COALITION TERMINATION AND THE STRATEGIC TIMING OF PARLIAMENTARY ELECTIONS

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*C*abinet coalitions in multiparty parliamentary democracies lead a precarious existence. Legislative majorities can typically dismiss the cabinet at will and can sometimes force early elections through parliamentary dissolution. Since coalition termination can have substantial political consequences, it is important to understand when and why such decisions are made. To this end, we develop a model of coalition bargaining in a legislature with dismissal and dissolution powers. We use the model to identify necessary and sufficient conditions for both coalition termination and parliamentary dissolution. In contrast to several widely held maxims, we find that coalition terminations need not be the automatic consequence of exogenous shocks. Nor do opportunistic parties with favorable electoral prospects always dissolve parliament to enhance their power. Instead, decisions to terminate coalitions or call new elections result from party leaders' rational responses to the constraints of legislative and electoral institutions and the anticipated feelings of the electorate.

oalition governments in parliamentary democracies lead a precarious existence. Typically, they can fall on any given day, sometimes with little or no warning. The circumstances surrounding coalition termination vary greatly, occasionally producing great drama. Some politicians are forced from their cabinet offices in a daze, never knowing what hit them. Others choose their date of departure and leave with smirks on their faces. Some alliances go down in fiery spectacles of backroom infighting and betrayal, whereas others take their struggles "to the country" and leave the judgment to the voters.

Why do governments fall at the precise moments that they do? Quite often, the causes of coalition terminations seem obvious in one sense—as when they follow a dissolution of parliament or a legislative vote of no confidence. "Explanations" of this kind direct our attention to two important and common legislative powers. In most parliamentary democracies, simple legislative majorities have *dismissal power*, that is, the power to recall the cabinet at any time. In many parliamentary democracies, legislative majorities also have *dissolution power*, that is, the power to dissolve parliament and force early elections. Once we recognize the availability of such powers, the more interesting questions become when and why parliamentarians use them.

We shall explain the causes and consequences of coalition termination in a legislature endowed with dismissal and dissolution powers. We pursue these questions because decisions to terminate coalitions, call new elections, or leave the government as it is, constitute dramatic events with nonobvious causes and politically important consequences. Such consequences may be direct or indirect. The best-known direct consequence is the sizable reallocation of legislative power that can follow a change in government. Indirect consequences include the effects of commonly held beliefs about the likelihood and aftermath of an upcoming termination on the present

bargaining powers and negotiating strategies of forward-looking parliamentarians. All else equal, participants in a seemingly viable government may have much greater bargaining power than those whose partnership is expected to collapse soon. If such beliefs are sufficiently common or their implications large enough, then they can affect parliamentary decision making decisively and long before the cabinet's predicted demise.

To identify causes and consequences of coalition termination, we develop a model of parliamentary bargaining in the presence of a preexisting governing coalition. In the model, an external event gives rise to commonly held expectations concerning the outcome of a potential election. We use the model to identify necessary and sufficient conditions for three collectively exhaustive types of outcomes: (1) coalition termination followed by a nonelectoral reallocation of power (either reallocations between existing coalition members or reallocations involving a new set of coalition members); (2) coalition termination followed by parliamentary dissolution and new elections; and (3) no coalition termination (i.e., the governing cabinet coalition survives the crisis completely intact). The predominant theme of our results is that coalition terminations are not automatic responses to external events. Instead, the causes and consequences of coalition terminations are reasoned and negotiated responses to a variety of changing circumstances. Furthermore, we find that popular opinion, strategic interaction, and institutional features of both legislative and electoral institutions each have systematic effects on the dynamics of coalition termination.

What value such insights provide is partially revealed by three conclusions, each of which allows us to reinterpret a widely held maxim concerning cabinet formation or termination. Our first conclusion suggests thinking anew about the maxim that "parties terminate cabinets when they expect electoral gains" (e.g., Grofman and van Roozendaal 1994,

158). We conclude that *favorable electoral prospects are neither a necessary nor a sufficient condition for either coalition termination or parliamentary dissolution*. Rather, the anticipation of good electoral fortunes gives a party a bargaining chip that it can exploit by either renegotiating the balance of power within an existing coalition, forging a more attractive coalition with new partners, forcing dissolution and new elections, or protecting the existing cabinet.

Our second conclusion amends the maxim that in three-party legislatures, "the governing coalition will comprise the largest and smallest legislative parties" (Austen-Smith and Banks 1988; Baron 1991). We conclude that *the bargaining advantages often attributed to a party's size are also the result of various other factors*, such as its electoral prospects or the policy and office-driven gains from trade that it can offer potential coalition partners. So while a political party's size and bargaining power can be positively correlated, we identify a wide range of circumstances under which they are not.

The third affected maxim is that governing coalitions are toppled by exogenous shocks that are "random and unpredictable events" (e.g., Browne, Frendreis, and Gleiber 1986; Cioffi-Revilla 1984). We conclude that *whether a particular crisis leads to both coalition termination and parliamentary dissolution, just coalition termination, or neither depends heavily on the electoral cycle*. For example, the same external event that causes no dissolution early in a parliament's term could well do so later.

In sum, our research provides a new way to understand parliamentary decision making in regimes where coalitions can be terminated at almost any time. It also proposes a new way to think about the relationship between legislative institutions, electoral considerations, and parliamentary decisions.

We begin our analysis by describing two important, but unremarkable, coalition terminations. These cases' shared characteristics are emblematic of factors that generally influence coalition termination. They provide the empirical grounding for our theoretical analysis. Then we briefly evaluate the existing literature on the causes of coalition termination and stockpile the wisdom it imparts. Next, we develop a noncooperative, game-theoretic parliamentary bargaining model and use it to identify the causes and consequences of coalition termination. We supplement our results with a short series of simple numerical examples. Finally, we offer concluding remarks and, in the Appendix, provide a series of proofs.

A TALE OF TWO COALITIONS[1]

We aim to facilitate a general understanding of coalition termination's dynamics by building a theoretical model upon empirically verifiable premises. To motivate our premises, we briefly chronicle two actual coalition crises. What makes these crises particularly illustrative for our purposes is that they represent milestones in the political histories of their respective countries. Their real-world significance is therefore indisputable, and the events are relatively well known. Yet these cases are by no means exceptional. We believe they are representative of many similar events.

Please note that each case contains five features that are common to coalition crises and serve as the building blocks of our own theoretical model. First, *coalition crises typically arise with changes in the political environment, and specifically when party leaders gain new information*. Party leaders are more likely to terminate coalitions or call early elections in the wake of major unexpected events beyond their control. But what makes such events critical is the new expectations they convey. Second, *coalition crises can produce any one of a number of possible outcomes*. Sometimes, the result is simply a cabinet reshuffle, a renegotiation of the "contract" between the existing coalition members. At other times, a new coalition may form between parties that were not previously partners. One extreme resolution of a coalitional crisis is, perhaps, the best known—the decision to dissolve parliament and call early elections. At the other extreme is the possibility that the crisis passes with the initial coalition and parliament intact. Third, *intensive party deliberations and negotiations often precede coalition termination*. That is, coalition realignment does not typically take the form of an immediate response to an exogenous shock. Instead, coalition bargaining is often protracted and hard-nosed. Fourth, *parliamentarians often conduct such negotiations in the shadow of elections*. That is, the strategies of party leaders are critically influenced by their anticipation of elections and by their expectations concerning voter preferences. Fifth and finally, *party leaders often pay a price when they abandon their previous commitments*. For example, politicians often encounter resistance from their own parties when they advocate changing coalition partners.

Germany, 1982

The seventeenth of September 1982 marked the most complete turnover in the German government since World War II. After 13 years of coalition government, the leadership of the Free Democratic party (FDP) decided to terminate its cooperation with the Social Democrats (SPD). An economic downturn had put the coalition partners at odds and lessened the value of the alliance to the FDP. With a ballooning budget deficit, the gulf between the FDP's commitment to fiscal discipline and the Social Democrats' Keynesian policies had gradually led to coalitional friction. At the same time, the coalition parties faced a new electoral challenge in the Green party, which had ridden the crest of peace protests and heated debates over the death of the German forests to electoral success. The Greens had drawn more than 5% of the vote in recent state elections (Bremen and Baden-Württemberg), success that if replicated at the national level, would land them in the Bundestag (the German parliament) for the first time.

The Green success stood in direct contrast to the FDP's electoral fortunes. The FDP had lost support in five of the six state elections held since 1979 and by 1982 was out of government in all but two states, an unprecedented low. Opinion polls showed a steady decline in the proportion of German voters intending to vote for the FDP. From 12% at the beginning of the 1981, this figure had dropped to about 7% by the middle of 1982. One poll in the summer of 1982 put FDP support as low as 5.3% (Søe 1985, 151). If this trend were to continue, the Free Democrats would be in danger of falling below the 5% threshold in the next scheduled Bundestag election in 1984. These grim forecasts, combined with the Green ascendancy, threatened to end the pivotal role that the FDP had played in virtually every postwar government.

The Free Democrats had several difficult choices to make. One option was to leave the coalition with the SDP in favor of one with the Christian Democrats (CDU/CSU). Some FDP leaders felt that such a switch would help their electoral standing in the longer run. Other elements within the FDP feared the electoral repercussions of "betraying" the commitment to the SDP, on which the party had contested the previous Bundestag election. Polls showed most FDP voters opposed to any change of partners, and Free Democrats committed to the SPD–FDP coalition felt that any change of coalition should be approved by the voters ex ante. While some FDP members favored asking President Carstens to dissolve the Bundestag and hold early elections, others, conscious of the FDP's declining electoral fortunes, foresaw early elections driving the party out of parliament.

The conflict came to a head when FDP economics minister Otto von Lambsdorff called for austerity measures affecting social services, only to be publicly rebuked by Schmidt and other SPD officials (Søe 1985; 1982 *Keesing's Record*, 31,774). On 17 September, after Schmidt rejected Lambsdorff's proposals, all four FDP cabinet ministers announced their resignation. Schmidt then allowed his cabinet to be voted down and unsuccessfully sought a parliamentary dissolution. Instead, on 1 October Helmut Kohl's CDU/CSU–FDP coalition was voted into office in the first successful application of Germany's constructive vote of no confidence. Several months later, Kohl engineered a parliamentary dissolution, leading to elections in March 1983.

For the FDP, the short-term fallout of coalition change was severe. Günter Verheugen, the party's secretary general, resigned in protest. Thousands of activists and several prominent leaders (including Verheugen) then left the party, which failed miserably in three state elections between late September and December of 1982. However, the six-month delay of the Bundestag election appears to have allowed the Free Democrats to recoup some of their public support. While the FDP, as expected, lost ground electorally, it did surpass the 5% of the March vote necessary to survive as a parliamentary party and coalition partner (see Poguntke 1993).

Ireland, 1987

A few years later, an era in Irish coalition politics came to an end. On 20 January 1987, the Irish Labour party withdrew from the two-party coalition that had governed Ireland for the major part of the period since 1973. Taoiseach (Prime Minister) Garret Fitz-Gerald of the Fine Gael, reduced to the head of a minority cabinet, promptly requested a dissolution of the Dail (the Irish parliament).

Labour's withdrawal from the third Fine Gael–Labour coalition had been long in the making. Though the two parties wasted little time in reaching agreement after the November 1982 election, the coalition soon encountered rough waters. Lingering economic recession in the mid-1980s led to increased unemployment, emigration, and industrial relations confrontations. FitzGerald's neoliberal economic policies succeeded in bringing down inflation but were unpopular among working-class voters (Girvin 1987). In addition, the government struggled with touchy issues such as abortion and divorce.[2]

The emergence of a new political party, the Progressive Democrats (PD), complicated the electoral picture. The party, founded in 1985 as a splinter group from Fianna Fail, quickly surpassed Labour in the polls to become Ireland's third largest party. Somewhat surprisingly, the PD proved to draw more support from disaffected Fine Gael voters than from Fianna Fail. Yet the problems of the coalition were particularly visited on the Labour party. From 9.4% of the vote in the November 1982 election, opinion polls showed support for the party slipping to 7–8% by the end of 1984 and all the way down to 4% by 1986 (Marsh and Mitchell 1992, 14).

In response to this alarming slippage, Labour party leaders attempted to "toughen up" their bargaining position vis-à-vis Fine Gael. Whereas their efforts yielded some policy victories, Labour leaders failed to improve their standing with the electorate and came under increasing pressure to resign from the coalition. Labour leader Dick Spring originally favored a continuation of the coalition with Fine Gael, but his position within the party gradually eroded. A Labour party electoral commission, reporting in September 1985, identified coalition participation as the greatest cause of the party's decline and advocated going into opposition. The alternative, it was suggested, "may be no party at all" (Marsh and Mitchell 1992, 15).

There was ambivalence about the coalition within the Fine Gael as well. While Prime Minister FitzGerald hoped to keep his coalition alive until a June 1987 election, he realized that Labour's government participation made it difficult to reach the budgetary goals on which he had staked much of the party's reputation. To shore up the party's shaky support, he hoped to fight the next election on the theme of fiscal integrity. At the 1986 party conference, he therefore left the door open for an abandonment of the coalition in the next parliament (Girvin 1987, 9–10).

A cabinet reshuffle in February 1986 failed to infuse any new blood into the coalition, and disgruntled

backbenchers defected from both coalition parties. At its annual conference in November, the Labour party adopted a resolution that ruled out participation in any coalition after the next election (1987 *Keesing's Record*, 35,084). That the main opposition party, Fianna Fail, steadfastly maintained a "no coalition" policy implied that no other option was feasible.[3] In response to growing internal pressure and the unprecedented unpopularity of the coalition, Spring disowned the coalition in September, declaring that he looked forward to a life in opposition.

Four months later, Labour found a rationale for withdrawal in the government's proposed cuts in social welfare, health, and education (Farrell and Farrell 1987; Marsh and Mitchell 1992, 16). These measures were critical to both parties' electoral credibility. The fact that the Fine Gael had forced these measures on the cabinet despite Labour opposition set in motion the events that led to Labour's 20 January withdrawal. The subsequent elections resulted in losses for both Fine Gael and Labour, while Fianna Fail captured the executive branch.

COALITION TERMINATION AND ITS CAUSES

As coalition terminations go, neither the German or Irish case is unusual. However (and despite their strong similarities), the existing literature on coalition government does not provide us with a general understanding of why parliaments resolve coalition crises in such distinct manners.

To facilitate such an understanding, we follow a respected list of political scientists who have long recognized the importance of executive stability in democracies and have sought to identify its determinants (Bryce 1921; Lowell 1896; Powell 1982). Over time, this literature has branched off into three distinct schools. One venerable tradition seeks the causes of coalition termination in the *structural attributes* of the coalition itself (Blondel 1968; Duverger 1954; Strøm 1985; Warwick 1979) or the larger regime in which coalition politics is played out (Grofman 1989; Lijphart 1984; Lowell 1896; Powell 1982). A second and more recent literature stresses the destabilizing effects of exogenous *critical events* (Browne, Frendreis, and Gleiber 1986; Cioffi-Revilla 1984; King et al. 1990; Warwick 1992a; Warwick and Easton 1992).[4] The final and still incipient tradition in the study of cabinet stability grew out of the structural attributes tradition. It focuses on *strategic interaction* between (and possibly within) parties as the key to coalition dynamics (Austen-Smith and Banks 1988, 1990; Baron 1989, 1991; Dodd 1976; Laver and Shepsle 1990; Riker 1962; Schofield 1992). What distinguishes work in this tradition is the employment of game-theoretic solution concepts as a guide to coalition stability. The analytical and empirical application of such tools to the question of coalition termination was first seriously pursued by Dodd (1976).

We build on the most promising lessons of all three approaches. For instance, the strategic interaction school inspires us to develop a rigorous and plausible behavioral foundation for the study of coalition termination. Adopting such an approach requires that we explain coalition termination as a result of the deliberate and often complex bargaining that goes on between party leaders. It also allows us to satisfy the desire of King and his colleagues, who "agree with Browne, Frendreis and Gleiber (1988, 934) that there is as yet no fully developed micropolitical theory of cabinet durability within the rational choice tradition" and "agree with Strøm that such an approach is essential to an understanding of cabinet durability" (1990, 868–69).

We draw from the structural attributes tradition the insight that institutions matter. As Laver and Schofield stress: "A single institutional feature can make two otherwise similar coalition systems as different as chalk and cheese. Particular constitutional constraints, the German constructive vote of no confidence for example, were even designed with the specific intention of having an impact upon the politics of government formation. To ignore such matters would clearly be to stick our heads in the sand" (1990, 214).

We believe that the institutions most likely to affect coalition termination are those that most directly impinge on party bargaining over executive coalitions and legislative dissolution. Dismissal and dissolution powers are good examples of such institutions, as are electoral laws and party rules that affect the costs of negotiations and electioneering. Therefore, our theoretical model explicitly defines not only dismissal and dissolution powers but also the rules that enable parties to make or accept deals concerning coalition participation.

While we draw from the "critical events" perspective as well, our approach is also a critique of this literature. Critical events scholars teach us that we cannot anticipate the entire political life of an executive coalition at its inception: from time to time, shocks occur that affect the outlook of the governing parties. As Strøm have previously noted, however, "an adequate critical events theory of cabinet dissolution has to meet the following criteria: events must (1) enter the utility calculations of the players in the governmental game; (2) be defined and observed independently of government resignations; and (3) be allowed to vary in their (a) exogeneity and (b) sufficiency as causes of government resignations" (1988, 929).

In other words, we need to think carefully about what makes events "critical" and how they affect coalition bargaining. Our problem with the critical events approach is that it does not authoritatively describe the specific nature of critical events. In fact, a key point often made by critical events theorists is that such events are random and unpredictable.[5]

By contrast, we believe that events such as wars, scandals, and economic shocks are not inherently critical. Instead, events *become* critical through their

effects on parliamentary bargaining. Thus what makes an event critical is the behavioral response it occasions among the bargaining parties. To put it bluntly, potentially critical events are meaningful only if they affect politicians' abilities to achieve their legislative and electoral goals.

In sum, common features of actual coalition crises and the existing literature on coalition dynamics lead us to propose a theory based on the premise that strategic behavior, institutional constraints, electoral motivations, and external events could figure prominently among the causes of coalition termination. The most novel feature of our theory is the inclusion of electoral motivations. Up to now, such motivations have played only a very modest role in the theoretical literature on coalition termination.[6] The previous absence of such motivations was noted by Laver and Schofield, who stated that "the problem for coalition theory, therefore, is that it has up until now been essentially static, assuming implicitly that politicians do not look forward to the next election when they bargain" (1990, 59). The benefit of including such motivations will soon become manifest.

THE MODEL

We identify causes and consequences of coalition termination by modeling coalition bargaining, in a parliament with dismissal and dissolution powers, as a game between three unitary actors called *parties*.[7] We develop a three-party model, as opposed to an *n*-party model, because it provides the simplest formal framework for examining the bargaining dynamics of coalition government. For expositional simplicity, we describe the case where all players share a common knowledge.[8]

The game begins at some point during parliament's term, after an initial governing coalition has been installed and soon after a potentially critical shift in public opinion occurs.[9] During the game, parties react to this "event" by either maintaining the existing coalition, negotiating a new one, or dissolving the legislature and calling new elections. We use the *subgame perfect Nash equilibrium* solution concept to draw deductively valid conclusions about party actions and bargaining outcomes (for a description of this concept, see Ordeshook 1992, 86–88).

We shall now provide a complete description of the game. For simplicity, we first describe the parties and their objectives absent a potentially critical event. We then describe the opportunities and new incentives that the event provides.

Parties and Their Objectives in the Absence of an Event

We call the three parties the *first party*, the *second party*, and the *out-party*. Each party's name indicates its relationship to the initial governing coalition. We describe the case where the first and second parties are members of the initial governing coalition, the

out-party is not, and any two parties can form a new majority coalition.[10] The only substantive distinction between the first and second parties, upon which none of our results depend, is that the first party reacts to the event before the second. More importantly, we do not assume that a party's name necessarily indicates its relative size. Thus neither the first nor the second party need be the largest.

Absent a potentially critical event, each party's objective is to maximize the value it derives from its role in parliament. We make three basic assumptions about these objectives:

ASSUMPTION 1. *Parties care about controlling seats in parliament.* Let $s_i \in \Re^+$ be the subjective value to party i of the seats that it controls, where $i \in \{1,2,o\}$, the subscript 1 refers to the first party, the subscript 2 refers to the second party, and the subscript o refers to the out-party. Since elections that determine seat shares must occur before a parliament's term commences, and since the beginning of the game occurs after such commencement, we assume that the initial values of the s_i parameters, as well as the initial values of all other game-relevant parameters, are determined exogenous to (prior to) the play of this game. For expositional simplicity, we describe the case where the subjective value of seats to party i is equivalent to the percentage of seats that party i holds ($s_i \in [0, 1]$, $\Sigma_{i \in \{1,2,o\}} s_i = 1$).

ASSUMPTION 2. *Parties value power within a governing coalition.* $c_i \in \Re$, $\Sigma_{i \in \{1,2,o\}} c_i = 1$, denotes party i's share of power in the initial governing coalition; where $c_1 + c_2 = 1$ and $c_o = 0$. c_i represents the currencies—such as portfolios (i.e., cabinet appointments) or patronage—by which the power from governing is derived, held, and transferred.[11] If we think of what a governing coalition does as dividing a valuable pie, then c_i represents the size of the pie slice that party i receives.

ASSUMPTION 3. *Parties can value some potential coalition partners more than others.* $g_i^j \in \Re^+$ represents the value to party i that a coalition with party j could produce. $g_j^i \in \Re^+$ represents the value to party j of the same coalition, and g_i^j need not equal g_j^i. In other words, if we think of one of the things that a governing coalition does as making (and then dividing) a valuable pie, then g_i^j represents the common expectation of the *total* (pre-division) value to party i of the pie that it and party j would make. g_j^i represents the value of the same undivided pie to party j.

We use g_i^j to represent the benefits of membership in a particular governing coalition. Such benefits derive from the similarity in policy preferences and/or the complementarity of office preferences among coalition members. For instance, a coalition containing parties with similar policy agendas is likely to generate greater utility for its members (all else constant) than would a coalition containing parties with

FIGURE 1

The Model's Extensive Form (Game Tree)
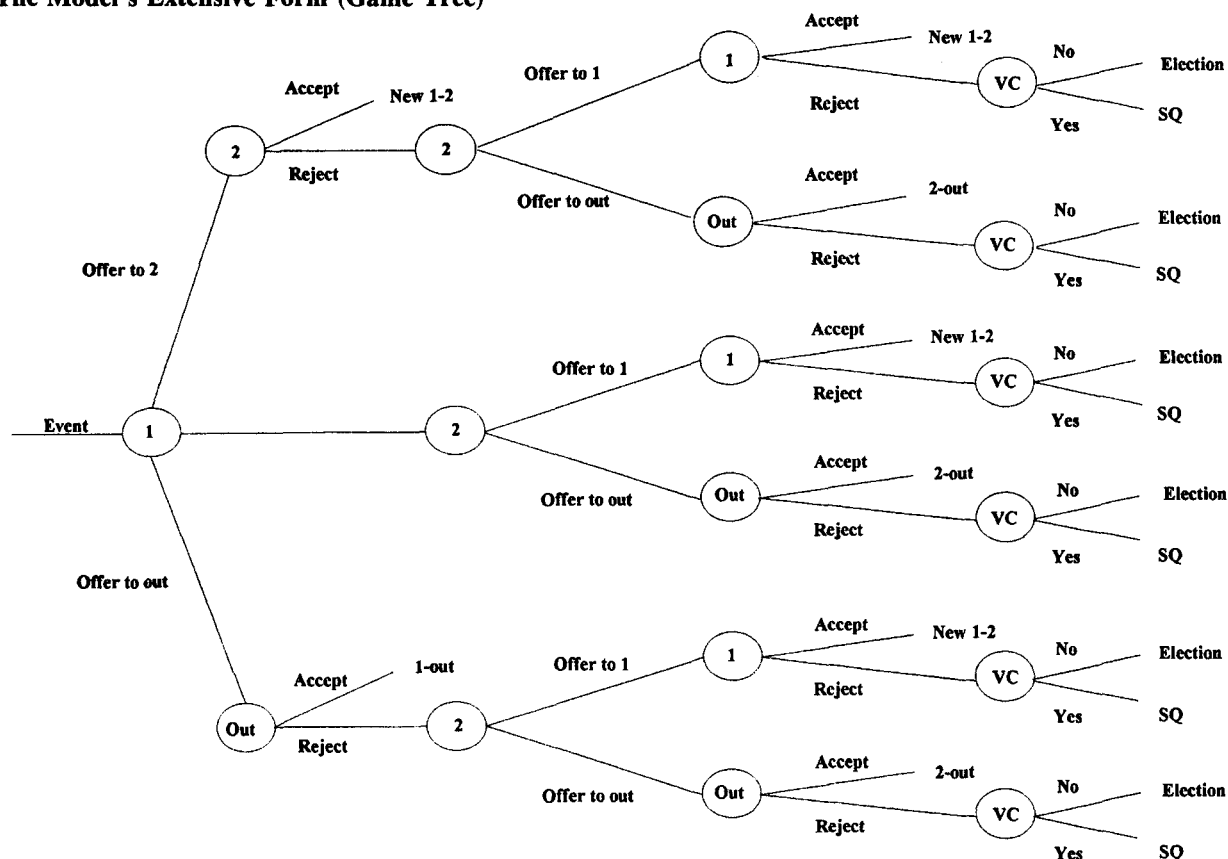
1, 2 and Out = the names of the parties.
1-Out = a coalition between the First and Out parties.
2-Out = a coalition between the Second and Out parties.
New 1-2 = original coalition survives, power is reallocated.
VC = Vote of Confidence—means a dissolution and new elections if it fails.
SQ = Status Quo—original government survives with no power reallocation.

conflicting policy agendas. Equivalently, a coalition of parties with different preferences over cabinet appointments can have greater value to its members than one in which all parties covet the same portfolios. One advantage of our coalition-specific value concept is that we can assume that parties are goal-oriented without making a general (and controversial) assumption about the extent to which parties are interested in patronage, policy outcomes, or the prestige of holding office.[12] $c_i \times g_i^j$ is the utility that a coalition with party j offers party i.[13]

In sum, we assume that party i's utility from its role in parliament can generally be thought of as a function $F_i(s_i, c_i \times g_i^j)$.[14] Because we want parsimoniously to highlight the distinct effects of party size, coalition partner value, and governing power on coalition termination, we describe our model using a simple example of such a function: the case where party i derives utility $s_i + (c_i \times g_i^j)$ from its role in government.[15]

Party Objectives and Opportunities in the Presence of an Event

Having just described the benefits that parties derive from governing, we now describe a sequence of events that may lead the parties to cast these benefits aside. We describe this sequence of events as a game that has two periods: period 1 (the present), in which parties take actions, and period 2 (the future), in which parties realize the consequences of their period 1 actions. Figure 1 depicts the extensive form of the first period, which begins at some point during a parliament's term, after an initial governing coalition has been installed and soon after a potentially critical event occurs.

A Potentially Critical Event

An event (represented by a poll that credibly signals public opinion or a set of shared past experiences that

informs electoral expectations) provides all parties with information about what would happen to them if an election were to be held in period 1. What this event reveals is $b_i \in \Re$, the expected utility of a period 1 election to party i. b_i represents all of the game-relevant information about party i's postelection well-being.[16]

While elections can provide benefits, calling them can also impose several types of costs. There are *opportunity costs* to calling elections, (e.g., the forfeiture of the policy-making opportunities or rent collection opportunities made possible by holding valuable offices) and *transactions costs* (e.g., those involved in election-related intraparty negotiation, campaigning, and electioneering). For each party, we assume that the relevant opportunity cost is the utility it currently draws from its role in government $s_i + (c_i \times g_i^j)$. $E_i \geq 0$ represents party i election-related transactions costs (i.e., the cost of achieving the benefits, b_i, revealed by the event). We do not assume that such transactions costs are the same for all parties. Together, our assumptions about the event and election-related transactions costs imply that party i expects a period 2 utility of $b_i - E_i$ from a period 1 election. For reference purposes, we display the game's relevant parameters:

Control of seats $\quad\quad\quad\quad\quad s_i \in \Re^+$
Initial share of power $\quad c_i \in [0, 1], c_1 + c_2 = 1, c_o = 0$
Postnegotiation shares $\quad \Sigma_{i \in \{1,2,o\}} c_i^j = 1$
 of power
Value of coalition partner j to $i \quad g_i^j \in \Re^+$
Postelection prospects $\quad\quad b_i \in \Re$
Transactions costs
 Election-related $\quad\quad\quad E_i \in \Re$
 Negotiation-related $\quad\quad K_i \in \Re$

Party i's utility from a period 1 election $= b_i - E_i$.

Utility from current role in government: (also election or negotiation-related opportunity cost) $= s_1 + (c_1 \times g_1^2)$, for the first party, $s_2 + ((1 - c_1) \times g_2^1)$ for the second party, and s_o for the out-party.

Reactions to the Event

After the event occurs, each coalition member has one opportunity to offer a reallocation of power to any other party. An example of such an offer is the following: "If you, party i, will coalesce with me, party j, then you shall receive share of power c_i^j, and I shall receive share of power $c_j^i = 1 - c_i^j$." For expositional clarity, we denote offered power shares with superscripts representing who power is shared with (e.g., c_i^j). Initial power shares have no superscripts (e.g., c_i).[17]

Recall that we describe the case where any two parties can coalesce and form a government. Thus the consequence of an accepted offer will be either a redistribution of power among members of the initial governing coalition or the formation of a new governing coalition. The first party has the first opportunity to make such an offer.[18] If it does so, then the

party to whom the offer is made can either accept or reject it. If it is accepted, then the game ends and the allocation of power that the first party proposed determines period 2 payoffs. If the first party either fails to make an offer or has its offer rejected, then the second party has an opportunity to make an offer. If it is accepted, then the game ends and the allocation of power that the second party proposed determines period 2 payoffs.[19]

If no party is willing to make an offer that another is willing to accept, then there exists the possibility of a vote of confidence. The requirements for such a vote to occur are (1) that no offer is made and accepted and (2) that a parliamentary majority wants such a vote. If the vote is held, and parties controlling a majority of seats vote *no*, then parliament is dissolved, new elections are held, the game ends, and party i's period 2 utility is $b_i - E_i$. Otherwise, the initial governing coalition survives intact, the game ends, and party i's period 2 utility is $s_i + (c_i \times g_i^j)$.

Simplifying Assumptions

Three assumptions allow us to simplify the exposition with only a minimal loss of generality. First, we assume that a failed vote of confidence is necessary and sufficient for dissolution and new elections. To be certain, such a focus simplifies the actual dissolution procedures found in some parliamentary democracies. For instance, some constitutions severely constrain or even prohibit early dissolution (e.g., Norway, Switzerland). Most parliamentary democracies, however, permit early dissolution on terms similar to those assumed here. For simplicity and generality, we abstract away from the discretionary power sometimes vested in the head of state (e.g., as in Germany). Notice, however, that the extension of our findings to many of these cases is straightforward. For instance, in the case where dissolution requires a head of government's or head of state's approval, dissolution is at least marginally more difficult to accomplish. We can represent such difficulty as an election-related transactions cost (by raising E_i). To represent cases where the person vested with the power of dissolution has a partisan bias, we can raise some E_i more than others. To represent the case where early dissolution is prohibited, we can make E_i prohibitively high for all parties. In sum, we assume that in all cases where dissolution is possible, every moment of a coalition's existence rests on the passage of at least an implicit vote of confidence.[20]

Second, we assume that each player has a minimal preference for stability, which manifests itself as a tie-breaking rule for the case where the expected utility from two distinct activities is equal. If all else is equal, then we assume that a party will act to preserve the initial governing coalition. If such an outcome is not possible but all else remains equal, then we assume that a party will act to preserve the current parliament. Simple alterations to this tie-breaking rule affect our findings in a minimal and straightforward fashion.

Third, we assume that making offers may involve a transactions cost. We represent such a cost by assuming that an offering party must pay $K_i \in \Re$. Our motivation for K_i is the party-specific costs of formulating an offer to redistribute power. These costs include the effort required to obtain the approval of party members and constituents.[21] As was true of electoral costs, we assume these negotiation costs may be different for different parties. We also recognize the existence of negotiation-related opportunity costs, such as the policy-making opportunities or rent collection opportunities that parties squander when they engage in coalition bargaining. As we did with election-related costs, we assume that each party's negotiation-related opportunity cost is the utility it currently draws from its role in government $s_i + (c_i \times g_i^j)$.

RESULTS

We now use the model to provide a deductively valid conclusion to the question of primary interest: What are the causes and consequences of coalition termination? Our conclusion is presented as three theorems and a corollary. We prove the first theorem in the Appendix. The validity of the other theorems follows from similar logic (twelve lemmas presented in the Appendix).

We begin by presenting conditions A, B, and C. These conditions are derived from eight lemmas in the Appendix and prove to be critical in the identification of coalition termination dynamics.[22] The Appendix includes a formal statement of each condition.

CONDITION A. *There is a majority that prefers an election to leaving the governing coalition exactly as it was.*

Condition A is satisfied only if either (1) the first and second parties hold a majority of seats and both anticipate higher utility from an election than they do from maintaining the status quo; (2) the first and out-parties hold a majority of seats and both anticipate higher utility from an election than from the continuance of the status quo; or (3) the second and out-parties hold a majority of seats and both anticipate higher utility from an election than from the continuance of the status quo.

CONDITION B. *All offering parties prefer an election to the best acceptable offer they can make.*

Condition B is satisfied if and only if each offering party finds itself in a situation equivalent to the following: the first party anticipates receiving higher utility from an election than it does from either making the offer that both maximizes its own utility and provides higher utility for the second party than an election or making the offer that maximizes its own utility and provides higher utility for the out-party than an election.

CONDITION C. *No offering party prefers the best acceptable offer it can make to leaving the governing coalition exactly as it was.*

Condition C is satisfied if and only if both the first and second parties prefer the status quo to a coalition between the out-party and itself in which the offering party retains nearly all governing power.

Theorem 1 characterizes the necessary and sufficient conditions for a potentially critical event to lead not only to coalition termination but also to dissolution.

THEOREM 1. *The event leads to dissolution if and only if A and B are true.*

Theorem 1 tells us that not every potentially critical event leads to dissolution. For dissolution to occur, there must exist a set of parties that collectively have a parliamentary majority and individually prefer an election to the status quo. Each party that can make an offer must also prefer the anticipated consequences of new elections to the most favorable and acceptable offer it can make.

This result leads us to qualify an important insight offered by Grofman and van Roozendaal, who argue that "anticipation of future electoral gains may cause a certain party or a group of parties to seek to bring down the cabinet at a moment when their anticipated electoral success will be greatest" and hypothesize that "parties terminate cabinets when they expect electoral gains" (1994, 158). Our model suggests that this insight is only partially correct. In coalitional circumstances, a party with favorable electoral prospects will also consider the option of extracting advantages through nonelectoral means (e.g., bargaining with parties that have less favorable prospects). Such renegotiation is particularly likely if some member of the existing coalition has a strong desire to avoid elections. Furthermore, even in noncoalitional two-party systems, where a single governing party can call elections at will, high election costs can suffice to preclude such an action. In sum, *it is simply not true that favorable electoral prospects for any particular party are sufficient to cause a parliament's downfall.*

Having established that a potentially critical event, by itself, does not cause dissolution, we now offer a corollary that describes the conditions under which dissolution is most likely. The validity of corollary 1 follows directly from theorem 1 and the straightforward application of simple comparative statics.

COROLLARY 1. *When it affects whether or not dissolution occurs, an increase in any party's expected postelection utility* (b_i) *or negotiation costs* (K_i) *OR a decrease in any party's election costs* (E_i)*, subjective value of seat control* (s_i)*, or subjective value of coalition membership* (g_i^j) *leads to dissolution. In addition, such changes never prevent dissolution where it otherwise would have occurred.*

Corollary 1 tells us that dissolution is most likely when there exist parties that (1) expect large benefits from an election, (2) face small election costs, (3) face large costs for negotiating nonelectoral transfers of power, (4) derive little value from the seats they currently control, and (5) derive little value from the other coalitions they could enter.

Corollary 1 also suggests a possible interactive effect between time elapsed since the last election and

whether a specific event will be critical. To see this effect, first note that most parliamentary democracies possess constitutionally mandated limits on the maximum length of a parliament's term.[23] Before the mandated time is reached, calling new elections is merely an option. However, when this upper bound is reached, new elections must be held.

Now consider this comparative static: if early elections mean that parties sacrifice greater policy-making opportunities and rent collection opportunities than later elections do, and if all else is constant, then as the parliamentary term approaches its upper bound, election-related opportunity costs should decrease. That is, all else constant, g_i^j should be relatively high early in a parliament's term, should decrease continually over that term, and should reach its minimum when parties have no other choice but to hold an election. If this relationship between g_i^j and time holds, then (following corollary 1) an event that does not cause dissolution early in a parliament's term could do so later.[24]

Theorem 1 and corollary 1 imply that *the extent to which a particular event is "critical" is extremely context-dependent.* For instance, if the opportunity costs of having an early election are high, then dissolution requires a large event. Thus if these costs decrease over time, then dissolution requires smaller events as a parliament ages.

Such conclusions run counter to the generally untested assumption of a constant hazard rate (or survival likelihood) that is prevalent in empirical, stochastic models of cabinet stability (Browne, Frendreis, and Gleiber 1986; Cioffi-Revilla 1984).[25] Interestingly, Warwick (1992b) finds impressive cross-national evidence that the hazard rate for executive coalitions increases over time. This is precisely what our model predicts, and we know of no other persuasive behavioral account of this regularity. At a minimum, future attempts to estimate empirically the determinants of cabinet duration should include a component that increases continuously as the constitutionally mandated parliamentary term limit approaches.[26]

We now describe necessary and sufficient conditions for a potentially critical event to have absolutely no effect on the initial governing coalition.

THEOREM 2. *The status quo is maintained if and only if A is false and C is true.*

Theorem 2 first tells us that the current governing coalition's and cabinet's complete survival requires that every parliamentary majority must include at least one pivotal party that prefers the status quo to an election. Theorem 2 also reveals that a coalition's survival requires that each offering party must prefer the status quo to a coalition (with the out-party) in which it retains nearly all governing power. If either requirement is not met, then the current cabinet does not survive—either a nonelectoral reallocation of power between existing coalition members, a coalition-changing nonelectoral reallocation of power, or dissolution and new elections will occur.

Our second theorem implies that coalitional stability is possible in the presence of either favorable election prospects or parties who are able to offer each other greater shares of power than they currently have. Simple comparative statics reveal why this is true: low electoral benefits (low b_i) decrease the threat of an election and a sufficiently unattractive out party (low g_1^o and g_2^o) or high negotiation costs decrease the threat of a nonelectoral reallocation of power. Absent both threats, offering parties have little bargaining power and generally cannot persuade other parties to accept meaningful changes to the status quo. Therefore, we conclude that *stability is fostered by either a dearth of alternate utility-generating opportunities for potential coalition partners or factors that make party-specific negotiation costs or election costs high.*

In all circumstances except those identified in theorems 1 and 2, the event leads to some type of nonelectoral reallocation of power.

THEOREM 3. *The event leads to a nonelectoral redistribution of power if and only if either (1) A is true and B is false or (2) A and C are false.*

While it is beyond our scope here to discuss, in depth, the conditions under which particular types of coalitions will form, we can address several widely held notions about coalition reformation.[27] For example, several recently published formal theories of coalition formation in a three-party legislature predict that the governing coalition will comprise the largest and smallest legislative parties (Austen-Smith and Banks 1988; Baron 1991).[28] Our findings imply that the validity of this prediction is not robust to the introduction of parties who look forward to the next coalition termination or election when they bargain. A further implication is that *the size and bargaining power of political parties need not be positively correlated.*

To see this, notice that a necessary condition for the "largest-smallest" prediction is that the party to whom an acceptable offer is made must control either the smallest or the largest number of seats. Now consider the general case where the largest party, i, is in the position to make an offer and there exists a disparity between the value of potential coalition partners, j and x to it ($g_i^j \neq g_i^x$). All else constant, the offering party should prefer to coalesce with the more valuable coalition partner. If all else is not constant, however, then the offering party must consider the trade-off between the value of a coalition partner (the value of different pies) and the size of the power share that it can retain (the share of each pie that it would receive). If the disparity is sufficiently large (e.g., if one party is a virtual pariah), then the offering party could choose to coalesce with the larger party (it will opt for a smaller piece of a more valuable pie).

In sum, we agree with formal political theorists that if an offer is made, then it will be made to the party whose bargaining power is weakest. However, such behavior does not require the formation of a coalition between the largest and smallest parties. Instead, if an offer is made, then it will be made to the weakest party, where the weakest party is the one that faces

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FIGURE 2

The Relationship between Conditions and Outcomes

(A) The vote of confidence will fail

	(B) Election beats best offer	(not B) Best offer beats election
(C) Status quo beats best offer	Dissolution & new elections	Non-electoral reorganization
(not C) Best offer beats status quo	Dissolution & new elections	Non-electoral reorganization

(not A) The vote of confidence will succeed

	(B) Election beats best offer	(not B) Best offer beats election
(C) Status quo beats best offer	Status quo survives	Status quo survives
(not C) Best offer beats status quo	Non-electoral reorganization	Non-electoral reorganization

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the most utility-damaging combination of (1) bad electoral prospects, (2) high election costs, (3) high negotiation costs, (4) low-value coalition partner alternatives, and (5) highly valued seats or coalition-related power (that must be forfeited as a result of coalition termination or parliamentary dissolution). Similar distinctions can be drawn between our "weakest party" dynamic, Riker's (1962) prediction concerning minimum winning coalitions, and Axelrod's (1970) prediction of connectedness.[29]

Figure 2 shows the ultimate relationship between our three conditions and the different types of outcomes described in the theorems.

AN EXAMPLE

We now present numerical examples that place our results in a more concrete setting. Some readers have found these examples to be very helpful in understanding which contexts trigger (or fail to trigger) coalition terminations. Others can treat this section as optional reading.

The example's critical assumptions are that the first party controls 45% of the seats ($s_1 = .45$), the second party holds 15% of the seats ($s_2 = .15$), the out-party holds 40% of the seats ($s_o = .40$), the first and second parties have equal shares of power in the initial governing coalition ($c_1 = c_2 = .5$), and all possible coalitions generate the same value for each party ($\forall i, j : g_i^j = 1$). The example's potentially critical event reveals that if election costs are zero, then new elections make the first and out-parties better off—and the second party worse off—than the status quo:

$$b_1 = 1 > .95 = s_1 + c_1 g_1^2$$

$$b_2 = .09 < .65 = s_2 + c_2 g_2^1$$

$$b_o = .91 > .4 = s_o.$$

The variables in our example are the negotiation transactions costs, $K_1 \in \{0, 1\}$, $K_2 \in \{0, 1\}$, and election transactions costs, $\forall i : E_i \in \{0, 1\}$.

In our example, the s_i and c_i add up to one, while the b_i add up to two. What motivates this set of parameters is the example-specific assumption that the source of beliefs about postelection benefits (b_i) are expectations about postelection seat and power shares.

$$\sum_i b_i = 2 = \sum_i s_i + \sum_i c_i g_i^j.$$

In sum, we choose this particular set of parameter values only because they allow us quickly to show how simple variations in electoral or legislative institutions might moderate the effect of a potentially critical event on coalition termination.

Example 1a. Negotiation and election costs are zero.

The outcome of the game is a redistribution of power between members of the initial governing coalition. To see why this is true, notice, in the example's initial assumptions, that the first and out-parties prefer an election to the status quo. Therefore, if no offer is accepted, then new elections are held.

To see why such elections do not take place, we move to the next to last stage of the game, the second party's opportunity to make an offer. The first party requires no less than

$$c_1^2 = \frac{b_1 - E_1 - s_1}{g_1^2} = .55$$

as a prerequisite for coalescence, as such an offer would make it indifferent between acceptance and

new elections $[s_1 + (c_1^2 g_1^2) = 1 = b_1 - E_1]$. For similar reasons, the out-party requires no less than

$$c_o^2 = \frac{b_o - E_o - s_o}{g_o^2} = .51.$$

Since making either offer leaves the second party better off than it expects to be after new elections ($b_2 - E_2 = .09$), since all coalitions are equally valuable to the second party (all $g_i^j = 1$) and since the second party benefits by making the smallest offer that another party will accept, the best move for the second party at this stage of the game is to offer $c_o^2 = .51$ to the out-party $[s_2 + ((1 - c_o^2) \times g_2^o) - K_2 = .64 > s_2 + ((1 - c_1^2) \times g_2^1) - K_2 = .6 > .09 = b_2 - E_2]$.

To see why the outcome of the game is not a new coalition between the second and out-parties, we move to the previous (and first) stage of the game, the first party's opportunity to make an offer. We now know that if the first party fails to make an acceptable offer, then the second and out-parties will coalesce. As a result, the second and out-parties will not accept any offer that leaves them worse off than will their prospective coalescence. Thus the out-party demands no less than $c_o^1 = .51$ as a prerequisite for coalescence, while the second party demands no less than $c_2^1 = .49$.

If the first party makes no offer, then it will be excluded from the period 2 coalition and will receive utility $s_1 = .45$. If it makes the smallest offer that leaves the out-party at least as well off as a coalition with the second party, then it receives no more than $s_1 + ((1 - (c_o^1 = .51)) \times g_1^o) - K_1 = .94$. Similarly, an acceptable offer to the second party would leave the first party with a payoff of no more than $s_1 + ((1 - (c_2^1 = .49)) \times g_1^2) - K_1 = .96$. Therefore, the first party makes the smallest acceptable offer, $c_2^1 = .49$; the second party accepts; and the game ends. Notice that *example 1a is the only case in which the largest and smallest parties choose to make a new coalition.*

Example 1b. Same as 1a, except that the first party's negotiation cost, K_1, increases from 0 to 1.

The outcome is now a new coalition between the second and out-parties. To see this, notice first that the dynamics of this example are the same as example 1a up to the point where we consider the situation faced by the first party.

Now consider the first party's dilemma. The increase in K_1 makes it prohibitively expensive for the first party to make an acceptable offer to either of the other two parties. In other words, if the first party makes no offer, it will be excluded from the period 2 coalition and will receive utility $s_1 = .45$; if it makes an acceptable offer to the out-party, it will receive no more than $s_1 + ((1 - c_o^1) \times g_1^o) - 1 = -.06$; and if it makes an acceptable offer to the second party, it will receive $s_1 + ((1 - c_2^1) \times g_1^2) - 1 = -.04$. Therefore, the first party makes no offer, the second party offers $c_o^1 = .51$ to the out-party, the out-party accepts, and the game ends. Notice that *example 1b represents the only case in which the minimum winning coalition forms.*

Example 1c. Same as 1b, except that the second party's negotiation cost, K_2, increases from 0 to 1.

The outcome is now dissolution and new elections. To see why this is true, notice first that the dynamics of this example are the same as example 1a up to the point where we consider the second party's opportunity to make an offer. Next notice that the increase in K_2 makes it prohibitively expensive for the second party to make an acceptable offer. Since the first party's negotiation cost is also prohibitively high (see example 1b), neither party makes an offer, the vote of confidence is held, and its failure leads to an election.

Example 1d. Same as 1c, except that each party's election cost increases from 0 to 1.

The outcome is now the status quo. To see this, notice first that the increase in election costs leads each party to prefer the status quo to an election.

$$b_1 - E_1 = 0 < .95 = s_1 + (c_1 \times g_1^2)$$

$$b_2 - E_2 = -.91 < .65 = s_2 + (c_2 \times g_2^1)$$

$$b_o - E_o = -.09 < .4 = s_o$$

This reversal in preferences means that a vote of confidence would pass if held. Therefore, if no offer is accepted, then the status quo is maintained.

Now consider the situation faced by the second party. Because the consequence of no accepted offer is the status quo, neither the first nor the out-parties will accept any offer that provides them with a smaller share of power than they currently have. Thus the first party requires no less than $c_1^2 = .5$ as a prerequisite for coalescence while the out-party will accept an offer that includes any positive share of power. While the second party could have nearly all of the power by coalescing with the out-party, the magnitude of K_2 leads the second party to prefer the status quo to any offer it could make $[s_2 + ((1 - c_o^2) \times g_2^o) - K_2 = .15 - \epsilon < .65 = s_2 + (c_2 \times g_2^1)]$, where $\epsilon > 0$ and very small. Therefore, the best move for the second party is to make no offer. Since the situation faced by the first party is nearly identical to that faced by the second, it also makes no offer. Therefore, neither party makes an offer, and the game ends with the initial governing coalition intact.

Example 1e. Same as 1d, except that the first party's negotiation cost, K_1, decreases from 1 to 0.

The result is a new coalition between the first and out-parties. The dynamics of this example are the same as example 1d up to the point where we consider the first party's offer. The out-party will accept any positive share of power as a prerequisite for coalescence while the second party requires no less than its current share of power, $c_2 = .5$. If the first party makes no offer, then the outcome of the game will be the status quo, and it will receive utility $s_1 + (c_1 \times g_1^2) = .95$; if it makes an acceptable offer to the out-party, the most utility it could receive is $s_1 + ((1 - \epsilon) \times g_1^o) - K_1 = 1.45 - \epsilon$; and if it makes an acceptable offer to the second party, the most utility it could

receive is $s_1 + ((1 - c_2^1) \times g_1^2) - K_1 = .95$. Therefore, the first party offers the smallest possible share of power to the out-party, the out-party accepts, and the game ends.

CONCLUSION

Our primary conclusion is that external events can deeply affect—but do not wholly determine—the dynamics of coalition bargaining. The effects of external events depend critically on the context in which they take place, the bargaining power of the various parties, and the constraints each party faces. For example, the 1980s breakups of the German and Irish coalitions were not the necessary and automatic outcomes of any environmental shock. On the contrary, they resulted from careful and deliberate adaptation to changing circumstances.[30]

Furthermore, and as McLean anticipated, "One vital factor brought out by none of the coalition theories is that there are two overlapping games going on all the time in parliamentary bargaining. There is coalition-building on the basis of the (known) result of the last election; and bargaining in anticipation of the (unknown) result of the next one. Immediately after an election, the first swamps the second, which gradually increases in relative importance until just before the next election" (1987, 113–14).

Of course, other institutional or organizational features ("structural attributes") may be just as important. The costs that individual parties incur while making or considering coalitional offers are one such factor. The leaders of the Irish Labour party, for example, faced major internal organizational constraints on their ability to negotiate with Fine Gael or any other party. These organizational rules imposed bargaining costs on the Labour party, as well as on any party (e.g., Fine Gael) that attempted to negotiate with it. The precise nature of such institutional constraints is well worth more intensive exploration in future research.[31]

The key implication of our findings is that scholars who want to understand parliamentary decision making need to pay greater attention to the specific nature of critical events. We suggest that information concerning anticipated voter behavior can serve as a gauge of a particular event's critical potential. Though this information need not be critical events' only metric, we believe that previous neglect of electoral incentives may have prevented us from obtaining a more adequate understanding of parliamentary decision making, especially as it regards coalition termination. While politicians cannot always "go to the country," the anticipated voice of the people is never far from the forefront of their concerns. In legislatures vested with dismissal and dissolution powers, expected electoral impact is often what makes a political event "critical" to cabinet stability.

Parliamentary government, the most common

democratic regime type, depends on effective delegation of power along a single chain of command. We argue that changes in the control of these governments are not an automatic consequence of environmental shocks. Instead, they are both a reflection of deliberate responses to such events and a reaction to the anticipated feelings of the electorate. The virtues of democracy hinge on precisely such interactions.

APPENDIX

We first present our findings about party behaviors, then we present our findings about the nature of coalition termination. We use the *subgame perfect Nash equilibrium* solution concept to derive our findings. This concept provides deductively valid conclusions and requires that we proceed by backward induction on the extensive form depicted in Figure 1. Thus we begin by characterizing behaviors at the end of the game.

LEMMA 1: The vote of confidence. *The event leads to the dissolution of the parliament and new elections if and only if the first and second parties fail to make an offer that ends the game and there exist parties i, j, and $x \in \{i, j, \emptyset\}$, such that $s_i + s_j > .5$ and $b_i - E_i > s_i + c_i g_i^x$ and $b_j - E_j > s_j + c_j g_j^x$.*

In words, Lemma 1 says that if the game advances to its final stage; if there exists a set of parties that together control a majority of seats; and if at least one of these sets contains only parties for whom an election is better than the status quo, then the outcome cannot help but be a lost vote of confidence. Given the assumptions that any majority can force a vote of confidence, and that a lost vote of confidence is a sufficient condition for dissolution and new elections, the validity of Lemma 1 is obvious.

The next-to-last stage of the game involves the reactions to any offer that the second party might make. Lemmas 2 and 3 describe these reactions.

LEMMA 2. *The out-party accepts the second party's offer, call it c_o^2, if and only if the first party fails to make an accepted offer and either (1) rejection leads to an election and*

$$c_o^2 \geq \frac{b_o - E_o - s_o}{g_o^2}$$

or (2) rejection leads to the status quo and $c_o^2 > 0$.

LEMMA 3. *The first party accepts the second party's offer, call it c_1^2, if and only if the first party fails to make an accepted offer and either (1) rejection leads to an election and*

$$c_1^2 \geq \frac{b_1 - E_1 - s_1}{g_1^2}$$

or (2) rejection leads to the status quo and $c_1^2 > c_1$.

The proof of Lemma 2 reveals the insight as to why these particular reactions take place. The proof of Lemma 3 is omitted because it is similar to the proof of Lemma 2.

Proof of Lemma 2. From the extensive form, it follows that if the out-party accepts the second party's offer, then it must be the case that the first party failed to make an accepted offer. In what follows, we consider only the case where the first party experiences such failure. From Lemma 1 and the common knowledge, the out-party can deduce whether its refusal of the second party's offer will lead to an election or the status quo. If rejection leads to an election, then the out-party receives $s_o + c_o^2 g_o^2$ if it accepts the offer and $b_o - E_o$ if it does not. Thus the out-party should accept the offer if and only if the offer is made and $s_o + c_o^2 g_o^2 \geq b_o - E_o$. Subtracting s_o from each side of the equation and then dividing each side by g_o^2 produces the requirement that

$$c_o^2 \geq \frac{b_o - E_o - s_o}{g_o^2} .$$

Similarly, if rejection leads to the status quo, then the out-party receives period 2 utility $s_o + c_o^2 g_o^2$ if it accepts the offer and s_o (since its share of power in the initial governing coalition is zero) if it does not. This implies that under the threat of the status quo, the out-party should accept if and only if $c_o^2 g_o^2 > 0$. The sufficiency condition follows trivially.   Q.E.D.

In sum, *a party's willingness to accept an offer depends on the value of its alternate opportunities: the more valuable the opportunities, the greater the threshold of power the party requires in exchange for foregoing them.* If a party believes that its rejection will lead to an election, then there is no reason for it to accept any offer that provides less utility than will an election. If, by contrast, parties believe that their rejection will lead to the status quo, then they should not accept an offer that provides less utility than the status quo. Since the out-party is not a member of the initial governing coalition, Lemma 2 implies that even a very small share of power would make the out-party better off than it was at the beginning of the game.

As Lemma 4 follows straightforwardly from the utility maximization and common knowledge assumptions, it is offered without proof.

LEMMA 4. *If $K_i > 0$, party i only makes offers that will be accepted.*

It is without a loss of substantive generality that we henceforth simplify the exposition by focusing on the case where $K_i > 0$.

Lemma 5 specifies the conditions under which the second party will make an offer. It also provides detailed information about the party to whom the offer will be made and the size of the offer.

LEMMA 5: The second party's offer

a. *If the second party's failure to make an acceptable offer leads to new elections, if there exists an offer that provides greater period 2 utility than an election to both the first and second parties, and if that offer also provides the second party with greater or equal period 2 utility than would an offer of*

$$\frac{b_o - E_o - s_o}{g_o^2}$$

to the out-party, then the second party offers

$$\frac{b_1 - E_1 - s_1}{g_1^2}$$

to the first party.

b. *If the second party's failure to make an acceptable offer leads to new elections, if there exists an offer that provides greater period 2 utility than an election to both the second and out-parties, and if that offer also provides the second party with greater period 2 utility than would an offer of*

$$\frac{b_1 - E_1 - s_1}{g_1^2}$$

to the first party, then the second party offers

$$\frac{b_o - E_o - s_o}{g_o^2}$$

to the out-party.

c. *If the second party's failure to make an acceptable offer leads to the status quo and if there exists an offer that provides greater period 2 utility to both the second and out-parties than does the status quo, then the second party offers the smallest possible (positive) share of power to the out-party.*

d. *Otherwise, the second party makes no offer, and a vote of confidence ensues.*

Proof of Lemma 5. From Lemmas 1–3 and the common knowledge, the second party can deduce the consequences of its actions. It follows that the second party should make some acceptable offer if and only if either (1) its failure to do so would lead to an election and $\min [s_2 + (1 - c_o^2)g_2^o - K_2, s_2 + (1 - c_1^2)g_2^1 - K_2] \geq b_2 - E_2$ or (2) its failure to do so would lead to the status quo and $\min [s_2 + (1 - c_o^2)g_2^o - K_2, s_2 + (1 - c_1^2)g_2^1 - K_2] > s_2 + c_2 g_2^1$.

We first consider the second party's strategy in the case where its failure leads to an election. In this case, the smallest offer that the first party will accept is

$$c_1^2 = \frac{b_1 - E_1 - s_1}{g_1^2},$$

while the smallest offer that the out-party will accept is

$$c_o^2 = \frac{b_o - E_o - s_o}{g_o^2}.$$

Therefore, if

$$s_2 + \left(1 - \frac{b_1 - E_1 - s_1}{g_1^2}\right)g_2^1 - K_2$$

$$\geq \max \left[s_2 + \left(1 - \frac{b_o - E_o - s_o}{g_o^2}\right)g_2^o - K_2, b_2 - E_2 \right],$$

then the second party offers

$$\frac{b_1 - E_1 - s_1}{g_1^2}$$

to the first party. Similarly, if

$$s_2 + \left(1 - \frac{b_o - E_o - s_o}{g_o^2}\right)g_2^o - K_2 > s_2 + \left(1 - \frac{b_1 - E_1 - s_1}{g_1^2}\right)g_2^1 - K_2$$

and if

$$s_2 + \left(1 - \frac{b_o - E_o - s_o}{g_o^2}\right)g_2^o - K_2 \geq b_2 - E_2,$$

then the second party offers

$$\frac{b_o - E_o - s_o}{g_o^2}$$

to the out-party. Otherwise, the second party makes no offer.

We now consider the case where the second party's failure to make an acceptable offer leads to the status quo. In this case, the smallest offer that the first party will accept is $c_1^2 = c_1 + \varepsilon$, where $\varepsilon > 0$ and small, and the smallest offer that the out-party will accept is $c_o^2 = \varepsilon$. Since making such an offer to the first party necessarily provides the second party with less utility than making no offer, making any offer to the first party under these circumstances is a dominated strategy. Thus, if $(1 - \varepsilon)g_2^o - K_2 > c_2 g_2^1$, then the second party offers ε to the out-party. Otherwise, the second party makes no offer.   Q.E.D.

In short, if the second party wants its offer to be accepted, then it must offer a share of power that is at least as large as the amount specified in Lemmas 2 or 3. Notice, however, that the more power the second party offers to another party, the less power it has for itself. Thus, if there exists a set of offers that can make both the second party and one other party better off than whatever the consequence of rejecting the offer would be (itself determined by the anticipated result of the vote of confidence), then the second party is best off making the smallest offer that another party will accept. If the second party's negotiation costs are sufficiently high or if both the first and the out-party are in a position to demand a large share of power, then the second party passes on its opportunity to make an offer.

The dynamics underlying the first party's opportunity to make an offer and the other parties' responses to such an offer, are very similar to the dynamics just described. For instance, consider Lemmas 6 and 7, which are offered without proof because of their similarity to Lemmas 2 and 3.

LEMMA 6. *The out-party accepts the first party's offer, call it c_o^1, if and only if (1) rejection leads to an election and*

$$c_o^1 \geq \frac{b_o - E_o - s_o}{g_o^1},$$

(2) *rejection leads to the status quo and* $c_o^1 g_o^1 > 0$, *(3) rejection leads to its exclusion from the period 2 coalition and* $c_o^1 g_o^1 \geq 0$, *(4) rejection leads to a coalition with the second party made under the threat of an election and*

$$c_o^1 \geq \frac{b_o - E_o - s_o}{g_o^1},$$

or (5) rejection leads to a coalition with the second party made under the threat of the status quo and $c_o^1 g_o^1 \geq \varepsilon$.

LEMMA 7. *The second party accepts the first party's offer, call it* c_2^1, *if and only if (1) rejection leads to an election and*

$$c_2^1 \geq \frac{b_2 - E_2 - s_2}{g_2^1},$$

(2) *rejection leads to the status quo and* $c_2^1 > c_2$, *(3) rejection leads to a coalition with the first party made under the threat of an election and*

$$c_2^1 \geq 1 - \frac{b_1 - E_1 - s_1}{g_1^2} - \frac{K_2}{g_2^1},$$

(4) *rejection leads to a coalition with the out-party made under the threat of an election and*

$$c_2^1 \geq \frac{\left(1 - \frac{b_o - E_o - s_o}{g_o^2}\right)g_2^o - K_2}{g_2^1},$$

(5) *rejection leads to a coalition with the out-party made under the threat of the status quo and*

$$c_2^1 \geq \frac{(1 - \varepsilon)g_2^o - K_2}{g_2^1}.$$

In short, the minimum share of power that a party requires for coalescence depends on the value of its other opportunities. For example, if the consequence of the first party's failure is an election, then the minimum share of power that party $i \in \{2, o\}$ is willing to accept is

$$c_i^1 \geq \frac{b_i - E_i - s_i}{g_i^1},$$

as before. Notice that this minimum acceptable share is increasing in the receiving party's electoral prospects, decreasing in its election costs, and decreasing in the value it derives from its relationship to the initial governing coalition. Similarly, if the consequence of the first party's failure is the status quo, then the second party is willing to accept no less than its current share of power, while the out-party (who has no current share of power) is willing to accept any positive share. If the consequence of the first party's failure is that the second party will make an offer of the type described in Lemma 5, then no party will accept a share of power that provides it with less utility than the second party's offer would.

As was true of the second party, the first party chooses a coalition partner based on its value (g_1^i) and on how much power it requires for coalescence. Lemmas 8–12 describe the first party's decision at the game's first decision node and the outcome of the game. What distinguishes each of these lemmas from the others in this set is the consequence of the first party's failure to make an acceptable offer. Notice that across Lemmas 8–12 the necessary conditions are collectively exhaustive. Notice also that within each lemma, the outcomes are collectively exhaustive. Since the collective proof of these lemmas follows the same general logic as the proof of Lemma 5, we contend that the proof of each should be obvious. Notice further that when there exist multiple offers that make the first party—and the party to whom the offer is made—better off than the consequence of rejection, the smallest of these offers is made.

LEMMA 8. *If the consequence of the first party's failure to make an acceptable offer is an election, then*

Additional Contingency	First's Offer	Result
$\left(1 - \frac{b_o - E_o - s_o}{g_o^1}\right)g_1^o > \left(1 - \frac{b_2 - E_2 - s_2}{g_2^1}\right)g_1^2$ and		
$\left(1 - \frac{b_o - E_o - s_o}{g_o^1}\right)g_1^o \geq b_1 + K_1 - E_1 - s_1$	$\frac{b_o - E_o - s_o}{g_o^1}$	first and out coalesce
$\left(1 - \frac{b_2 - E_2 - s_2}{g_2^1}\right)g_1^2 \geq \max\left[\left(1 - \frac{b_o - E_o - s_o}{g_o^1}\right)g_1^o, b_1 + K_1 - E_1 - s_1\right]$	$\frac{b_2 - E_2 - s_2}{g_2^1}$	first and second redistribute
$b_1 + K_1 - E_1 - s_1 > \max\left[\left(1 - \frac{b_2 - E_2 - s_2}{g_2^1}\right)g_1^2, \left(1 - \frac{b_o - E_o - s_o}{g_o^1}\right)g_1^o\right]$	none	dissolution and new election

LEMMA 9. *If the consequence of the first party's failure to make an acceptable offer is a coalition between the first and second parties made under the threat of an election, then*

Additional Contingency	First's Offer	Result
$b_1 - E_1 - s_1 + \frac{g_1^2 K_2}{g_2^1} - K_1 > b_1 - E_1 - s_1$ and		
$b_1 - E_1 - s_1 + \frac{g_1^2 K_2}{g_2^1} - K_1 \geq g_1^o - K_1$	$1 - \frac{b_1 - E_1 - s_1}{g_1^2} - \frac{K_2}{g_2^1}$	first and second redistribute
$g_1^o - K_1 > \max\left[b_1 - E_1 - s_1 + \frac{g_1^2 K_2}{g_2^1} - K_1, b_1 - E_1 - s_1\right]$	0	first and out coalesce
$b_1 - E_1 - s_1 \geq \max\left[b_1 - E_1 - s_1 + \frac{g_1^2 K_2}{g_2^1} - K_1, g_1^o - K_1\right]$	none	first and second redistribute

LEMMA 10. *If the consequence of the first party's failure to make an acceptable offer is a coalition between the second and out-parties made under the threat of an election, then*

Additional Contingency	First's Offer	Result
$\left(1 - \dfrac{b_o - E_o - s_o}{g_1^o}\right)g_1^o > \left(1 - \dfrac{\left(1 - \dfrac{b_o - E_o - s_o}{g_o^2}\right)g_2^o - K_2}{g_2^1}\right)g_1^2$ and $\left(1 - \dfrac{b_o - E_o - s_o}{g_o^1}\right)g_1^o \geq K_1$	$\dfrac{b_o - E_o - s_o}{g_o^1}$	first and out coalesce
$\left(1 - \dfrac{\left(1 - \dfrac{b_o - E_o - s_o}{g_o^2}\right)g_2^o - K_2}{g_2^1}\right)g_1^2 \geq \max\left[\left(1 - \dfrac{b_o - E_o - s_o}{g_o^1}\right)g_1^o, K_1\right]$	$\dfrac{\left(1 - \dfrac{b_o - E_o - s_o}{g_o^2}\right)g_2^o - K_2}{g_2^1}$	first and second redistribute
$K_1 > \max\left[\left(1 - \dfrac{\left(1 - \dfrac{b_o - E_o - s_o}{g_o^2}\right)g_2^o - K_2}{g_2^1}\right)g_1^2, \left(1 - \dfrac{b_o - E_o - s_o}{g_o^1}\right)g_1^o\right]$	none	second and out coalesce

LEMMA 11. *If the consequence of the first party's failure to make an acceptable offer is a coalition between the second and out-parties made under the threat of the status quo, then*

Additional Contingency	First's Offer	Result
$(1 - \varepsilon)g_1^o > \left(1 - \dfrac{(1 - \varepsilon)g_1^o - K_2}{g_2^1}\right)g_1^2$ and $(1 - \varepsilon)g_1^o \geq K_1$	ε	first and out coalesce
$\left(1 - \dfrac{(1 - \varepsilon)g_2^o - K_2}{g_2^1}\right)g_1^2 \geq \max[(1 - \varepsilon)g_1^o, K_1]$	$\dfrac{(1 - \varepsilon)g_2^o - K_2}{g_2^1}$	first and second redistribute
$K_1 > \max\left[\left(1 - \dfrac{(1 - \varepsilon)g_2^o - K_2}{g_2^1}\right)g_1^2, (1 - \varepsilon)g_1^o\right]$	none	second and out coalesce

LEMMA 12. *If the consequence of the first party's failure to make an acceptable offer is the status quo, then*

Additional Contingency	First's Offer	Result
$(1 - \varepsilon)g_1^o - K_1 > c_1 g_1^2$	ε	first and out coalesce
$c_1 g_1^2 \geq (1 - \varepsilon)g_1^o - K_1$	none	status quo

Formal Statements of Conditions A, B, and C

CONDITION A. *There exists a majority that prefers an election to the status quo.*

$$(s_1 + s_2 > .5 \text{ and } b_1 - E_1 > s_1 + c_1 g_1^2 \text{ and } b_2 - E_2 > s_2 + c_2 g_2^1)$$

or

$$(s_1 + s_o > .5 \text{ and } b_1 - E_1 > s_1 + c_1 g_1^2 \text{ and } b_o - E_o > s_o)$$

or

$$(s_2 + s_o > .5 \text{ and } b_2 - E_2 > s_2 + c_2 g_2^1 \text{ and } b_o - E_o > s_o).$$

CONDITION B. *Offering parties prefer an election to the best acceptable offer they can make.*

$$b_i - E_i > \max\left[s_i + \left(1 - \dfrac{b_j - E_j - s_j}{g_j^2}\right)g_i^1 - K_i, s_i + \left(1 - \dfrac{b_o - E_o - s_o}{g_o^2}\right)g_i^o - K_i\right],$$

where

$$\dfrac{b_i - E_i - s_i}{g_i^j}$$

is the minimum offer that party i will accept from party j under the threat of an election.

CONDITION C. *No offering party prefers the best acceptable offer it can make to the status quo.*

$$(1 - \varepsilon)g_2^o - K_2 \leq c_2 g_2^1 \text{ and } (1 - \varepsilon)g_1^o - K_1 \leq c_1 g_1^2,$$

where $\varepsilon > 0$ is very small.

Proof of Theorem 1. Notice that the only conditions under which the event can lead to dissolution are specified in Lemma 8. Conditions A and B specify the full set of such conditions.

Now suppose that dissolution does not necessitate A. Since at least one set of two parties must have enough seats to constitute a majority, not A implies that neither

$$(b_1 - E_1 > s_1 + c_1 g_1^2 \text{ and } b_2 - E_2 > s_2 + c_2 g_2^1)$$

nor

$$(b_1 - E_1 > s_1 + c_1 g_1^2 \text{ and } b_o - E_o > s_o)$$

nor

$$(b_2 - E_2 > s_2 + c_2 g_2^1 \text{ and } b_o - E_o > s_o).$$

Thus, if not A, then there exists no majority that prefers an election to the status quo. Since a majority is required to defeat the vote of confidence and since a defeated vote of confidence is required for dissolution, dissolution necessitates A.

Now, suppose that dissolution does not necessitate B. Not B implies that at least one of the following statements is not true:

$$b_2 - E_2 > \max\left[s_2 + \left(1 - \frac{b_1 - E_1 - s_1}{g_1^2}\right)g_2^1 - K_2, s_2\right.$$

$$\left. + \left(1 - \frac{b_o - E_o - s_o}{g_o^2}\right)g_2^o - K_2\right]$$

and

$$b_1 - E_1 > \max\left[s_1 + \left(1 - \frac{b_2 - E_2 - s_2}{g_2^1}\right)g_1^2 - K_1, s_1\right.$$

$$\left. + \left(1 - \frac{b_o - E_o - s_o}{g_o^1}\right)g_1^o - K_1\right].$$

If one of the two statements are not true, then at least one of the offering parties can make an offer that will be accepted and should do so. If at least one party makes such an offer, however, then the vote of confidence will not be held. Since a vote of confidence is required for dissolution, dissolution necessitates B. Sufficiency follows trivially.   Q.E.D.

Notes

1. The *Irish Times* carried the following reflection on the 1987 fall of the Fine Gael–Labour coalition: "It was the best of Governments; it was the worst of Governments" (as quoted in Girvin 1987, 9).

2. As part of a "constitutional crusade," Prime Minister FitzGerald pressed a referendum to legalize divorce under quite restrictive circumstances. FitzGerald's design ran into considerable ecclesiastical and popular resistance, however, and in June 1986 his initiative was voted down by a humiliating 63% of the voters (Farrell and Farrell 1987, 234).

3. Fianna Fail finally abandoned this policy in 1989, when, after much soul searching, it joined a coalition government with the Progressive Democrats (Laver 1992).

4. King and his colleagues (1990), Alt and King (1994), Warwick (1992 a and b), and Warwick and Easton (1992) all seek in various ways to unify the critical events and structural attributes perspectives. None of them, however, have developed a micropolitical theory.

5. For instance, Cioffi-Revilla maintains that "Italian governments are subject to random political shocks and crises, having numerous manifestations such as scandals, parliamentary defeats, pivotal defections, and other occurrences" (1984, 334).

6. Recent exceptions to this rule include Austen-Smith and Banks 1988; Grofman and van Roozendaal 1994; and Strøm 1990.

7. For a thorough defense of the unitary-actor assumption in static models of parliamentary bargaining, see Laver and Schofield 1990, chap. 2.

8. We expand on each of these assumptions in turn. As is true of other formal models of parliamentary interaction (Austen-Smith and Banks 1988; Baron 1991), we can use our three-party model to explain the dynamics of an *n*-party bargaining situation by assuming that at least one of our parties is actually a protocoalition. This expansion is problematic only to the extent that the unitary-actor assumption does not carry over well to the case of the protocoalition. With regard to our knowledge assumption, we assume that (1) all players know the rules of the game and that (2) every player knows what every other player believes about every aspect of the game, every player knows that every player knows this, and so on. This particular assumption (as opposed to the assumption that all parties have full information about every aspect of the game) makes our results robust to the class of assumptions where all players, while possibly uncertain about the actual values of game's parameters, have a basis for sharing common beliefs about them.

9. Our model shows how parties react to a particular circumstance. The conditions under which our claims hold are sufficiently robust so that we can describe reactions to a relatively broad set of circumstances. Like most game-theoretic models, ours is a static model; it focuses on a particular moment in time. However, its play does not prevent multiple plays of the same game in the future, nor does it prevent players in any particular play of the game from making present decisions based on concrete, subjective beliefs about different possible futures. Therefore, we can (and do) use comparative statics to draw dynamic (nonstatic) conclusions about the causes and consequences of coalition termination.

10. For expositional simplicity, we do not describe the case where grand coalitions are possible. However, we need not alter the model to describe such a case. For example, we can easily simulate grand coalition formation by conceptualizing either the first or the second party as a previously formed coalition of more than one party (or protocoalition) and by setting the share of seats controlled by the out-party sufficiently close to zero. Similarly, the formation and resilience of single-party or minority governments can also be understood using special cases of our model.

11. We make no assumptions about the relative value of different appointments or about whether cabinet and other portfolios are valued for policy or patronage reasons. Therefore, we use the term *share of power* as opposed to the term *number of portfolios* or *number of noncabinet appointments* in recognition of the possibility that some appointments are more valuable than others. For instance, prime ministers and finance ministers typically have broader policy responsibilities and greater agenda powers than other cabinet ministers. For more on this topic, see Breton 1991 and Laver and Shepsle 1993, 1994.

12. Stated another way, we enclose the usual spatial model of parliamentary bargaining into a "black box" by assuming that the parties share common beliefs about the value of the gains from trade that can be created by each possible coalescence.

13. Since our conception of coalition-specific benefits is also party-specific, we are not limited to the case where coalition negotiations are purely zero-sum situations in which parties compete over nondivisible private goods. Put another way, *either, neither, or both* members of a coalition can derive high utility from membership.

14. Since Downs (1957), the theoretical literature on voter and party behavior has been heavily committed to the assumption that parties are vote-maximizers or at least vote-seekers. Other literature on political parties variously portrays them as seekers of power, office, or policy outcomes (Strøm 1990). Our construction allows us to accept each of these motivations as plausible components of a party objective function.

15. Recall that we describe the case where $s_i \in [0, 1]$, $\Sigma_{i \in \{1,2,o\}} s_i = 1$. Notice also that we do not impose similar restrictions on the value of g_i^j. Together, these assumptions imply that our results are robust to a wide array of assumptions about the extent to which parties favor seats or governing power. To represent the case where party i's main interest is in the retention of seats, we set g_i^j low. To represent the case where the same party is primarily interested in governing, we set g_i^j high. Since all elements of the utility functions are party-specific, our results are also robust to cases where parties differ in the weight attached to seats or coalition membership in their objective functions.

16. For example, suppose that the first party cares only

about its ability to form a single-party majority government in period 2, while the second party cares only about the number of period 2 seats it will control. We would then characterize the value of b_1 as increasing only in the first party's belief about the subjective probability that it will be able to form a single-party majority government in period 2, given a period 1 election. Similarly, we would characterize the value of b_2 as increasing only in the second party's expectation of the number of seats that it will control in period 2 given a period 1 election. As a result, the value of b_i in our model is affected by common beliefs about the likelihood and severity of subsequent postelection shocks that would cause the game we describe to be played again in the future.

17. In equilibrium, parties can make and accept offers of power shares that are less than zero and greater than one. Allowing such a range of offers simplifies the technical statement of the model considerably. Furthermore, since we do not allow parties to opt out of the game, the actual numerical value of the offer is irrelevant. All that matters is the value of the offer relative to the value of a party's other opportunities. Substantively, we can think of offers that are less than zero or greater than one as examples of rent-seeking behavior by powerful parties who not only have the power to keep all of the valuable offices and policymaking opportunities for themselves but also can extract value from other parties in exchange for a delay in an event (i.e., an election) that will make them even worse off (than they are under the terms of an unfavorable agreement.) In sum, the added notational complexity of restricting c_i^j to [0, 1] would be worthwhile only if the focus of our research was "who gets what." Similar concerns lead us to describe the case where the out-party does not make offers. To see that only minimum generality is lost by this assumption, it is sufficient to notice that all possible two-party coalitions (first-second, first-out, second-out) can be outcomes in our model. Notice also that the conceptual basis of the three key conditions does not depend on whether or not the out-party can make offers. In sum, the added notational complexity of allowing the out-party to make offers (the number of endnodes in the game would increase by 54) would be worthwhile only if the focus of our research was "who gets what." It is not.

18. Since the first party's *only* defining characteristic is that it has the first opportunity to make an offer, this assumption is innocuous.

19. Why do we limit coalition members to one offer each? Our intent is to identify conditions under which parties will put an end to an existing governing coalition. For a particular party to want to make a sequence of offers, it must expect that an early offer in the sequence will be rejected and that a later one will be accepted. For this sequence of events to occur, the value of some parameter *must* change between the time that the first and second offers are made. However, our exogenous determination assumption implies that no important parameter values change during the game, and the common knowledge assumption implies that there is nothing that parties can learn about each other's preferences during the game. Therefore, within our game, there would be no reason to make multiple offers. Of course, in reality, multiple offers are possible, but for an early offer in a sequence to be rejected and a later one accepted, either some important parameter value must change (e.g., the present value of coalescence) or learning must take place. Since ours, like most game-theoretic work, is a static model, the consequence of each possibility can only be viewed with comparative statics based on multiple, independent plays of our game.

20. For a more comprehensive cross-national comparison of the variation in dissolution powers, see Laver and Schofield 1990, 64.

21. To the extent that such costs are coalition-specific, rather than party-specific, they can be represented by decreasing the value of the relevant g_i^j terms.

22. Condition A is derived from Lemma 1. Condition B is derived from Lemmas 2–3 and 5–8. Condition C is derived from Lemmas 2–3, 5–7, and 11.

23. King and his colleagues (1990) refer to this as the "constitutional interelection period."

24. Parties must forfeit currently held seats and coalition membership when an election is held. To the extent that a party derives value from the seats they currently hold or their membership in the current governing coalition, the fact that they are lost at election time means that all else constant, all s_i and g_i^j should decay as a parliament ages—converging to zero when there is no choice but to hold an election. If the values decrease as the age of a parliament increases and all else is constant, then (again, following Corollary 1) an event that does not lead to dissolution early in a parliament's term could do so later.

25. This functional form expressed in the Poisson model has been questioned on theoretical grounds by Warwick and Easton (1992), and empirical studies have provided little support. Kaashoek (1993) finds that the duration distribution varies substantially across political systems, in ways that are generally not consistent with the exponential distribution implied by the Poisson model.

26. One important step in this direction is offered by King and his colleagues (1990), who use the fact that a disproportionate number of cabinets are terminated in the final year of a parliament's maximum allowable term to estimate temporal and structural components of cabinet stability. Warwick and Easton (1992), Alt and King (1994), and Diermeier and Stevenson (1994) build upon the base of King and his colleagues (1990) and offer thorough discussions of the application of different hazard rate functions to the analysis of cabinet stability.

27. The technical details of "who coalesces with whom" (which are tangential to the thrust of the argument in the text) and the terms under which coalescence takes place are completely described in Lemmas 5 and 8–12.

28. Our intent here is not to cast general aspersion on these particular models, which are novel and compelling in many respects and are among the best work in the field. Our disagreement with these models is limited to the stated prediction.

29. For instance (as the argument just given suggests), the weakest party need not control the smallest number of seats. Therefore, the minimum winning coalition need not form. With respect to connectedness, our results suggest that coalitions need not contain the parties whose policy preferences are most closely related. To see this, consider that to the extent that policy preferences play a role in our analysis, we believe that they are represented in the g_i^j terms. That is, we argue that a coalition containing parties with complementary policy agendas is likely to generate greater utility for its members (high g_i^j and g_j^i) than would a coalition containing parties with conflicting policy agendas. However, even if this relationship between policy and g_i^j terms holds, it does not necessarily follow that the most policy-friendly coalition will form. For instance, the first party may be better off making an offer to a party for whom g_i^j is small than it would be by making an offer to a party for whom g_i^j is large, when the latter party requires a much larger share of power as a prerequisite for coalescence.

30. The difference in outcomes between the two cases is at least consistent with our conclusions. The Irish Labour party was ultimately willing to let the coalition fail a confidence vote (condition A held), and given Fianna Fail's reluctance to coalesce, there was no other offer that could beat an election (condition B held). Theorem 1 leads us to expect dissolution in such a circumstance. For the FDP, however, an immediate election was the worst possible outcome (condition B did not hold). Given the Social Democrats' willingness to let the coalition be voted down (condition A held), Theorem 3 leads us to expect a nonelectoral redistribution of power.

31. Political scientists have only just begun to explore effects of institutional arrangements such as the constructive vote of no confidence, constraints on bargaining sequences, and specific rules concerning parliamentary dissolution (see, e.g., Bawn 1993; Laver and Schofield 1990; and Strøm, Budge, and Laver 1994).

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