assassination, incarceration, or expatriation). Tilly (1978) argues that government repression in the form of sanctions, bans, arrests, and executions impede the ability of groups to mobilize resources and challenge the state. Repression depletes resources by deterring participation in the movement and killing and imprisoning current participants. As resources diminish, so does the dissident movement's likelihood of achieving its goals. Moreover, dissident leaders may also be removed from power.

While both government and dissident leaders must minimize audience costs and opponent costs, simultaneous minimization of both is often difficult. In the case that both cannot be simultaneously minimized, it is most important to minimize audience costs. If one cannot maintain the support of one's coalition, then one lacks credibility and authority when dealing with the opponent.

With the goal of protecting their authority positions, leaders choose how their group will behave towards the other. Each leader chooses an action, from an *action set*, to take in response to the opponent's action. The available actions to government and dissident leaders include both hostile (H) and cooperative (C) actions. Following Tilly (1978, 55), I define cooperative actions (e.g., statements of support, negotiations, agreements) as actions that *lower* an opponent's costs (e.g., time, energy, resources, etc.), while hostile actions (e.g., negative statements, riots, and guerrilla warfare) refer to actions that *raise* an opponent's costs. I depict each leader's *action set* in Figure 1. Positive values indicate cooperative actions, while negative values represent hostile actions. Moreover, cooperation and hostility may be expressed by intensity or magnitude (i.e., on an interval-level scale). That is, each leader may choose actions ranging from highly hostile actions (-10) to highly cooperative actions ($+10$).

[2]The term *audience cost* is taken from Fearon (1994). I argue that leaders face these costs when they lose confrontations and when they fail to respond to losses with increased hostility.

[3]This concept and phrase is similar to Colaresi's (2004) overcooperation concept.

[4]Colaresi (2004) invokes this same "hawkish" assumption, which could be relaxed in the future.

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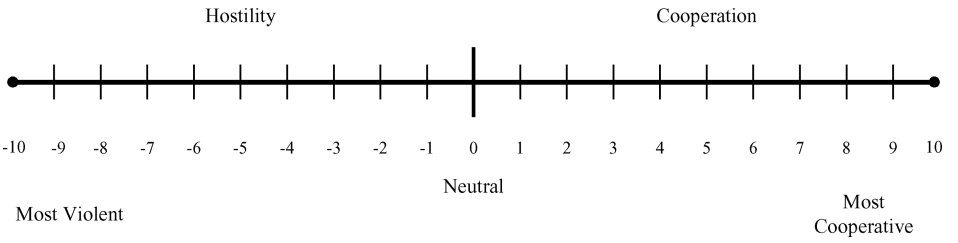

FIGURE 1 Government and dissident leaders' action set.

However, while each action taken by an actor raises or lowers the costs of the other actor (i.e., opponent), there is a price to pay for each action taken. I refer to the cost of taking an action as *action costs*. Each tactic is produced from the same pecuniary and nonpecuniary resource pool. Taking action imposes costs on one's own group: it costs time, energy, money, and human resources to protest, repress, negotiate, and make agreements. I assume that as the magnitude of hostile actions increases, the costs associated with those actions increase. As Levi (1989, 32) puts it, "coercion is expensive." I also assume that as the magnitude of cooperative actions increases, the costs associated with those actions increase. Finally, I assume that, on average, the price per unit of hostility is greater than the price per unit of cooperation (Kadera, 2001, 52, 59).

As noted above, leaders have finite resources with which to "pay" these associated costs. Therefore, each actor's resource pool constrains the viable actions available in an actor's action set. Because cooperation is less expensive than hostility and opponent cooperation lowers one's own costs, the least costly interactions, on average, are those in which both governments and dissidents cooperate. Thus, both actors prefer the use of cooperative tactics, which is consistent with Bueno de Mesquita and Lalman's (1992, 40) assumption that leaders prefer to negotiate rather than fight. Yet, due to the multiple threats that leaders face (discussed below), coupled with the fear of becoming the "sucker," mutual cooperation will rarely take place.

Decision-Making Contexts: Action Costs, Opponent Costs, Audience Costs

I argue that *opponent costs*, *audience costs*, and *action costs* influence leaders' decisions (and consequently behavioral shifts) in the short run. Specifically, leaders look to the recent past; consider the relative levels of opponent costs, audience costs, and action costs; and react in ways that ensure their tenure. To fix ideas, I write

$$GA_{CT} = f(OPPC_{PT}, AUDC_{PT}, ACTC_{PT}), \tag{1.1}$$

$$DA_{CT} = f(OPPC_{PT}, AUDC_{PT}, ACTC_{PT}), \tag{1.2}$$

where A refers to current level of government (G) or dissident (D) action on a H–C continuum, OPPC refers to *opponent costs* or the costs raised by opponent hostility and lowered by opponent cooperation, AUDC refers to *coalition audience costs* or successes/failures with the opponent, ACTC refers to *action costs* or the leader's expenditures, and the subscript PT refers to the leader's "previous turn."

I proxy all of the costs using levels of behavior and relative levels of behavior. According to the prior definitions, hostility raises an opponent's costs, while cooperation lowers an opponent's costs. Thus, the opponent's last action on the H–C continuum is a good proxy for opponent costs incurred in the previous turn. The presence of audience costs is determined by the relative levels of the two actors' actions in the previous turn: Who succeeded and

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who failed? Finally, a leader's last action is a good proxy for the action costs incurred in the previous turn. To fix ideas I write:

$$G_T = f(G_{T-1}, D_T, GFAILURE_{T-1}), \quad (2.1)$$

$$D_T = f(D_{T-1}, G_{T-1}, DFAILURE_{T-1}), \quad (2.2)$$

where G_T represents government hostility or cooperation in turn T, D_T represents dissident hostility or cooperation in turn T, G_{T-1} represents government hostility or cooperation in turn T-1, D_{T-1} represents dissident hostility or cooperation in turn T-1, $GFAILURE_{T-1} = 1$ if $G_{T-1} > D_T$ on the H–C continuum, 0 otherwise, and $DFAILURE_{T-1} = 1$ if $D_{T-1} > G_{T-1}$ on the H–C continuum, 0 otherwise.

I argue that leaders will observe these costs simultaneously and react to the set of costs incurred in the last "turn." Therefore, I construct six decision-making contexts from the relative levels of the variables and hypothesize how leaders will respond to the collective information set in their turn.[5] Given that it is more important for leaders to protect against internal than external threat, leaders repeat similar actions after successes in interactions with hostile or cooperative opponents and switch tactics after suffering audience costs and opponent costs. Each of these scenarios is depicted in the six contexts appearing in Figure 2, and I describe the logic behind each hypothesis below. While presenting the hypotheses, I describe some fictitious events which help to clarify the relative levels of actions but only serve as examples and only represent one possible combination of tactics observed within a given context.

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Hypotheses

Figure 2 depicts leaders' hypothesized actions given a particular decision-making context. The solid horizontal lines depict the range of actions available to each leader, where the solid vertical lines demarcate hostile actions from cooperative actions. Each leader's previous action is denoted by the subscript PT, and the dotted lines with arrows indicate the predicted directions in which actors shift their behavior in the current turn. An arrow pointing to the *right* indicates a hypothesized *positive* change in behavior, while an arrow pointing to the *left* indicates a hypothesized *negative* change in behavior.

In Context 1 (C1), both actors are hostile, yet the dissident leader's group is more hostile than the government. For example, if dissidents demonstrate and the government verbally issues a negative statement, the dissident leader does not incur audience costs. As such, the dissident leader should reduce his or her hostility levels as a result of his or her success. If we reverse the sequence such that the government denies a policy and the dissidents respond by demonstrating, the government leader appears weak for losing to a hostile dissident group. And, his or her image will worsen if he or she fails to return hostility toward the hostile opponent. In this instance, government leaders should increase hostility directed towards their opponent. Thus, change in government behavior should be negative.

In Context 2 (C2), both actors are cooperative but one is more cooperative than the other. For example, suppose the dissidents ask for material aid from the government. If the government extends such aid, the dissident leader does not incur any audience costs or opponent costs. The dissident leader should continue to be cooperative on average, yet reduce his or her intensity. The leader has no incentive to increase cooperation levels. In this context, change in dissident behavior should be negative, but dissident leaders should be

[5]In subsequent sections of my dissertation that are not reproduced in this article, I take up the issue of modeling these relationships.

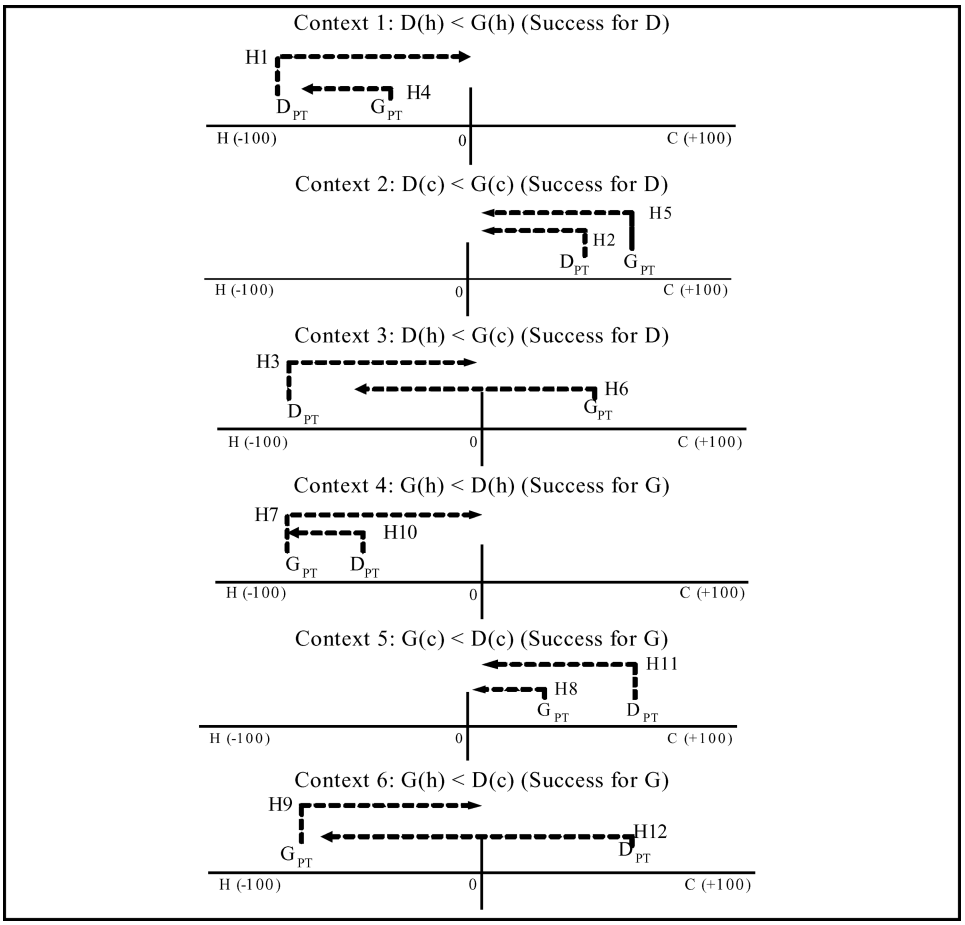

FIGURE 2 Six decision-making contexts and hypothesized change in behavior.

more likely to use cooperation than hostility (e.g., make an optimistic comment). In contrast, suppose that the sequence begins with the government extending aid followed by the dissidents asking for additional aid. In this instance the government leader suffers audience costs but does not incur opponent costs. To reduce audience costs, the leader should reduce the intensity of cooperation. Thus, change in government behavior should be negative.

In Context 3 (C3), the dissidents are hostile, while the government is cooperative. Consistent with Goldstein and Pevehouse (1997), I refer to this context as a "bully" context because the dissidents return hostility in response to cooperative initiatives sent by the government. For example, imagine that the dissidents demonstrate, and in response the government responds by approving a pro-dissident policy. Here, the dissident leader absorbs no audience costs and opponent costs are lowered by the opponent's use of cooperation. As such, the dissident leader should reduce his or her hostility levels (e.g., criticize the government); change in dissident behavior should be positive. On the other hand, if the government approved aspects of a dissident policy and the dissidents responded by demonstrating, the government leader would appear weak to his or her coalition. To save face, the government leader should increase the intensity of hostility. On average, we should see large swings in behavior that cross the H–C threshold. Change in government behavior should be large and negative.

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In Context 4 (C4), both actors are hostile, yet the government is more hostile than the dissidents. Suppose first that the government engages in an armed attack. The dissidents follow by beginning a riot. In this scenario, the government leader does not incur audience costs but does incur opponent costs. The theory implies that the government leader should reduce hostility but remain hostile to a hostile dissident group. On average, change in government behavior should be positive but minimal. Reversing the sequential order, if the dissident riot was followed by a government attack, the dissident leader would suffer audience costs. In order to satisfy his or her coalition, the dissident leader should, on average, increase hostility (e.g., use hostile force). Change in dissident behavior should be negative.

In Context 5 (C5), both actors use cooperation and so both leaders should remain cooperative yet reduce the intensity of their cooperation. Although the dissident leader incurs audience costs, he or she does not incur opponent costs. To maintain nonthreatening interactions with the government, the leader should reduce action costs by reducing cooperation. Like the dissident leader in C2, the government leader in C5 has no incentive to increase cooperation levels which could result in overcooperating. As a result, there should be a negative change in both government and dissident leader behavior in C2 and C5.

In Context 6 (C6), the government is hostile, while the dissidents are cooperative. For the sake of example, suppose the dissidents begin the sequence by agreeing to release hostages and the government responds by engaging in armed attacks. Much as the government leader must respond with hostility in C3, the dissident leader must respond with hostility in C6. Leaders appear weak if they do not respond to bully behavior with hostile means. We should expect large negative swings in dissident behavior and dissident leaders should be more likely to use hostility than cooperation (e.g., demonstrations) in the current turn. Reversing the sequence, if the government began by engaging in armed attacks and the dissidents responded by releasing hostages, the government leader does not incur audience costs or opponent costs. In this context, the government leader should continue to direct hostility at the dissidents but reduce the intensity (e.g., issue a warning). Thus, change in government behavior should be positive and government leaders should be more likely to use hostility than cooperation. Having described the contexts and implied hypotheses, I now turn my attention towards the research design.

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Research Design

Since I am asking questions that concern actors' levels of both cooperation and hostility, the data for my study must measure actors' behavioral levels on a cooperation–hostility continuum. Event data are a natural choice for analysis because they offer the most detailed record of interactions between and among actors (Goldstein, 1992, 369). Event data are "day-by-day coded accounts of who did what to whom as reported in the open press (Goldstein, 1992, 369)." Such data projects record four important pieces of information: the actor, the target, the event, and when the event occurred. To utilize event data in statistical models, one must first aggregate the events in a way that requires some method of combining different event types into a "single theoretically meaningful measure (in one or more dimensions)" of the relationships among actors (Goldstein, 1992, 370). Most event data projects convert events into a measure of conflict or cooperation.[6] The conflict-cooperation variable measures the intensity of one actor's behavior directed towards another.

[6]See Cooperation and Peace Data Bank (COPDAB), World Events Interaction Survey (WEIS), Integrated Data for Events Analysis (IDEA), and Intranational Political Interactions (IPI) Project.

The Chile and Venezuela data come from the Intranational Political Interactions (IPI) project.[7] IPI codes event data for a handful of middle powers during the years 1983–92. The data were coded by human coders using an ordinal scheme that contains ten general categories of cooperation and ten general categories of hostility (Leeds et al., 1995). While the IPI project proves useful in the study of domestic conflict (Moore & Davis, 1998; Carey, 2006), the ordinal scales impose on the data a constant, interval, linear relationship between the events and their assigned values. Rather than impose such a strong assumption, Shellman (2004a) surveys a set of scholars who work in the field to determine whether this linear assumption has an empirical basis. The research follows the work of Azar and Sloan (1975) and Goldstein (1992) in that it asks political violence experts to collectively order and assign intensity weights to the event categories of the IPI project. The panel make-up and the reported reliability checks suggest that the resulting data are valid and reliable (see Shellman, 2004a). The survey produced two common *interval-like* scales of domestic cooperative and hostile political actions based on a group of experts' judgments. I use the Shellman (2004a) interval-like scales in this study.

Since I have simplified my theoretical model to two actors, I aggregate all dissident actions taken towards the government together and all government actions taken towards the dissidents together. After combining the different event types into a conflict-cooperation measure, one must convert the events to a time series by temporally aggregating the data. To temporally aggregate data means to sum or average a variable across such regular time intervals as days, months, quarters, or years. The time interval is often chosen by the individual researcher (and should be theoretically motivated), but according to Alt, King, and Signorino (2001), little attention has been paid to the bias that this choice can introduce.

While only a few political scientists examine the effects of temporal aggregation on inferences (e.g., Freeman, 1989), many other scholars have explored the impacts of temporal aggregation in other literatures. In fact, when one surveys econometrics, economics, and statistics literatures, one generally concludes that aggregation matters. That is, one can draw different inferences by choosing different units of temporal aggregation. Moreover, in a recent study, Shellman (2004b) shows that we do not infer the same "causal" relationships across temporal units of aggregation when testing competing hypotheses in the repression-dissent nexus.

We must put forth a theoretically driven argument about the temporal dynamics of state and dissident responses to one another. Rarely, if at all, do internal conflict scholars have a theory about the temporal frequency of conflict and cooperation between actors in a given case. Typically, scholars working with event data represent an actor's behavior as an "accumulation of discrete actions over some uniform but ultimately arbitrary interval of time (e.g., weeks, months, quarters)" (Dixon, 1988, 240). What is the appropriate interval to aggregate conflict-cooperation data? While aggregating data by the appropriate interval is plausible in many areas of study (e.g., budgets), the appropriate interval at which governments respond to dissidents and dissidents respond to governments is blurred. So I return to theory and ask: What does theory tell me to do?

I developed my theory within a sequential framework, in which governments and dissidents take turns acting and reacting to one another's behavior. Therefore, I must aggregate and analyze data that captures the sequential nature of government-dissident relations. I choose to aggregate the data by "turns" (see Marlin-Bennett, Rosenblatt, & Wang, 1991, and Moore, 2000). Doing so lends the data to sequential statistical methods. I explain the process below.

[7]See the IPI website for more information: http://garnet.acns.fsu.edu/~whmoore/ipi/ipi.html.

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Marlin-Bennet, Rosenblatt, & Wang (1991, 202–3) introduce an effective distinction between a "turn" and a "move." A move is a single action taken by one actor towards another, while a turn is defined as an uninterrupted sequence of moves by one actor directed towards another. I illustrate using the following sequences:

$$D_1, G_1, D_2, G_2, D_3, \ldots. \qquad \text{(sequence 1)}$$

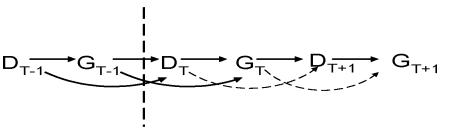
In sequence 1, the dissidents, D, and the government, G, take "turns" acting and reacting to one another's behavior. However, not every action exhibited by an actor is reacted upon immediately. Time passes between these actions, and a group may make two or more "moves" before its opposition makes a move or reacts. Therefore, the sequence looks more like this:

$$d_1, d_2, g_1, g_2, g_3, d_3, d_4, g_4, d_5, d_6, \ldots. \qquad \text{(sequence 2)}$$

To analyze behavior in a "turn-taking" fashion, I must produce an ordered sequence of interactions resembling the first sequence. In hypothetical sequence 2, each lower-case entry is a "move," whereas the capital letters in sequence 1 represent turns. The first two letters in sequence 2, d_1 and $d2$, represent the "turn" D_1 in sequence 1. The next "turn," G_1, identified in sequence 1 is actor G's first, second, and third "move," d_1, d_2, and d_3, in sequence 2. Actor D's second "turn," D_2, consists of only one "move," d_3.

In order to produce the desired sequential "turns" depicted in sequence 1, I aggregate the data by calculating the mean of each sequence of moves. For example, I calculate the mean magnitude of actor D's first two moves, in sequence 2, to produce D's first turn. The mean of the sequential moves, g_1, g_2, g_3, now equals the government's turn 1 or G_1. Next, D's second turn consists of only one move, so the magnitude of the move alone represents D's second turn. In effect, I transform the series of move interactions into a series of turn interactions. The data are in sequential order in which the dissidents and the government take turns acting and reacting. Now I direct attention to model specification.

Before specifying the model employed to test the hypotheses, I must describe the sequential nature of the model and the "turn" notation to clarify the temporal nature of the variables. In order to test my hypotheses, the model must be able to illustrate sequences of two competing actors' actions. I must explain two dependent variables, which, statistically, means two equations. Both sequence 1 and the sequence below depict a sequence of government-dissident actions and reactions:



(sequence 3)

To explain the notation and causal sequences, I offer the following example. Suppose we wanted to model current government behavior (G_T) as a function of previous government and previous dissident behavior and we wanted to model current dissident behavior (D_T) as a function of previous government and dissident behavior. Using sequence 3, we would write:

$$G_T = f(G_{T-1}, D_T), \qquad (3.1)$$

$$D_T = f(G_{T-1}, D_{T-1}). \qquad (3.2)$$

I display a path diagram in Figure 3 that models sequence 3. Observe in Figure 3 that the government action at turn T (G_T) is explained by the dissident action at turn T (D_T)

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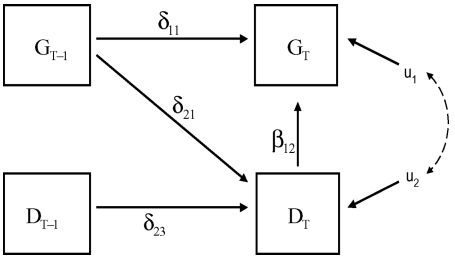

FIGURE 3 Sequential causal model of dissident government interactions.

(which actually precedes G_T in temporal order) and the government's previous action (G_{T-1}), whereas D_T is explained by D_{T-1} and G_{T-1}. As a result, each government leader's current context is shaped by G_{T-1} and D_T, while each dissident leader's current context is shaped by G_{T-1} and D_{T-1}.

In this study, I want to model the effect of each decision-making context on government-dissident actions. Specifically, I am interested in how each context influences the change from one turn to the next in both actors' behavior. To model such change, I construct five dummy variables that represent Contexts 1–5 (C1–C5) described above and regress change in dissident behavior (ΔD_T) and change in government behavior (ΔG_T) on each of them plus a constant. The constant represents the effect of Context 6 (C6) on the dependent actor's behavior. Each of the dependent change variables is calculated by taking the first difference between each actor's behavior at turn T and at turn T-1. To fix ideas, I write the following model:

$$\Delta G_T = +\delta_{11}C1_T + \delta_{12}C2_T + \delta_{13}C3_T + \delta_{14}C4_T + \delta_{15}C5_T + \delta_{10} + e_{17T}, \quad (4.1)$$

$$\Delta D_T = +\delta_{21}C1_T + \delta_{22}C2_T + \delta_{23}C3_T + \delta_{24}C4_T + \delta_{25}C5_T + \delta_{20} + e_{27T}, \quad (4.2)$$

where ΔG_T represents the change in government behavior from turn T-1 to turn T, ΔD_T represents the change in dissident behavior from turn T-1 to turn T, and $C1_T$–$C5_T$ are dummy variables equal to 1 when the conditions in Figure 2 correspond to each dummy variable. For example, when both actors are hostile and D_{T-1} is more hostile than G_{T-1}, then C1 is equal to 1 and all other dummy variables are equal to zero. The constants δ_{10} and δ_{20} represent the conditions in Context 6 for the governments and dissidents, respectively, and e_{17T} and e_{17T} are disturbance terms.[8] The six contexts are mutually exclusive, so the constant represents the effect of Context 6 on change in behavior.

To interpret the effects of C6, one simply observes the sign, magnitude, and statistical significance of the intercept term. To interpret the other variables' sign and magnitude, one must add the coefficient on the variable of interest to the intercept. The sum produces the impact of the decision-making context on the change in the dependent actor's behavior. For example, to observe the impact of C3 on the change in government behavior, one would add together $\delta_{13} + \delta_{10}$. The sum indicates the direction and magnitude of the dependent actor's change in behavior under the conditions in C3. An insignificant dummy variable suggests that the context does not produce any significant changes in behavior from those produced by C6. Next, I draw your attention to some necessary diagnostic analyses before proceeding to the estimation stage.

[8]Here, I make no argument about the functional form of the relationships between previous behavior and current behavior. I do, however, address this in other parts of my dissertation.

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Estimating the multiple equation time series models requires that I check for (1) stationary time series, (2) contemporaneous correlated errors across equations, and (3) autocorrelated disturbances within each equation. First, I diagnosed stationary time-series using augmented Dickey-Fuller (ADF) unit root tests which led to rejection of the null hypothesis that each series contains a unit root.[9] Second, I checked to see if the errors were correlated across equations. I estimated each equation on its own using Ordinary Least Squares (OLS) and calculated the correlation coefficient for the residuals across equations. However, no correlation posed a threat to inference.[10] Finally, to diagnose autocorrelation, I chose to perform the M-test and Breusch-Godfrey tests to detect both first-order and higher order autocorrelation. Autocorrelation was detected in each model and so I dealt with the problem two ways. One way to deal with the problem is to calculate Newey-West serially correlated (SC) robust standard errors (Wooldridge, 2000, 387–404). In addition, I chose to model the dynamics of the series using autoregressive integrated moving average (ARIMA) or Box-Jenkins (1976) methodology. ARIMA methodology allows the researcher to control for series noise and efficiently evaluate the impacts of the variables of substantive interest on the dependent variable (Wood, 1988, 221). Since controlling for series noise probably gives me a more efficient estimate of the size of the effects, I choose to interpret the ARIMA results. However, the general inferences are the same across the ARIMA and OLS results with SC robust standard errors.

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Results

The ARIMA estimates and standard errors for equations (4.1) and (4.2) appear in tabular form in Tables 1 and 2. I display the change associated with each context graphically in Figure 4. Of the 12 hypotheses tested in two countries, 21 of 24 (88%) are supported. Moreover, both the government and dissident models do well independently. The government results corroborate 10 of 12 hypotheses (83%), while the dissident results support 11 of 12 hypotheses (92%). I now turn attention towards interpreting the ARIMA results in Figure 4.

Figure 4 illustrates the substantive effects of the decision-making contexts on changes in the dependent actor's behavior. The results for change in dissident behavior are displayed in the first row, while results for change in government behavior are displayed in row 2. Column 1 contains the results for Chile, while column 2 contains the results for Venezuela. The vertical axis in each graph represents the change in government behavior from turn T-1 to turn T, while each context is arranged along the horizontal axis. The values for Contexts 1–5 represent the sum of the coefficient on each respective dummy variable (1–5) plus the constant. The effects for Context 6 are interpreted using the estimate of the intercept. The asterisks indicate that the change in the dependent actor's behavior is statistically significant at least at the .10 level. If an actor is hypothesized to move to the left in Figure 2, we expect negative change in behavior. Thus, the bar in Figure 4 corresponding to a given context should be negative. In contrast, if an actor is expected to move to the right in Figure 2, the bar in Figure 4 should be positive. I begin by discussing the government results and then present the dissident results for each case.

In Contexts 4 and 6, the dissident group responded to the government's previous hostile tactic with a less hostile tactic than the government's. In these situations, the government should, on average, reduce its hostility in the current turn. Change in behavior should be *positive* in both contexts. Figure 4 illustrates that the Chilean government operating in

[9] ADF statistics are available from the author upon request. All models were run with and without trend and drift. The tests were stable across different lag lengths.

[10] I checked the sensitivity of results using a SUR estimator for those coefficients greater than |.05| and the results remained consistent and changed little.

TABLE 1 Government: Multiple equation ARIMA time-series estimates

Variable	Chile (1983–1992) Δ*Government* behavior ARMA (0, 1)		Venezuela (1987–1992) Δ*Government* behavior OLS (No autocorrelation detected)	
$GC1_T$	−29.46	(7.14)***	−27.37	(9.99)***
$GC2_T$	−25.19	(8.36)***	−37.05	(12.05)***
$GC3_T$	−37.81	(7.55)***	−52.28	(10.73)***
$GC4_T$	−19.73	(6.70)***	−.49	(9.53)
$GC5_T$	−0.47	(11.89)	*No Observations*	
Constant ($GC6_T$)	+24.29	(6.70)***	+14.59	(9.20)*
AR(1)	—	—		
AR(2)	—	—	—	—
MA(1)	−.604	(.048)***	—	—
Wald Chi	596.71***		—	
N (turns)	455		125	
Joint-F (all GC = 0)	54.72***		20.37***	
Joint-F (GC1 = GC3)	6.69***		13.66***	
Joint-F (GC2 = GC5)	1.93*		9.45***	
Joint-F (GC1 = GC4)	19.82***		34.23***	
Joint-F (GC4 = Constant)	10.87***		.66	

Standard errors are shown in parentheses.

TABLE 2 Dissident: Multiple equation ARIMA time-series estimates

Variable	Chile (1983–1992) Δ*Dissident* behavior ARMA (2, 0)		Venezuela (1987–1992) Δ*Dissident* behavior ARMA (1, 0)	
$DC1_T$	+15.38	(6.49)***	+48.17	(10.24)***
$DC2_T$	−3.62	(8.23)	+30.13	(16.68)**
$DC3_T$	+11.96	(6.74)***	+45.72	(9.96)***
$DC4_T$	+9.90	(6.44)***	+35.54	(8.85)***
$DC5_T$	+6.0	(10.89)	+26.62	(29.38)
Constant ($DC6_T$)	−11.35	(6.29)***	−39.52	(8.14)***
AR(1)	−.514	(.044)***	−.515	(.101)***
AR(2)	−.277	(.042)***	—	—
Wald Chi 2	310.32***		237.18***	
N (turns)	455		125	
Joint-F (all DC = 0)	31.26***		45.69***	
Joint-F (DC4 = Constant)	7.57***		19.81***	
Joint-F (DC2 = DC5)	1.0		.01	
Joint-F (DC1 = DC4)	7.87		14.98***	
Joint-F (DC1 = DC3)	2.89**		.12	
Joint-F (DC1 = DC3)	.83		—	

Standard errors are shown in parentheses.

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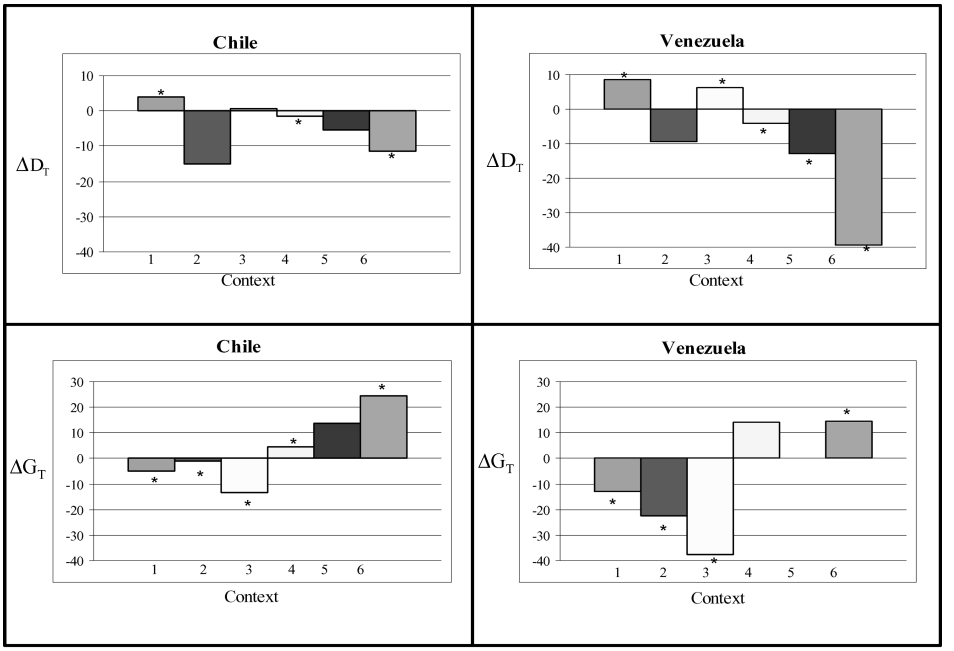

FIGURE 4 Average dissident and government change by country and context.

Context 4 decreases hostility levels in the current turn by about four points, while the Venezuelan government decreases hostility by about 14 points on the −100 to +100 H–C scale. It is important to note that decreasing hostility means that behavior actually becomes more positive moving from high negative values to lower negative values. In Context 6, the Chilean government decreases hostility levels in the current turn, on average, by more than 24 points, while the Venezuelan government decreases hostility levels by almost 15 points. In sum, the results support the hypothesized relationships in C4 and C6.

In Contexts 2 and 5, the government and dissidents mutually cooperated, yet the government overcooperated. Governments should decrease their action costs and protect against coalition audience costs suffered for overcooperating in the previous turn. They should shift in the same way under the conditions of C5. As a result, I expect change in behavior to be *negative* in both contexts. In Figure 4, we observe that in C2, for both Chilean and Venezuelan governments, change in behavior is negative as predicted. Figure 4 records about a 1-point reduction in behavior in Chile and about a 23-point reduction in Venezuela. Context 5 should also produce a negative change in government behavior across Chile and Venezuela. However, the results do not support this hypothesis in Chile, and we cannot test it in Venezuela, as there are no observations of C5 conditions in these data.

In Contexts 1 and 3, government leaders should respond to hostile dissidents with increased hostility following failed interactions. Furthermore, the change associated with C3, otherwise known as the bully context, should be the largest in relation to the other contexts since government leaders are hypothesized to shift their behavior from cooperation to hostility. Change in Context 1 should also be large and negative as government leaders confront the aftermath of a loss to a hostile dissident group. In response, leaders should raise their hostility levels to show strength and resolve to both their ruling coalition and their dissident opposition. In these contexts, the government leader is responding to the hostile dissident group who threatens his or her rule directly (opponent costs) and indirectly

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(audience costs). In Figure 4, we observe that change in C1 and C3 is negative and statistically significant in Chile and Venezuela. Chilean government hostility increases by about five points in Context 1 and by more than 13 points in Context 3 on the −100 to +100 H–C scale. The Venezuela results report a statistically significant negative change of almost 40 points in C3 and about 13 points in C1. In Venezuela, C3 produces the most absolute change in government behavior, while in Chile C3 ranks second behind C6.

Now I turn my attention towards the results for the dissident models. In Contexts 1 and 3, dissident leaders should repeat similar hostile actions in the current turn yet perform those actions with less intensity. Thus, positive changes in dissident behavior should be associated with C1 and C3. The results in Figure 4 show that the average change in government behavior in C1 is positive and statistically significant in both countries, while C4 is positive and statistically significant in Venezuela only. In Chile, dissidents in C1 decrease their hostility, on average, by about four points, while Venezuelan dissidents in C1 decrease their hostility levels by almost 10 points. Similar to C1, dissident leaders in Venezuela operating in C3 reduce hostility, on average, by about eight points on the −100 to +100 H–C scale.

In Contexts 2 and 5, as described above, mutual cooperation occurs between governments and dissidents. The same logic applies to dissident leaders in these contexts as to government leaders. Specifically, in each context, the dissident leader should decrease cooperation levels. Thus, the average change in behavior in Contexts 2 and 5 should be negative and statistically significant. In Chile, as shown in Figure 4, C2 decreases change in dissident behavior by almost 15 points on the −100 to +100 H–C continuum. Though the coefficient in Table 4 is not statistically significant, C6 is the constant which is equal to −11. Context 2 produces the predicted direction of change in behavior, but the results indicate that the effects are the same as those generated from C6 in Chile. We observe the same relationships in Venezuela. In both cases, the effect of C2 and C6 is virtually the same. These results support the hypotheses implied by the theoretical argument. Observing Figure 4, C5 produces negative change in both Chile and Venezuela as expected. Note that the test on C5 is whether or not change in behavior is different from change in behavior in C6. Since C6 is negative and significant in Chile, C5 garners support. Thus the hypothesis is corroborated in both Chile and Venezuela.

In Context 4, the dissidents have recently failed to reach the hostility levels of the government. The theory implies that dissident leaders, on average, will increase their hostility after failing to achieve the hostility levels of the government. This predicted change in behavior is similar to that predicted for governments in C1. Observing Figure 4, this is the case in both Chile and Venezuela. Dissidents in both Chile and Venezuela increase hostility levels, but more so in Venezuela.

In Context 6, dissident leaders are predicted to respond to government bullies with increased hostility. Observing Figure 4, C6 in each country produces statistically significant negative changes in dissident behavior. Moreover, the bully context is associated with the largest statistically significant amount of change in Chile and in Venezuela. The results reported here account for the anticipated responses to "bully behavior" implied by the theory.

Conclusion

This study offers a rational choice approach to the analysis of internal conflict-cooperation processes. Specifically, the research focuses on linking government and dissident leaders' micromotives to the macrolevel behavior, such as large-scale protests, mass demonstrations, and cooperative agreements, observed in the world. Given a leader's motive to retain

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office, a rational leader should employ tactics that give the leader the best chance at maintaining office in the short run. Leaders must employ tactics that protect against internal and external threats to their rule while conserving resources. Given the argument, I derive the conditions under which one should observe the escalation and de-escalation of macrolevel cooperation and conflict within domestic societies. The statistical results indicate that the theory can account for many empirical findings in the literature as well as explain novel hypotheses and additional dynamics (Lakatos, 1978). The results strongly communicate that decision-making contexts matter and furthermore show empirically how they matter.

In sum, this study contributes an original theory, model, and findings to the repression-dissent literature. Though this article will not be the final word on this topic, it should motivate scholars to explore the problem from leaders' perspectives, their motives, and their decision-making contexts. Using this micromotive framework, we can learn more about the causal mechanisms that drive government and dissident actions.

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