How the President and Senate Affect the Balance of Power in the House: A Constitutional Theory of Leadership Bargaining

GISELA SIN **ARTHUR LUPIA**

University of Michigan

September 2005. In progress.
We thank Christopher H. Achen, Rosario Aguilar-Pariente, Gary W. Cox, James N. Druckman, Orit Kedar, Adam S. Levine, Justin Magouirk, Kenneth A. Shepsle, Kaare Strom, Robert P. Van Houwelling, Alan Wiseman and seminar participants at the University of Michigan, the 2003 Annual Meeting of the American Political Science association and the 2004 Annual Meeting of the Midwest Political Science Association for helpful comments. We thank Jesse Menning for writing programs that generate examples and images.

Abstract

Can the President or the Senate affect the balance of power in the House? We find that they can. Our answer comes from a model that links House leadership decisions to the constitutional requirement to build lawmaking coalitions with the Senate and President. Changing the ideal point of a non-House actor, while holding constant the ideal point of all House members, can alter the House's balance of power. Power shifts because changes in the Senate or President can reshape the set of achievable legislative outcomes, which, in turn, alters the bargaining power of key House members. A corollary clarifies when empowering preference outliers (policy extremists) in the House leads to legislative outcomes that moderates prefer. Overall, our theory clarifies how constitutional requirements induce House members to make different leadership decisions than they would if they were, as commonly represented, unaware of other chambers or branches of government.

Leadership decisions in the U.S. House of Representatives are important. They determine who in the House can set agendas and make appointments. They affect which House members have jurisdictional and procedural advantages in particular policy domains. As a result, these decisions influence every piece of legislation that comes out of Washington.

These decisions are also of great interest to scholars. One reason for this interest is that the decisions are largely unconstrained. The Constitution (Article I, Section 5) places few limitations on the House's management structure. This broad latitude prompts many questions about how House members distribute power amongst themselves.

Some scholars attempt to explain the balance of power in the House by examining its organizational logic. In current scholarship on House organization, three theories are focal. One theory, for which the work of Shepsle and Weingast (1987) is iconic, contends that distributional concerns drive organizational decisions. Here, House power relations are managed through a committee system, which uses jurisdiction-bound agenda controls and the threat of *ex post* vetoes in conference committees to enforce legislative bargains among House members. A second theory, advocated by Krehbiel (1991), posits efficient information distribution as a key goal of legislative organization and focuses on the preferences of the median legislator. A third theory focuses on parties as organizational cartels. Scholars such as Aldrich and Rohde (2000) and Cox and McCubbins (1993) argue that the majority party organizes the chamber in ways that help its leadership maintain control.

These theories, and others like them, have two common attributes. First, they portray House members as rational, strategic and acting with policy-related goals in mind. Second, they assume that these same House members do not account for the Senate or the President when making organizational decisions.

Does it matter that leading theories of the House ignore the Senate and President? We argue that it does. Counter to the intuition provided by existing models, we find that changes in the partisan balance of the Senate or the identity of the President provides House members with an incentive to redistribute power amongst themselves.

Our first step in making this argument is to recognize that House members achieve policy goals by passing new laws. Laws, in turn, begin life as bills. The typical bill comes to the floor from a House committee. If a majority of the committee's members and a majority of the entire chamber passes the bill, then it becomes a law *only if outside actors respond in particular ways*. Article I, Section 7 of the Constitution mandates that the House and Senate must eliminate all differences in bills before seeking Presidential approval. If neither chamber is willing to accept the other chamber's bill "as is," or if the chambers cannot easily agree on a set of unifying amendments, then the chambers can negotiate their differences in venues such as conference committees. If such efforts produce a bill that both chambers and the President accept, then the joint bill – and not the original House bill -- becomes law. Otherwise, no new laws emerge.

In other words, *the Constitution requires the House to work with others to make new laws*. Such negotiations may be explicit or implicit, they may be public or private, but they are unavoidable. So regardless of whether partisan, informational, or distributional concerns influence House members, all know that the legislative consequences of their choices depend on subsequent interactions with the Senate and President.

This fact motivates our *constitutional theory of leadership bargaining,* where by leadership decisions, we mean not just choices over positions such as Speaker of the House, committee and subcommittee chairs, and membership on prestigious committees, but also the distribution of procedural rights among those positions. Our theory links such decisions to the constitutional requirements described above. A null hypothesis for us – and a claim implicit in research on leadership decisions in the House of Representatives, most of which allows no role for outside actors -- is that changes in the partisan balance of the Senate, or in the identity of the President, do not affect the distribution of legislative power in the House. We reject this claim. We find that a change in who occupies the Presidency or who controls the Senate can affect the negotiating leverage of key House members, which, in turn, can change the House's balance of power.

We build our argument from prior theoretical work on legislative organization, an examination of the rules and norms of inter-branch relations, and lessons from studies of coalition bargaining in parliaments. The parliamentary studies, though an unusual source, are quite relevant. In many democracies, multi-party coalition governments are the locus of legislative authority. A parliamentary party with governing aspirations is in a situation similar to that of the bill-passing House majorities described above -- to achieve a legislative goal, they must coalesce with outsiders (in the parliamentary case, other parties). Coalescence often requires bargaining. A party's leadership decisions can affect its bargaining leverage in coalition negotiations (see, e.g., reviews in Marsh and Mitchell 1999). Labor unions and firms make analogous leadership decisions in their attempts to enhance their bargaining leverage (see, e.g., Williamson 1975). We contend that similar dynamics are at work in the House – members know that their leaders can influence the outcomes of subsequent interactions with the Senate and President and they make leadership decisions with such dynamics at least partially in mind.

A formal model is our theory's backbone. The model has a unique combination of attributes: it is non-cooperative, defined over a multi-dimensional policy space, multi-chamber, multi-branch, and multi-stage. The stages are particularly important. First is a *leadership stage* where House members bargain over how to distribute power. Second is a *reconciliation stage* where the House and Senate can settle their differences. Third is a *constitutional stage* where joint bills become laws only if the President and the chambers act as the constitution requires. Our results come from showing how reconciliation and constitutional stage dynamics affect leadership stage decisions.

Constitutional party government is one way to label our main result. This label is, in part, in homage to Aldrich and Rohde's conditional party government thesis. Like Aldrich and Rohde, we show that the distribution of power in the House depends on how intra-party variance in House members' policy preferences compares to inter-party differences. Moreover, we prove that such relationships also depend on the Senate and President's preferences. Specifically, we prove that shifting the ideal point of the Senate or President, while holding constant the preferences of all House members can induce the House to change its balance of power. A change in the party of the President, for example, can induce House members to transfer power from the median member of the House as a whole to the median member of the majority party, or vice versa depending on the nature of the Presidential move. Our result implies that broad claims about the parties' decisions in House organizational choices should be updated with the constitutional requirements of Article I, Section 7 in mind.

A corollary identifies a rationale for empowering members whose policy preferences are relatively extreme (a.k.a., preference outliers). This rationale is greatest when the outliers are given an effective veto that they can use to reject Senate proposals that House moderates would be hard-pressed to reject themselves. In such cases, appointing, ideological extremists – who may face unique "audience costs" -- as the House's representatives in a conference committee can yield joint bills that are better for House moderates than if they themselves represented the House. As with the main result, we prove that such dynamics depend on the Senate and President's preferences (e.g., moving a single non-House actor's ideal point can affect whether and what kinds of "extremists" moderate House members want to promote).

In sum, we find that the constitutional requirement to bargain with non-House actors can induce House members to make different leadership decisions than they would if they were, as commonly represented, an isolated entity that is unaware of other chambers or branches of government. Put another way, rational, foresighted and policy-oriented House members have an incentive to incorporate aspects of the Constitution's Article I, Section 7 into the organizational decisions they make under the Constitution's Article I, Section 5. The paper continues as follows: we introduce the model, we define the equilibrium, and then we present our results. A brief appendix follows the text and includes essential proofs.

The Model

The game is one of complete information, which we solve for a unique subgame-perfect Nash equilibrium. It features $N+2$ players. $N > 3$ of the players are House members. The other two players represent the Senate and the President, respectively. Our decision to model the Senate as a unitary actor is motivated by our desire to offer a parsimonious explanation of how changes in the Senate and President affect House organizational incentives. While this representation of the Senate simplifies reality, it is an advance in the sense that many models of Congress do not include the Senate at all.[1]

Preferences

Each player, including the Senate and President, comes from one of three ideological factions. We label these factions *F1*, *F2* and *F3*. We focus on the case where no faction constitutes a majority of the House -- $max\ (\%F1, \%F2, \%F3) < .5$ and $\%F1 + \%F2 + \%F3 = 1$. Since we allow factions to have identical policy preferences, this assumption is without a loss of generality. Of course, one can object that since only two parties are typically represented in the House, our model should include just two factions. This presumption, however, negates the possibility that members of the majority party may find it beneficial to threaten to side with members of minority party if their fellow partisans do not treat them sufficiently well in leadership negotiations. Having three factions is the most parsimonious way to represent such threats in a model.

Policy preferences motivate player objectives. We define these objectives using ideal points *(F1,F2, F3)*, utility functions, and the Euclidean plane $\Re^2$. Substantively, we think of points on this plane as representing aggregations of possible legislative outcomes over a particular substantive domain for the coming term. For any player $i \in N+2$, ideal

[1] Our focus on interchamber dynamics follows the lead of recent studies by Tsebelis (2002), Tsebelis and Money (1997) and Diermeier and Myerson (1999). Tsebelis and Tsebelis and Money use cooperative game theory to highlight ways in which the existence of another chamber affects the House's ability to achieve policy goals. Diermeier and Myerson show how individual members of the House can increase their expected payoff from lobbyists by making the number of veto points in their chamber a function of the number of veto points elsewhere in government. A working paper by Bovitz and Hammond (2001) also focuses on multi-chamber dynamics. Its substantive focus is closer to our own. It examines how the Senate, President, and bureaucracy affect internal House organization. It does not, however, offer a complete model of these decisions. It use divide the dollar examples to "illustrate general points about the great importance of inter-institutional context for theories of how distributive politics is institutionally organized" (2001:30).

point Fi, $i \in \{1, 2, 3\}$, and legislative outcome $L \in \Re^2$, player i's expected policy utility from a leadership agreement is $U_i(F_i, L) = - |F_i\text{-}L|$. In words, all players from a particular faction have identical policy preferences and their policy utilities decrease monotonically and non-linearly in the difference between their ideal points and the game's legislative outcome.

Sequence of Events

The game has three stages: a leadership stage, a reconciliation stage, and a constitutional stage. The game ends when a constitutionally sufficient set of actors agrees on a joint bill, $j \in \Re^2$. If such an agreement cannot be reached, a pre-existing aggregate policy status quo $q \in \Re^2$ prevails.

The Leadership Stage

Every two years, at the beginning of a new Congress, the House's first order of business is for its members to forge a power sharing arrangement. Choosing leaders is a critical part of such arrangements. House leaders, most notably the Speaker of the House, have substantial power over subsequent organizational decisions such as committee assignments and changes in House rules and procedures (Shepsle 1978, Cox and McCubbins 1993).

Figure 1 depicts our model of the leadership selection stage. In it, *F1* goes first and has an opportunity to offer a power sharing arrangement to *F2* or *F3*. If *F1* fails to make an acceptable offer, then *F2* can make an offer to *F3*. Successful arrangements require the support of a majority of House members (two factions). If no faction makes an acceptable offer, then the game ends with legislative outcome $L=q$.[2] Substantively, we think of *F1* and *F2* belonging to the majority party, with *F1* being regarded as the dominant faction *ex ante* – whether it retains this status *ex post* depends on the outcome of the negotiations.

[Figure 1 here.]

Offers are of the following form: "If you, faction *F2*, join with us, faction *F1*, then together, for a pre-defined substantive domain[3], we shall use a leadership distribution that is weighted in the following manner for the remainder of the term: with probability $c_1^2 \in [0, 1]$ the House leadership shall act as if our faction's ideal point is its own and with probability $1- c_1^2$ it shall act as if your faction's ideal point is its own." Here, subscripts denote the faction making the offer and superscripts denote the faction to whom the offer is made. We represent the agreement as probabilistic to reflect the fact that these agreements are not situation specific. Leadership agreements made at the beginning of a legislative session are usually intended to persist for the duration of the coming legislative term and to cover multiple issues within that term. We contend that agreeing to give one faction the speakership, another faction the chair of a prestigious committee, and altering House rules to affect the procedural rights of such positions is

[2] We assume the following leadership stage tie-breaking rules. For making an offer: if there exists no offer that provides the offering faction with greater utility than the consequence of making no offer, then make no offer. If making an offer to a majority party faction provides equal utility to making an offer to the minority party faction, then make an offer to majority party faction. For reactions to an offer: if an offer yields the same utility as the status quo, accept the offer; if an offer from *F1* yields the same utility as an offer from another faction, then accept *F1*'s offer. These assumptions simplify our equilibrium statements but do not affect our main results.

[3] The agreement is defined over a particular substantive domain to allow for variance in scope. While we shall describe the leadership agreement as if it covers all legislative matters arising over the coming legislative term, one can also use our framework to represent leadership selection as a series of parallel games where, for example, one kind of arrangement is sought for domestic policy.

analogous to agreeing that “your faction controls the legislative process 73% of the time, while my faction controls it in 27% of circumstances.”

In sum, the offer is akin to a coalition agreement amongst party factions in the House. It is a compromise that emanates from the fact that the coalescing factions may not see eye-to-eye on all issues. Its terms allow the House leadership to personify the factions’ agreement on how conflicts within the coalition will be managed.

The Reconciliation Stage

After the House chooses a power-sharing arrangement, it can begin to produce bills. If the Senate passes different bills, however, the chambers must coordinate to create new laws. In some cases, the chambers synchronize their bills with little effort. In other cases, more work is needed. The work takes the form of negotiations. The best-known venues for such negotiations are conference committees. We will, in what follows, proceed as if all interchamber negotiations follow conference committee rules.[4]

The actual conference committee voting rule is that each chamber gets one vote and a proposal needs two votes to pass. The number of persons representing each chamber is irrelevant. As Bach (2001, CRS-22) points out, “A majority of the House managers and a majority of the Senate managers must approve and sign the conference report. Decisions are never made by a vote among all the conferees combined.”

Following conference committee norms, we represent interchamber reconciliation efforts as a game between two players, representative conferees from the House and Senate. Accordingly, in our model a joint bill emerges only if both conferees agree to it.

[4] As conference committee negotiations are always available as a reversion for other forms of negotiation – in that either chamber has the ability to call for such activity – we regard this assumption as entailing a minimal loss of substantive generality.

If there is no such agreement, then the game ends with the status quo as the legislative outcome.[5]

We assume that the Senate conferee shares the Senate's ideal point, $s \in \{F1, F2, F3\}$.[6] We assume that the House conferee's ideal point comes directly from the House power sharing arrangement.[7] With probability $c_i^k \in [0, 1]$ the conferee shall act as if faction i's ideal point is its own and with probability 1- c_i^k the conferee shall act as faction k's ideal point is its own. We assume that Nature uses c_i^k to determine the House

---

[5] We assume the following tie-breaking rule for the reconciliation and constitutional stage. If a player is indifferent between the status quo and the joint bill, accept the status quo and reject the joint bill. For simplicity we denote this case as one where the joint bill becomes the status quo.

[6] Our decision to give the Senate conferee the Senate's ideal point stems from Senate procedures for choosing conferees. Senators can filibuster the selection of conferees or offer a motion to reconsider the appointments. So to the extent that it is reasonable to represent the Senate as being of one mind on a particular issue, it is reasonable to represent the Senate conferee as being of the same mind. These procedures are quite different than those for the House, which we describe in the next footnote.

[7] Rule 1, clause 11 of the House rules gives the Speaker complete discretion over conferee selection. Even after naming an initial set of conferees, the Speaker retains the authority to remove them or add new ones. What's more, the House cannot challenge the Speaker's choice of conferees through a point of order. Indeed, "[t]here is no effective way to challenge the Speaker's choice of conferees in the House" (Longley & Oleszek 1989: 38), "These guidelines [Rule I,11]…necessarily give the Speaker considerable discretion, and his exercise of this discretion cannot be challenged on the floor through a point of order" (Bach 2001, CRS-15). Lazarus and Monroe (2003) and Carson and Vander Wielen (2002) show empirically how speakers do use their appointment power to manipulate conference committees to end up with outcomes closer to the party median. In principle, we believe that the Speaker is not unconstrained in his choices – if enough members are sufficiently displeased with the Speaker's actions they can replace him or reduce his powers. However, the fact remains that the House rules give the Speaker considerable latitude to select conferees.

Consider, for example, a recent case involving House Speaker Dennis Hastert. Hastert, not regarded as a particularly confrontational leader, used his ability to select conferees to kill a House bill that passed by a very wide margin, though he and other leaders of his party opposed it. In October 1999, the House rejected a managed-care package Speaker Hastert had backed and instead overwhelmingly adopted a plan he had worked hard to defeat. The bipartisan package included a number of patient protections, like allowing patients to sue their health plans in state courts -- a provision the GOP leadership had consistently opposed. Hastert endorsed a rival measure that contained many of the same patient protections but allowed only limited legal action. The bipartisan bill passed by a vote of 275-151. A companion bill was also passed in the Senate, but it had no provisions granting patients the right to sue. A conference committee was formed. The Speaker chose 13 Republican conferees, all of whom sided with the majority party leadership on this issue and *only one of whom voted for the House bill*. Those excluded included the Republicans who co-authored the bipartisan bill. Greg Ganske of Iowa, one of the Republican sponsors "was furious as he looked at the list of conferees. "Is that stacking the deck, is that trying to subvert the will of the House, or what?"" he said in an interview (cited in Carey 1999). As a response to many accusations he received, Hastert explained that he followed the regular procedure by appointing members of committees with jurisdiction over health issues. While it is reasonable to presume that the Speaker cannot always reverse a majority decision in this manner, this example provides a powerful reminder that the Speaker's power over conferee selection is relevant.

conferee's ideal point, $C_H \in \{F1, F2, F3\}$, for a given play of the game after the leadership stage and before the legislative stage and that this decision is common knowledge once it is made.

In other words, leadership stage bargaining effectively defines the content of a "representative bill." The bill reflects an aggregation of the set of initial bargaining positions that the House presents to the Senate in interchamber bargaining over the ensuing legislative term. So, if "your faction" agrees to control the process 73% of the time, then the representative bill is your faction's ideal point with probability .73 and is the ideal point of your power-sharing partner with probability .27.

The reconciliation stage, in turn, manages differences between the House and Senate's initial bargaining positions. Indeed, much of this model's inferential leverage comes from the assumption House members recognize subsequent constitutional constraints on advancing their preferred legislative agendas when they make internal organizational decisions. This way of thinking follows Shepsle and Weingast (1987). Like them, we portray conference committees as providing *ex post* vetoes on House bills. Our treatment extends theirs by modeling factors such as conferee selection as a product of decisions made in the opening days of a legislative session. In other words, we treat House members as understanding that their leadership decisions will affect who represents them in negotiations with the Senate. They also know that delegating such power is equivalent to giving particular House members *ex post* vetoes over issues that become the focus of reconciliation attempts in a certain percentage of circumstances.

We now turn to characterizing the content of any joint bill that emerges from the reconciliation stage. In our efforts to provide a parsimonious account of conference dynamics in our model, we have scoured the empirical literature on this topic. Some scholars claim that the House is advantaged in such negotiations, due to the chamber's superior ability to develop policy-specific expertise (Steiner 1951). Others claim that the Senate is advantaged because: (1) the Senate committee and its conferees draw more directly and more completely upon the support of their parent chamber than do House Committee and its conferees (Fenno 1966, Vogler 1971), (2) the Senate's political decisions are more in line with the demands of interests groups and constituent (Manley 1973), (3) the Senate usually acts second on legislation after is has been already passed by the House so it makes only marginal adjustments which are mostly accepted by the House, the chamber that originally designed the bill (Strom and Rundquist 1977).

With respect to the question: "Does one chamber have an advantage in interchamber negotiations?" there is no consensus. Following this literature, we assume that attempts to reconcile differences between the House and Senate are determined by a simple algorithm – "split the difference if possible, otherwise recognize bargaining power." This algorithm first draws a straight line between the conferee's ideal points. If the midpoint of this line can prevail in the game's constitutional stage, then it is the joint bill. Otherwise, the algorithm draws a line that extends from the status quo to the midpoint of the original line and beyond. This line includes all points in the policy space that are equally distant from the conferees' respective ideal points. If any point on this line can prevail in the game's constitutional stage (described below), then the point closest to the original midpoint is the joint bill. If no such point exists, then the conferees cannot split the difference and make both better off. In this case, the algorithm searches the entire space for the point closest to the original midpoint that can prevail in the game's constitutional stage. Such a point becomes the joint bill if it exists. Note that while such a bill must make both conferees better off than the status quo, it may benefit one chamber far more than the other. Such asymmetric outcomes will occur, for example, when the status quo (i.e., the reversion point) is much farther from one conferee's ideal point than it is to the other. In such cases, the conferee with the distant ideal point will have less bargaining leverage and the joint bill will, all else constant, be farther from her ideal point. The algorithm's final step is defeat – if the conferees cannot agree, then the game effectively ends here with the status quo as the legislative outcome (technically, the joint bill becomes the status quo). In effect, the algorithm reflects the equal voting leverage that conference committee rules give to each chamber, but allows reconciliation arrangements to be affected and constrained by bargaining power imbalances and subsequent constitutional requirements.

The Constitutional Stage

Figure 2 depicts the extensive form of the game's constitutional stage. House members, the Senate and the President consider the joint bill under a closed rule $L=\{j, q\}$, where $j \in \Re^2$ denotes the joint bill. Since we are examining the case where no House faction holds a majority of seats, the joint bill needs the support of at least two factions to pass the House. So, if two House factions and the Senate support the bill, the bill goes to the President. Otherwise, the game ends with legislative outcome $L=q$. We assume that the House moves before the Senate. Since the model is one of complete information, this assumption does not affect our results.

[Figure 2 about here.]

If the President gets the joint bill, s/he can sign the bill or veto it. If s/he signs the bill, it becomes law and the game ends with outcome $L=j$. If s/he vetoes the bill, the game continues.

The game's final decision nodes represent the House and Senate's reaction to a presidential veto. If either chamber cannot generate sufficient support for an override, then $L=q$. If the override succeeds, then $L=j$. Constitutionally, an override requires 2/3 of both houses. We represent this requirement in different ways for each chamber.

For the House, an override requires the support of at least two-thirds of the membership. The support of two of the three factions may not be sufficient. Instead, the size of the factions supporting the override must be greater than or equal to two-thirds of the membership. For example, suppose that factions $F1$ and $F3$ support an override. The override has sufficient support only if $\%F1+\%F3\geq 2/3$.

For the Senate, we assume that the chamber finds a veto override in its interests if the joint bill provides them with at least $v>0$ more utility than the status quo. In other words, a small change from q is not enough to elicit supermajority support in the Senate – an override requires that the joint bill be substantially better for the representative Senator than the status quo.

Our description of the game's extensive form is now complete. Next, we use the model to address the question of how changes in the Senate and President affect the balance of power in the House.

Equilibrium Properties

In this section, we describe behaviors and outcomes for each of the game's three stages. These behaviors and outcomes are the components of our main results. Our conclusions come from the game's unique subgame perfect equilibrium. A subgame-perfect Nash equilibrium in our game consists of the following components:

- In the constitutional Stage, all players choose strategies that are best responses to the actions of all other players in this stage.
- In the reconciliation stage, the algorithm described in the text determines all actions.
- In the leadership stage, all House members choose strategies that are best responses to the actions of all other players, all of which are conditioned on the common knowledge that the algorithm will determine reconciliation stage outcomes and the belief that all players will choose best responses in the constitutional stage.

Because we draw our conclusion by conducting a backward induction on the game's extensive form, we describe general properties of the equilibrium in the same order. We focus first on constitutional stage, second on the reconciliation stage, and third on the leadership stage. An appendix includes a full technical derivation of these results.

Proposition 1 describes constitutional stage dynamics, which we regard as following straightforwardly from the constitutional requirements. However, as we shall describe below, the substantive implication of this result and the manner in which it differs from many other models of congressional decision-making is far from trivial.

PROPOSITION 1. The Constitutional stage yields a new law (*L=j*) $\Leftrightarrow$

- $[|s-q|-|s-j|>0$ and $|p-q|-|p-j|>0$ and $s\neq p]$ OR $[s=p$ and $|s-q|-|s-j|>0$ and $(|w-q|-|w-j|>0$ or $|z-q|-|z-j|>0)]$ OR $[|p-q|-|p-j|\leq 0$ and $\%P\leq 1/3$ and $|s-q|-|s-j|-v>0$ and $|z-q|-|z-j|> 0]$.

In words, a new law is made if

- the Senate, President, and the two House factions who share their respective, but different, ideal points prefer the joint representative bill to the status quo,
- the Senate and the President have the same ideal point, they and their House faction prefer the joint representative bill to the status quo, and one of the other two House factions (denoted *z* and *w* above) has the same preference
- the President prefers the status quo, the size of the House faction that agrees with him is less than 1/3 of the entire chamber, the Senate prefers the joint representative bill to the status quo so much that it will support an override, and

the House faction that is aligned with neither the Senate nor the president (denoted z) also prefers the joint bill.

Henceforth, we refer to the conditions of Proposition 1 as the Constitutional set (CS). Any actor in the House or Senate who wants to supplant the status quo with new legislation is constrained to produce a joint bill that falls within this set.

It is worth noting that the set of points that the President, the Senate, and a House majority prefer to the status quo need not overlap with the set of points that two-thirds of the Senate and the House prefer. Figure 3 offers an example. In it, let $\%F1 + \%F2 > 2/3$. The CS is the union of the shaded areas. The black area represents the set of policies that the President, the Senate and a majority of House members prefer to the status quo. The gray area represents the set of policies for which the House and Senate will override a presidential veto.

The fact that these two areas are not connected increases the realism of legislative negotiations in our model. Instead of simply "dividing a dollar" or choosing a point on a continuous contract curve, or choosing points from a discrete set of petals all of which originate at a status quo point, actors in our model can use the threat of a very different kind of legislative outcome, say the "override" subset of the CS to increase their leverage in bargaining over alternatives in the CS's "presidential" subset. Substantively, the discontinuity in the CS is a consequence of an important – but sometimes underappreciated – empirical fact: laws can be made by two different kinds of coalitions – a House majority/Senate majority/Presidential coalition and a House supermajority/Senate supermajority coalition. This fact allows legislative bargaining to be more dynamic than it is commonly portrayed in models that focus solely on the House.

[Figure 3 here.]

We now characterize the reconciliation stage. Recall that it entails an interaction between House and Senate conferees, that the voting rule gives each chamber one vote, and that two votes are required to pass a joint bill. As a result, the algorithm described above will not produce a joint bill that provides lower utility to either player than q. Since s is the Senate conferee's ideal point, a necessary condition for $L=j$ is $|s-q|-|s-j|>0$.

Let $mid(C_H, s)$ be the midpoint of the line connecting C_H, the House conferee's ideal point and s, the senate conferee's ideal point. This point "splits the difference" between conferee ideal points and serves as the algorithm's default joint bill. In other words, if $mid(C_H, s)\in CS$, then $j= mid(C_H, s)$). Note that when the House and Senate conferees are from the same faction, $mid(C_H, s)=s$.

When $mid(C_H, s)\notin CS$, the algorithm searches for another alternative in the manner described above. Call this "second best" point, $sec(C_H,s)$. Recall that if there are no such points that split the difference, then the resulting joint bill is closer to the ideal point of conferee closest to the status quo. In what follows, $j(C_H,s)\in\{mid(C_H,s), sec(C_H,s)\}$ denotes the joint bill. The appendix includes a complete specification of the conditions under which each kind of bill emerges.

One attribute of these reconciliation stage dynamics is particularly important for the results to follow. If we hold the ideal points of all House members constant, but move the ideal point of the Senate or the President, the CS can change. When the CS changes, it can affect whether or not the midpoint between the ideal points of two House factions is in the CS. When changing the Senate or the President affects the midpoint of at least one potential legislative coalition in this way (e.g., the change causes the midpoint between *F1* and *F3*'s ideal points to be outside the CS), it affects the legislative outcome that the coalition can produce, which can reduce (or increase) the value to both potential coalition partners of coming to an agreement. Such a change in the value of one potential coalition can, in turn, affect the relative bargaining leverage of all factions. To see how, note that when *F1* and *F3* -- in the example above -- derive less utility from coalescing with each other, the relative value to each of coalescing with *F2* increases. This shift, in turn, can result in *F2* gaining a larger share of legislative power. Such dynamics play a key role in our ability to reject our null hypothesis that changes in the Senate or the President do not affect the distribution of legislative power in the House.

The Leadership Stage

We now characterize offers and responses in the leadership stage. We begin with an easy result. If we assume that *F1* and *F2* constitute the majority party and that the two factions ideal points are sufficiently close to one another and sufficiently far from *F3*, then the power sharing arrangement is the result of an offer from *F1* that *F2* accepts. The outcome is akin to a party line vote for the speaker, which is akin to the traditional outcome empirically.

Now to the more complex question about how the prospect of outcomes in the game's reconciliation and constitutional stages affects decisions in the leadership stage. Since the technical description of these decisions is complex, we offer an intuitive description here. Consider the case where faction *F1* can make an offer to faction *F2* or *F3*. A four-step sequence summarizes the logic of *F1*'s best response.

Step 1: Use the subgame that follows this offer to determine each player's consequence of failing to reach agreement.

- Suppose, for example, that failure leads to *F2* making an offer that *F3* accepts which, in turn, produces legislative outcome $L=j(F2,s)$ with probability c_2^3 and legislative outcome $L=j(F3,s)$ with probability $1-c_2^3$.

Step 2: Determine which offers from *F1* each faction will accept.

- *F2* will only accept offers that provide it at least as much expected utility as $-c_2^3|F2-j(F2,s)|-(1-c_2^3)|F2-j(F3,s)|$. *F3* will only accept offers that provide it at least as much expected utility as $-c_2^3|F3-j(F2,s)|-(1-c_2^3)|F3-j(F3,s)|$.

Step 3: Use step 1 information to calculate *F1*'s maximum feasible offer ($c^*{}_1^x$) to each other faction.

- The utility consequence for *F1* of not making an acceptable offer in this example is $-c_2^3|F1-j(F2,s)|-(1-c_2^3)|F1-j(F3,s)|$. The utility consequence of making offer $c^*{}_1^2$ to *F2*, if accepted, is $-c^*{}_1^2|F1-j(F1,s)|-(1-c^*{}_1^2)|F1-j(F2,s)|$. The utility consequence of making offer $c^*{}_1^3$ to *F3*, if accepted, is $-c^*{}_1^3|F1-j(F1,s)|-(1-c^*{}_1^3)|F1-j(F3,s)|$.

Step 4: Use the information in steps 2-3 to determine *F1*'s offering strategy, where F1 makes the offer that maximizes its expected utility subject to the constraint that it makes the faction to whom the offer is made better off than its other coalitional possibilities.

This final step has two implications that are analogous to coalition dynamics identified by Lupia and Strom (1995: 656-7). A faction that does not have attractive alternative possibilities, such as a faction whose ideal point is very far from that of two factions whose ideal points are very far from one another, will have less bargaining leverage. Therefore, if they are included in the coalition, it will be under relatively unfavorable terms. A related dynamic is that a faction will not necessarily accept an offer that gives them the greatest share of power. All else constant, they will accept a smaller power share (c_i^j) from a coalition with whom they can generate legislative outcomes that are closer to their own ideal point.

Results

In this section, we use the equilibrium just described to clarify how the Senate and President affect legislative organization. We begin with the simplest case. Suppose, for a moment, that the Senate, the President, and two House factions share the same ideal point, *F1*. The unique subgame perfect equilibrium implies legislative outcome *j(F1,F1)=F1=L*. The House members that share an ideal point are indifferent between all organizational arrangements because all yield to the same legislative outcome.

Legislative organization is more interesting and complex in other cases. We now use the model to reject a focal null hypothesis and to offer a new explanation of how the House distributes power amongst its members.

Rejecting the Null Hypothesis and the Emergence of Constitutional Party Government

Aldrich and Rohde's conditional party government thesis (stated formally in Aldrich, Grynaviski, and Rohde (1999)) is that if there is little variance in policy preferences within parties and great differences between parties, then political parties will play the focal role in organizing the House. As the within-group variance increases relative to the between-group variance, party centrality in legislative organization diminishes and, in the limit, disappears.

Our model yields a different conclusion. It is similar in structure to conditional party government, but very different in detail. We find that what factions offer to each other in organizational negotiations *is more than a function of the distances between their respective ideal points* -- the location of the Senate's and President's ideal points also affect factional incentives. Proposition 2 states a necessary condition for the occurrence of such an event.

PROPOSITION 2. A necessary condition for changing the House balance of power without moving the ideal point of a single House member is moving the ideal point of the Senate or the President in a way that changes the CS which, in turn, changes the legislative outcome that at least one potential House coalition would produce.

In words, it is possible to hold constant the ideal points of every member of the House, move the ideal point of the Senate or President and change the equilibrium power sharing arrangement in the House. Moving these ideal points changes factions' bargaining leverage by affecting the boundaries of the CS. This boundary change can induce the factions to have different preferences about who represents the House in the reconciliation stage. The preference changes, in turn, can affect what leadership offers the affected factions are willing to make or accept. As a result, they can have a ripple effect – as one faction changing what offers it is willing to make or accept can affect the bargaining leverage of all factions. When such ripples occur, movements in the ideal points of the Senate and President can induce House members to alter the balance of power in the House.

In the extreme, single shifts in the Senate or President can read to very large shifts in the distribution of leadership power in the House. Figure 4 gives an example.

[Figure 4 here.]

The top of the figure depicts initial conditions. In it, the President and Senate share the ideal point *(6, 6)* with House faction *F2*. The other two House factions, *F1* and *F3*, have ideal points *(0, 12)* and *(15, 15),* respectively. The status quo is *(12, 9). F1* controls 40% of House members, *F2* controls 20% of House members, and *F3* controls 40% of House members. Faction *F1* has the first opportunity to make an offer, followed by faction *F2*.

Using the reconciliation algorithm, the three possible conference bills are *j(F1,s)*, *j(F2,s)*, and *j(F3,s)*, respectively. The conference bill resulting from an agreement between *F1* and the *Senate*, *j(F1,s)=(3, 9)*, or an *F3*-Senate agreement, *j(F3,s)=(10.5, 10.5)*, is the midpoint between their respective ideal points. *j(F2,s) (6, 6)* coincides with *F2's* ideal point, and is the outcome of an agreement between *F3* and the Senate.

The equilibrium outcome from this game is a power sharing arrangement between factions *F1* and *F2,* where $c^{*}{}_{1}^{2} =1$ (*F1* retains all governing power), C_H*=F1* (one of F1's members becomes House conferee 100% of the time) and *L=j(F1,s)=(3,9)*. This distribution of power is sufficient to induce faction *F2* to coalesce with *F1,* rather than allowing the leadership stage negotiations to continue. If *F2* were to reject this offer, then *F1* would make an offer to *F3*, that *F3* would accept[8], in which the power sharing arrangement, $c_1^3 =.97$, would make *F3* conferee 3% of the time and *F1* 97% of the time Such an outcome would be worse for *F2* than *L=(3,9)*. Furthermore, *F1* prefers to coalesce with *F2* and retain all the power than coalesce with *F3* and having to give up some power.

In the lower panel of Figure 4, we hold the House factions' positions constant, but move the President's ideal point. This simple move radically reshapes the constitutional set, and hence, the range of joint bills that can emerge from conference negotiations. We now explain how it affects leadership negotiations and the balance of power in the House.

We move the President's ideal point from *F2* to *F3*. One consequence of this change is that the President is now aligned with a faction that controls more than one-third of House members. This faction can prevent an override of any joint bill that the president would veto. With this move, the constitutional set is reduced to the intersection of the set of points that both the Senate's and President's factions prefer to *q*.

In equilibrium, the resulting power sharing arrangement is between factions *F1* and *F3*, where $c_1^3=.3$. In other words, with probability .3, a member of F1 is the House conferee and *L=j(F1,s)=(8.5, 12.5)* and with probability .7, a member of F3 represents

---

[8] If *F3* had rejected the offer, *F2* would have made him an offer that would have also left him indifferent between the outcome and the status quo.

the House in interchamber negotiations and $L=j(F3,s)=(10.5, 10.5)$ is the legislative outcome. This distribution of power is sufficient to induce faction *F3* to coalesce with *F1*, rather than allowing the leadership stage negotiations to continue. If *F3* rejects this offer and the games continue, then *F2* would offer the power sharing arrangement $c_2^3=1$ and *F3* would accept the offer as giving *F2* total control of the conferee leaves it as least as well off as the status quo. This new outcome represents a shift in the House power balance. *F3*, the faction that gained a President, is much better off: the policy outcome represents a gain in 8.5 utils from the initial situation. *F2*, the faction that lost a President, is worse off: it losses about 2.4 utils from the previous circumstances.

In sum, the bargaining power of factions is not independent of anticipated actions in the conference and constitutional stages of the game. The impact of such dependence of leadership stage dynamics distinguishes our notion of constitutional party government from Aldrich and Rohde's conditional party government. To the extent that Aldrich and Rohde refine Cox and McCubbins' party cartel thesis and Krehbiel's median-legislator-as-pivotal thesis, our theory compounds the refinement.

Corollary: Outliers on Committees

Many studies focus on the presence of preference outliers on Congressional committees. Preference outliers are legislators who do not have centrist preferences with respect to a particular set of issues. Outliers matter because certain empirical patterns in the distribution of House leadership or committee appointments can validate some theories of legislative organizations and invalidate others. Our model produces a committee outlier result that differs from previous conclusions. One of the ways it is different is that it focuses on conference committees. It also differs in why outliers are desirable. In stating this result, we focus on how conferee selection affects the content of the joint bill. Note, however, that when a faction's policy utility from a particular joint bill increases, its bargaining leverage can change. In general, greater policy utility from a joint bill corresponds to greater leverage in the leadership stage.

Figure 5 depicts an example of our result. In it, the Senate and the President are from the same faction, the one in the northeast quadrant. Another faction, *F1*, whose ideal point is located towards the center of the figure, is thinking about the kind of offer it will make or accept in the leadership stage. Looking ahead to the reconciliation stage, faction *F1* knows that if it controls the House conferee, then the joint bill will be *j(F1,s).*

[Figure 5 here.]

A question arises. Can faction *F1* benefit by delegating leadership power to another faction? The answer is "no" if the other faction shares the Senate and President's ideal point. If a member of that faction is conferee, then *j(F3,s)=p=s* an outcome which is farther from faction *F1's* ideal point than *j(F1,s).* Now consider the faction *F2*. Its ideal point is in the figure's west quadrant. If one of its members is named House conferee, then the joint bill is *j(F2,s)*. This is closer to faction F2's ideal point than *j(F1,s)*. Faction *F1* receives higher policy utility when a member of faction *F2* is selected as conferee than when one of its own is sent to negotiation with the Senate. The outcome from this game is a coalition between *F1* and *F2,* where *F2* receives all the power and becomes conferee 100% of the time.

The intuition underlying this result is as follows. Because the conference committee voting rule gives one vote to each chamber and two votes are needed to win, the House and Senate conferees are – in effect – given veto power over conference proposals. This thin institutional structure leaves open the question of where bargaining leverage in conference committees comes from. For the House, such leverage can come from conferees who can credibly threaten to reject proposals from the Senate that a more moderate conferee could not credibly reject. When the extremists can do this, the moderates may prefer that the extremists bargain on their behalf.

Imagine, for example, Senate conferees suggesting to House conferees that a certain concession on an abortion-related bill would be acceptable to a majority of the House floor. Where a centrist who agrees with the statement might be inclined to go along with the concession, a House member who has committed strongly and publicly to a different position can offer a different response (e.g., “I am unable to accept any such compromise and would rather that we produce no joint bill than one with the concession you suggest.”) If the House centrists prefer a version of the bill that does not include the concession, they can achieve a joint bill they like better by selecting members of other factions as conferees. Such dynamics play a critical role in our model – they are the main reason that even though Faction 1 has the advantage of making the first offer, they sometimes choose to yield a substantial amount of leadership power to another faction.

We can say more about the conditions under which a moderate House faction realizes greater policy utility by having another faction control its conferee. If a House faction and the Senate conferee share an ideal point, then it maximizes policy utility when one of its members serves as conferee. Otherwise, it may gain greater policy utility by having a conferee whose ideal point is on the opposite side of its own ideal point than that of the Senate conferee. Figure 6 shows just how large the range of beneficial outliers can be.

[Figure 6 about here.]

In Figure 6, the Senate and President share an ideal point, *S*, which faction z does not. The ideal point of the third faction does not appear (and is not needed for the purpose of this example). Instead, the dashed circle around z represents the set of legislative outcomes that provide z with greater policy utility than *j(z,s)*. To simplify the exposition, we consider the case $c_z^j \in \{0,1\}$ -- where z can either keep all of the leadership power for itself (ensuring that the conferee will share its ideal point) or where z can transfer all leadership power to another faction (ensuring that the conferee will share another faction's ideal point). Similar logic extends to the case $c_z^j \in [0,1]$.

What kinds of coalitions yield a joint bill that faction z prefers to j(z,s) – the bill that would emerge if $c_z^j=1$? The shaded and unshaded ranges of Figure 6 provide the answer. If the third faction is located in the unshaded range, then faction z gets greater policy utility from $c_z^j=1$. If, however, the third faction is anywhere in the shaded range, then faction z can get greater policy utility by yielding leadership control ($c_z^j=0$).

Two additional aspects of this figure are worth noting. First, the shaded range extends infinitely to the left. This occurs because both the extreme faction and the moderate faction are better off if they produce a representative bill that is indefinitely far to the left, knowing that the resulting joint bill must be inside the Senate's win set (the circle surrounding S). Since Senate can credibly veto any point outside of its win set, the any joint bill produced by this "extremist faction-Senate faction" coalition closer to Z than is j(z,s). Our constitutional theory of legislative organization, thus, reveals that we can move the potential House conferee far to the left and still end up with a situation where the relatively centrist House faction gets greater policy utility by having extremists represent them in conference.[9]

Second, a simple thought experiment conducted on this figure reinforces this paper's central conclusion – a change in the Senate or the President can change the balance of power in the House. If, for example, we shift the Senate's ideal point to either faction z's position or to a far-left point in the initial shaded range, the boundaries of the figure's shaded and unshaded ranges will move as well. At the extreme, if the Senate moves to faction z's ideal point, there is no such range. When such a move effects whether a particular faction gets greater policy utility from having one of its own members serve as conferee or is better off having another faction represent the chamber, it affects the offers that it is willing to make or accept – which can change the balance of power in the House.

In sum, House members whose ideal points are different than those of Senate conferees have an incentive to account for the preferences of the President and the Senate when choosing its leadership. Sometimes they can benefit by empowering members who can credibly counter Senate preferences.[10] And to the extent that there is a relationship

---

[9] This result parallels Kedar's (2005) party balancing claim. Kedar examines the behaviors of spatially-oriented voters in parliamentary elections. Of interest is the case where a voter expects a party A to be in government and is contemplating whether to vote for a party B or a party C. Suppose party B's ideal point is closer to that of the voter. Kedar reasons that the voter will have an incentive to vote for party C instead if she believes that post-election coalition bargaining will yield an A-C coalition that produces policies closer to her ideal point than would an A-B coalition. Empirically, she finds evidence of such voting in several countries.

[10] A caveat to this result is that the Senate in our model cannot adapt to the House's choice of conferee. If it could, following the logic of Diermeier and Myerson (1999), we expect that the Senate would respond in kind. The Senate has an incentive to match the House's extremists with their own extremists (whose ideal points approached an opposite pole). Where this "race to extremes" would stop would be determined by the minimum of the maximum distance one of the chambers could go. If prevailing in conference depends on the nature of credible commitments that House and Senate conferees can make and if a faction can influence conferee selection, then it has an incentive to do so in ways that strengthen its bargaining position. One way to do this is to send conferees that will not compromise on an issue of common interest. If members who have taken extreme public positions on this issue (e.g., abortion) can more credibly

between conferee status, and having served on a bill's originating committee, as Shepsle and Weingast (1987) claim, our result provides a different rationale for outliers on House committees. Moderates and extremists on the same side of an issue may agree that both are better off if extremists negotiate on their behalf – if, as in the numerical example, the consequence is pulling the bill closer to both of their ideal points. Indeed, our model implies that when House members negotiate amongst themselves, they may gain by providing extreme factions with positions on powerful House committees, especially if such positions make the members more likely to serve as conferees.[11]

Conclusion

One way to think about our research is that it answers the question, "If a tree falls on the President of the United States, can the Speaker of the House get hurt?" While established theories of legislative power in the House are based on the premise that the President does not affect the distribution of power within the House, our work suggests otherwise. In it, a change in the ideological perspective of the President can alter the kinds of laws that foresighted legislatures can expect to pass. Such alterations, in turn, can change the bargains that House factions are willing to strike with one another when distributing power within the chamber. In this sense, the President's health and legislative organization need not be independent. Similar dynamics apply to changes in the Senate.

---

threaten to shut down negotiations when asked to make certain compromises, then moderate members can benefit by making them conferees.

[11] Krehbiel (1991) derives a role for outliers from am emphasis on when House members will acquire technical expertise. Technical expertise is a public good when legislatures can make better decisions as a result of expert knowledge. Which House members are most likely to invest the time and effort required to gain such expertise? For Krehbiel, the answer is House members whose preferences over a certain issue are relatively extreme when the House is willing to make procedural concessions in return for expertise. The concession is the ability to play a pivotal role on the relevant originating committee in the House committee and the ability to have this committee's proposals considered by the entire House under a closed rule. Such concessions allow extremists to derive a policy benefit from their investments. The House's willingness to make this deal depends on the extremity of the member's preferences and the cost to the chamber of basing decisions on bad information. If the cost of failure is high and the member's preferences are not too extreme, then the House benefits by empowering extremists and making the procedural concessions.

Our paper shows that thinking about Congress in this manner yields substantive conclusions that clarify the distribution of power in the House. Sin (2005) has also used this theoretical framework to conduct empirical work. Studying major rule changes in House procedures over several decades, she compares situations in which there is no change in which party controls the House or Senate and no change in the President to situations in which either the Senate or President change. Her null hypothesis follows from previous theories of legislative organization and is the same as the one in this paper: changes in the Senate and President should not affect how the House distributes power amongst its members. She finds, however, a significant and substantial difference – the proportion of Houses that embark on significant rule changes is far higher immediately following a change in the Senate or the President than they are when no such change occurs. Using a range of statistical tests, Sin shows that the result is not easily explained by existing theories of legislative organization, but is exactly as a constitutional theory of leadership bargaining implies.

Indeed, the Constitution requires that multiple chambers, and in some cases the executive, agree on legislative changes. Combining this fact with the inferential power of positive political theory reveals the constitutional requirement's strategic and substantive implications for legislative organization. It shows that long before a Congress's first bill reaches the president's desk, House members who desire power, perks, or who care about their legislative legacy have incentives to integrate the dynamics of the constitutional endgame into their plans for distributing leadership positions and procedural powers.

Appendix [Incomplete]

Proposition 1. If the game reaches the Constitutional stage

L=j $\Leftrightarrow$

- ***[|s-q|-|s-j|>0 and |p-q|-|p-j|>0 and s≠p] OR***
- ***[s=p and |s-q|-|s-j|>0 and (|w-q|-|w-j|>0 or|z-q|-|z-j|>0)] OR***
- ***[|p-q|-|p-j|≤0 and %P≤1/3 and |s-q|-|s-j|–v>0 and |z-q|-|z-j|> 0]***

L=q $\Leftrightarrow$

- ***|s-q|-|s-j|≤0 OR***
- ***[s=p and |s-q|-|s-j|>0 and |w-q|-|w-j|≤0 and|z-q|-|z-j|≤0] OR***
  [|s-q|-|s-j|>0 and |p-q|- |p-j|≤0 **and (*%P>1/3*** **or** ***|s-q|-|s-j|–v≤ 0 or |z-q|-|z-j|) ≤ 0.)]***

Proof of Proposition 1. By backward induction.

The House and Senate Decide Whether or Not to Override a Presidential Veto

Lemma 1. The outcome of the override subgame is:

L=j **$\Leftrightarrow$ *s≠p*** **and *%P≤1/3*** **and *min(|s-q|-|s-j|–v, |z-q|-|z-j|) > 0.***

L=q **$\Leftrightarrow$ *s=p*** **or *%P>1/3*** **or *max(|s-q|-|s-j|–v, |z-q|-|z-j|) ≤ 0.***

Supermajorities in the House and Senate must agree to override a veto. For the House, the support of 2/3 of the membership is required. For the Senate, we represent the requirement as that the joint bill being at least distance v closer to the Senate's ideal point than the status quo.

Getting to the override stage of the game implies that the President vetoed the joint bill ($|p-q|-|p-j| < 0$, where $p\in\{F1,F2,F3\}$ is the president's ideal point. This fact has an implication for the feasibility of an override in our model. Let *%P* denote the percentage of House members who are from the same faction as the President. Since we are studying the case where no group has a majority of House seats, $\%P\in [0, .5]$. Since the President preferred q to the joint bill, this faction has the same preference by definition. Therefore, if $\%P>1/3$, the House will not override the veto and the legislative outcome is $L=q$.

Now suppose $s=p$ - - the Senate and the President are from the same faction. Since getting to the override stage implies that the President preferred q to j, the Senate has the same preference. Therefore, the Senate will not override the veto and the legislative outcome is $L=q$. If $s\neq p$ and $U_s(j) - v > U_s(q)$ *(i.e.,* $|s-q|-|s-j|- v>0$*)*, then the Senate votes to override the veto.

For the House, the case $s\neq p$ and $\%P\leq 1/3$ and $|s-q|- |s-j| - v >0$ remains. Let *%S* denote the percentage of House members who are from the same faction as the Senate, where $\%S\in[0, .5]$. Since the Senate conferee has the same ideal point as the Senate itself and since the emergence of a joint bill that the Senate previously approved is a necessary condition for this stage in the game to be played in equilibrium, it must be the case that $|s-q|- |s-j| >0$. Therefore *%S* of the House prefers j to q. Since $\%P\leq 1/3$ of House members will not support an override and $\%S \leq .5$ will support it, the remaining ideological group becomes pivotal with respect to an override. Let $Z\neq s\neq p\in\{F1, F2, F3\}$ denote the faction of House members who are from a different ideological group than either the Senate or the president ($\%P+\%S+\%Z=1$). In the case described, if this pivotal group prefers j to q (i.e., $|z-q|- |z-j| >0$), then the veto is overridden.

The President's Decision on the Joint bill

Lemma 2. The outcome of the presidential subgame is:

L=j **$\Leftrightarrow$ *|p-q|-|p-j|>0*** **OR [*|p-q|-|p-j|≤0*** **and *%P≤1/3*** **and *|s-q|-|s-j|–v>0 and |z-q|-|z-j|> 0*]**

L=q **$\Leftrightarrow$ *|p-q|- |p-j|≤0*** **and (*%P>1/3*** **or *|s-q|-|s-j|–v≤ 0 or |z-q|-|z-j|) ≤ 0.)***

To characterize the President's decision, we need a way of describing what the President will do when the House and Senate will override a veto. In such cases, the President's choice does not change the game's legislative outcome, $L=j$. For this purpose, let $\pi_p\in\{-\infty,\infty\}$ represent the President's public stance in conditions where he anticipates an override. $\pi_p>0$ represents cases where, all else constant, the President wants to be seen signing the joint bill. $\pi_i<0$ represents cases where, all else constant, he prefers to be seen opposing the joint bill. This term does not affect our results, but does allow behavioral predictions when the President's choice does not affect the final outcome.

If the president anticipates an override, then the relevant utilities are $U_p(q,\pi_p) = -|p\text{-}j|$ and $U_p(j,\pi_p) = -|p\text{-}j|+\pi_p$. If $\pi_p > 0$, then the president chooses j. If $\pi_p \leq 0$, then the president chooses q. Otherwise, then the relevant utilities are $U_p(q) = -|p\text{-}q|$ and $U_p(j) = -|p\text{-}j|$. If $|p\text{-}q|\text{-}|p\text{-}j| > 0$, then the president chooses j. If $|p\text{-}q|\text{-}|p\text{-}j| \leq 0$, then he or she chooses q. By implication,

- If $s{\neq}p$ and $\%P{\leq}1/3$ and $min(|s\text{-}q|\text{-}|s\text{-}j|{-}v,\ |z\text{-}q|\text{-}|z\text{-}j|) > 0$ and $\pi_p > 0$, then the president approves j under threat of override and the game ends with $L{=}j$.
- If $s{\neq}p$ and $\%P{\leq}1/3$ and $min(|s\text{-}q|\text{-}|s\text{-}j|{-}v,\ |z\text{-}q|\text{-}|z\text{-}j|) > 0$ and $\pi_p \leq 0$, then the president vetoes j under threat of override and the game goes to the override stage.
- If [$s{=}p$ or $\%P{>}1/3$ or $max(|s\text{-}q|\text{-}|s\text{-}j|{-}v,\ |z\text{-}q|\text{-}|z\text{-}j|) \leq 0$] and $|p\text{-}q|\text{-}|p\text{-}j| > 0$, then the president approves j with no override threat and the game ends with $L{=}j$.
- If [[$s{=}p$ or $\%P{>}1/3$ or $max(|s\text{-}q|\text{-}|s\text{-}j|{-}v,\ |z\text{-}q|\text{-}|z\text{-}j|) \leq 0$] and $|p\text{-}q|\text{-}|p\text{-}j| \leq 0$], then the president vetoes j and the game continues with no credible override threat.

The Senate's Decision on the Joint bill

Lemma 3. The outcome of the Senate subgame is:

$L{=}j \Leftrightarrow$ [$|s\text{-}q|\text{-}|s\text{-}j|{>}0$ and $|p\text{-}q|\text{-}|p\text{-}j|{>}0$] OR [$|p\text{-}q|\text{-}|p\text{-}j|{\leq}0$ and $\%P{\leq}1/3$ and $|s\text{-}q|\text{-}|s\text{-}j|{-}v{>}0$ and $|z\text{-}q|\text{-}|z\text{-}j|{>}0$]

$L{=}q \Leftrightarrow |s\text{-}q|\text{-}|s\text{-}j|{\leq}0$ OR [$|s\text{-}q|\text{-}|s\text{-}j|{>}0$ and $|p\text{-}q|\text{-}|p\text{-}j|{\leq}0$ and ($\%P{>}1/3$ or $|s\text{-}q|\text{-}|s\text{-}j|{-}v{\leq}0$ or $|z\text{-}q|\text{-}|z\text{-}j|) \leq 0$.)]

Let $\pi_s \in \{-\infty,\infty\}$ represent the Senate's public stance in conditions where it anticipates that the President will veto the joint bill and the veto will stand. For the Senate, the relevant utilities are $U_s(q) = -|s\text{-}q|$, $U_s(j) = -|s\text{-}j|$ if $L{=}j$ is the outcome of the presidential subgame just described, and $U_s(j) = -|s\text{-}q|+\pi_S$ if $L{=}q$ is the outcome of the subgame.

If $L{=}q$ is the outcome of the presidential subgame and $\pi_S{>}0$, the Senate approves the joint bill. If $\pi_S{\leq}0$, the Senate kills the joint bill. If $L{=}j$ is the outcome of the presidential subgame, then if $|s\text{-}q|\text{-}|s\text{-}j|{>}0$, then the Senate approves the joint bill and if $|s\text{-}q|\text{-}|s\text{-}j|{\leq}0$, then the Senate kills the joint bill.

The House's Decision on the Joint bill

Let $\pi_i \in \{-\infty,\infty\}$ represent House member i's public stance in conditions where it anticipates a veto that will stand.. For House faction i, the relevant utilities are $U_i(q) = -|x\text{-}q|$, $U_i(j) = -|x\text{-}j|$ if $L{=}j$ is the outcome of the Senate subgame, and $U_i(j) = -|x\text{-}q|+\pi_H$ if $L{=}q$ is the outcome of the Senate subgame.

If $L{=}q$ is the outcome of the Senate subgame, or if $|x\text{-}q|\text{-}|x\text{-}j|{>}0$ for the other two House factions, then if $\pi_i{>}0$, then House faction i votes for the joint bill. If $\pi_i{\leq}0$, House faction i votes against the joint bill. If $L{=}j$ is the outcome of the Senate subgame, then if $|x\text{-}q|\text{-}|x\text{-}j|{>}0$, then House faction i approves the joint bill and if $|x\text{-}q|\text{-}|x\text{-}j|{\leq}0$, then House faction i votes against the joint bill.

Two of the three factions must approve the joint bill for the game to proceed to the Senate subgame. A necessary condition for $L{=}j$ in the "Senate's decision on the joint bill" described above is $|s\text{-}q|\text{-}|s\text{-}j|{>}0$. If this condition is satisfied, then the House faction whose members are from the same ideological group as the Senate also support the joint bill -- therefore, only one other group's support is needed. The condition [$s{\neq}p$ and $\%P{\leq}1/3$ and $min(|s\text{-}q|\text{-}|s\text{-}j|{-}v,\ |z\text{-}q|\text{-}|z\text{-}j|){>}0$] implies that a second group, z, also supports the bill.

In the case, $s{=}p$, let $W{\neq}s{=}p{\in}\{F1, F2, F3\}$ denote the set of House members who are from a different ideological group than the Senate and the President or group z just defined above, ($\%P{+}\%Z{+}\%W{=}1$). Group W is pivotal in the case [[$s{=}p$ and $|s\text{-}q|\text{-}|s\text{-}j|{>}0$ and $|z\text{-}q|\text{-}|z\text{-}j|{\leq}0$]. *QED*.

Reconciliation Stage Rule

For any set of ideal points, the algorithm described in the text yields the following equilibrium values of j:

$j(C_H,s) = mid(C_H,s) \Leftrightarrow$
[$|s\text{-}q|\text{-}|s\text{-}mid(C_H,s)|{>}0$ and $|p\text{-}q|\text{-}|p\text{-}mid(C_H,s)|{>}0$ and $s{\neq}p$] ***OR*** [$s{=}p$ and $|s\text{-}q|\text{-}|s\text{-}mid(C_H,s)|{>}0$ and ($|w\text{-}q|\text{-}|w\text{-}mid(C_H,s)|{>}0$ or $|z\text{-}q|\text{-}|z\text{-}mid(C_H,s)|{>}0$)] ***OR*** [$|p\text{-}q|\text{-}|p\text{-}mid(C_H,s)|{\leq}0$ and $\%P{\leq}1/3$ and $|s\text{-}q|\text{-}|s\text{-}mid(C_H,s)|{-}v{>}0$ and $|z\text{-}q|\text{-}|z\text{-}mid(C_H,s)|{>}0$]

$j(C_H,s) = sec(C_H,s) \Leftrightarrow$

$|s-q|-|s-mid(C_H,s)|\leq 0$ **OR** $[s=p$ and $|s-q|-|s-mid(C_H,s)|>0$ and $|w-q|-|w-mid(C_H,s)|\leq 0$ and $|z-q|-|z-mid(C_H,s)|\leq 0]$ **OR** $[|s-q|-|s-mid(C_H,s)|>0$ and $|p-q|-|p-mid(C_H,s)|\leq 0$ and ($\%P>1/3$ or $|s-q|-|s-mid(C_H,s)|-v\leq 0$ or $|z-q|-|z-mid(C_H,s)|)\leq 0.)]$

AND

$[|s-q|-|s-sec(C_H,s)|>0$ and $|p-q|-|p-sec(C_H,s)|>0$ and $s\neq p]$ ***OR*** $[s=p$ and $|s-q|-|s-sec(C_H,s)|>0$ and $(|w-q|-|w-sec(C_H,s)|>0$ or $|z-q|-|z-sec(C_H,s)|>0)]$ ***OR*** $[|p-q|-|p-sec(C_H,s)|\leq 0$ and $\%P\leq 1/3$ and $|s-q|-|s-sec(C_H,s)|-v>0$ and $|z-q|-|z-sec(C_H,s)|>0]$

$j(C_H,s)=q \Leftrightarrow$

$|s-q|-|s-sec(C_H,s)|\leq 0$ **OR** $[s=p$ and $|s-q|-|s-sec(C_H,s)|>0$ and $|w-q|-|w-sec(C_H,s)|\leq 0$ and $|z-q|-|z-sec(C_H,s)|\leq 0]$ **OR** $[|s-q|-|s-sec(C_H,s)|>0$ and $|p-q|-|p-sec(C_H,s)|\leq 0$ and ($\%P>1/3$ or $|s-q|-|s-sec(C_H,s)|-v\leq 0$ or $|z-q|-|z-sec(C_H,s)|)\leq 0.)]$

Leadership Stage

Again, we proceed by backward induction.

F3's reaction to F2's offer

At this decision node, the consequence of *F2* failing to make an acceptable offer is $L=q$. *F3* will accept offer c_2^3 if and only if $-c_2^3|F3-j(F2,s)| - (1-c_2^3)|F3-j(F3,s)| \geq -|F3-q|$. This means that if *F2* wants to coalesce with *F3*, it must offer

- $c_2^3\geq [|F3-j(F3,s)| - |F3-q|]/[(|F3-j(F3,s)|-|F3-j(F2,s)|)]$ if $|F3-j(F3,s)|>|F3-j(F2,s)|$
- $c_2^3\leq [|F3-j(F3,s)| - |F3-q|]/[(|F3-j(F3,s)|-|F3-j(F2,s)|)]$ if $|F3-j(F3,s)|<|F3-j(F2,s)|$
- *If* $|F3-j(F3,s)|=|F3-j(F2,s)|$, *F3* will accept any offer by the tie-breaking rule and the fact that $j(F3,s)$ is at least as close to *F3* as is *q* (by definition of the reconciliation algorithm).

Two lemmas simplify the specification of further steps in the backward induction process.

Lemma 4. If $|F3-j(F3,s)|\geq|F3-j(F2,s)|$, then *F3* will accept any offer from *F2*.

Proof. Since $j(F3,s)$ is at least as close to *F3* as is *q* (by definition of the reconciliation algorithm), $|F3-j(F3,s)|-|F3-q|\leq 0$, $|F3-j(F3,s)|-|F3-q|]/[(|F3-j(F3,s)|-|F3-j(F2,s)|$ is non-positive. Since, c_2^3 is restricted to $[0,1]$ the condition is satisfied for any value of c_2^3. *QED*.

Lemma 5. Two factions cannot strictly prefer one another's joint bills simultaneously.

Proof. Consider two factions $A,B \in\{F1,F2,F3\}$. Recall that $j(A,s)$ is the point in *CS* that is closest to the midpoint of the line connecting *A* and *s*, and that the same is true for *B*. Suppose that *A* or *B* shares its ideal point with the Senate. Then, by the joint bill definition, the midpoint of the line connecting its ideal point with that of the Senate is simply its own ideal point, the joint bill will be the point in CS that is closest to its own ideal point. If, however, the faction in question strongly prefers the other faction's joint bill to its own, then its joint bill cannot be the point in the *CS* that is closest to its ideal point. So, if factions *A* and *B* each strongly prefer the other's joint bill to its own, then neither can share the Senate's ideal point. The Senate must share the ideal point of the faction that is excluded from the coalition $(s\neq A\neq B)$. Therefore, if $j(A,s)$ is closer to *B* than is $j(B,s)$ and if $j(A,s)$ is the closest point in *CS* to the midpoint of *s* and *A*, then *A* must be further from *s* than *B*. If *A* is further from *s* than *B*, and $j(B,s)$ is closer to s then $j(A,s)$, then $j(B,s)$ cannot be closer to *A* than is $j(A,s)$. Therefore, *B* cannot prefer *A*'s joint bill when *A* strongly prefers *B*'s joint bill. *QED*.

F2's offer

F2's chooses a value of c_2^3 that maximizes its utility subject to three constraints. One constraint is $c_2^3\in[0,1]$. The second (acceptability) constraint is that *F3* will accept it. The parameters of this constraint are listed under "*F3*'s reaction to *F2*'s offer" and Lemma 4. The third constraint pertains to incentive compatibility. Since, *F2* can prefer *q* to $j(F3,s)$, there exist values of c_2^3 that, if accepted, will make *F2* worse off than if *F3* rejects. Therefore, *F2*'s incentive constraint is $U_2(c_2^3, F3\ accepts)= -c_2^3|F2-j(F2,s)| - (1-c_2^3)|F2-j(F3,s)|\geq U_2(c_2^3,F3\ rejects)= -|F2-q|$.

No acceptable offer assumption (NAO). We assume, without a loss of generality, that if no offer in $c_x^y \in [0,1]$ satisfies the acceptability constraint for any relevant *Fy*, then *Fx* offers $c_x^y=1$ if $|Fx - j(Fy,s)| \geq |Fx-j(Fx,s)|$ and offers $c_x^y=0$, otherwise.

Lemma 6. *F2*'s offer and *F3's* response are as follows:

- **If $min(|F3 - j(F3,s)|-|F3-j(F2,s)|, |F2 - j(F3,s)|-|F2-j(F2,s)|) \geq 0$, then $c_2^3=1$ and *F3* accepts.**
- **If $|F2 - j(F3,s)| \leq |F2-j(F2,s)$, then $c_2^3=0$ and *F3* accepts.**
- **If $|F2 - j(F3,s)|-|F2-j(F2,s)|>0>|F3-j(F3,s)|-|F3-j(F2,s)|$ and $min([|F3 - j(F3,s)|-|F3-q|]/[|F3 - j(F3,s)|-|F3-j(F2,s)|],1) \geq (|F2-q|-|F2-j(F3,s)|)/ (|F2-j(F2,s)|-|F2-j(F3,s)|)$, then $c_2^3= min([|F3 - j(F3,s)| -|F3-q|]/[|F3 - j(F3,s)|-|F3-j(F2,s)|],1)$ and *F3* accepts.**
- **If $|F2 - j(F3,s)|-|F2-j(F2,s)|>0>|F3-j(F3,s)|-|F3-j(F2,s)|$ and $min([|F3 - j(F3,s)|-|F3-q|]/[|F3 - j(F3,s)|-|F3-j(F2,s)|],1)<(|F2-q|-|F2-j(F3,s)|)/ (|F2-j(F2,s)|-|F2-j(F3,s)|)$, then $c_2^3= 1$ and *F3* rejects.**
  Proof. In the first bulleted case, *F3* prefers *F2's* joint bill to its own, so the acceptability constraint is not binding. Since $|F2 - j(F3,s)|>|F2-j(F2,s)|$, $max\ U_2(c_2^3)=1$. In the second bulleted case, *F2* prefers *F3*'s joint bill to its own. Since $|F2 - j(F3,s)|-|F2-j(F2,s)|<0$, $max\ U_2(c_2^3)=0$. If $|F3 - j(F3,s)|<|F3-j(F2,s)|$, *F3* accepts the offer because it shares *F2*'s preferences over potential joint bills. Since $|F2 - j(F3,s)| \leq |F2-j(F2,s)|$, Lemma 5 renders $|F3 - j(F3,s)|>|F3-j(F2,s)|$ impossible. In the third and fourth bulleted cases, each faction most prefers its own joint bill. Since $|F2-j(F3,s)|-|F2-j(F2,s)|>0$, $max\ U_2(c_2^3)=1$. However, *F3*'s acceptability constraint is binding. In the third case, $\exists\ c_2^3 \in [0,1]$ that satisfies the acceptability and incentive compatibility constraints, so *F2* offers the largest value of c_2^3 that *F3* will accept. In the fourth case, there exists no such offer, so $c_2^3=1$ by the NAO assumption. *QED.*

<u>*F2 and F3's response to F1's offer*</u>

There are four cases to consider. Note that with respect to acceptability constraints, the cases $c_2^3=0$ and $c_2^3=1$ are mirror images of one another.

- If $|F2 - j(F3,s)|-|F2-j(F2,s)|>0>|F3 - j(F3,s)|-|F3-j(F2,s)|$, and $min([|F3 - j(F3,s)|-|F3-q|]/[|F3 - j(F3,s)|-|F3-j(F2,s)|],1) \geq (|F2-q|-|F2-j(F3,s)|)/ (|F2-j(F2,s)|-|F2-j(F3,s)|)$ then the policy consequence of rejecting *F1*'s offer stems from $c_2^3=min([|F3 - j(F3,s)| -|F3-q|]/[|F3 - j(F3,s)|-|F3-j(F2,s)|], 1)$.
  - *F2* acceptability constraint:
    - If $|F2 - j(F2,s)| \geq |F2-j(F1,s)|$, accept any offer.
    - If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ then *F1* must offer $c_1^2 \leq [(1-c_2^3)(|F2-j(F2,s)| - |F2 - j(F3,s)|)] / (|F2 - j(F2,s)|-|F2-j(F1,s)|)$.
  - *F3* acceptability constraint:
    - If $|F3 - j(F3,s)| \geq |F3-j(F1,s)|$, accept any offer.
    - If $|F3 - j(F3,s)|<|F3-j(F1,s)|$, then F1 must offer $c_1^3 \leq c_2^3(|F3-j(F3,s)|-|F3-j(F2,s)|)/(|F3 - j(F3,s)|-|F3-j(F1,s)|)$.

- If $|F2 - j(F3,s)|-|F2-j(F2,s)|>0>|F3 - j(F3,s)|-|F3-j(F2,s)|$, and $min([|F3 - j(F3,s)|-|F3-q|]/[|F3 - j(F3,s)|-|F3-j(F2,s)|],1)<(|F2-q|-|F2-j(F3,s)|)/ (|F2-j(F2,s)|-|F2-j(F3,s)|)$ then the policy consequence of rejecting *F1*'s offer is $L=q$ *(i.e., $c_2^3=1$ and F3 rejects).*
  - *F2* acceptability constraint:
    - If $|F2 - j(F2,s)| \geq |F2-j(F1,s)|$, accept any offer.
    - If $|F2 - j(F2,s)|< |F2-j(F1,s)|$, then F1 must offer $c_1^2 \leq [|F2 - j(F2,s)|-|F2-q|]/[|F2 - j(F2,s)|-|F2-j(F1,s)|]$
  - *F3* acceptability constraint:
    - If $|F3 - j(F3,s)| \geq |F3-j(F1,s)|$, accept any offer.
    - If $|F3 - j(F3,s)|<|F3-j(F1,s)|$, then F1 must offer $c_1^3 \leq [|F3 - j(F3,s)|-|F3-q|]/[|F3 - j(F3,s)|-|F3-j(F1,s)|]$

- If $min(|F3 - j(F3,s)|-|F3-j(F2,s)|, |F2 - j(F3,s)|-|F2-j(F2,s)|) \geq 0$, then the policy consequence of rejecting *F1*'s offer is $L=j(F2,s)$ *(i.e., $c_2^3=1$ and F3 accepts).*
  - *F2* acceptability constraint:

- If $|F2 - j(F2,s)| \geq |F2-j(F1,s)|$, accept any offer.
- If $|F2 - j(F2,s)| < |F2-j(F1,s)|$, reject any offer $c_1^2 > 0$.

▪ *F3* acceptability constraint:
  - If $|F3 - j(F3,s)| > |F3-j(F1,s)|$, then *F1* must offer $c_1^3 \geq (|F3 - j(F3,s)| - |F3-j(F2,s)|) / (|F3 - j(F3,s)| - |F3-j(F1,s)|)$
  - If $|F3-j(F1,s)| \geq |F3 - j(F3,s)| \geq |F3-j(F2,s)|$, then reject any offer.
  - If $|F3 - j(F3,s)| = |F3-j(F1,s)| = |F3-j(F2,s)|$, then accept any offer.

- If $|F2 - j(F3,s)| \leq |F2-j(F2,s)|$, then the policy consequence of rejecting *F1*'s offer is $L=j(F3,s)$ *(i.e.,* $c_2^3=0$ *and F3 accepts).*
  - *F2* acceptability constraint:
    - If $|F2 - j(F2,s)| > |F2-j(F1,s)|$, then *F1* must offer $c_1^2 \geq (|F2 - j(F2,s)| - |F2-j(F3,s)|) / (|F2 - j(F2,s)| - |F2-j(F1,s)|)$
    - If $|F2 - j(F1,s)| \geq |F2-j(F2,s)| > |F2-j(F3,s)|$, then reject any offer.
    - If $|F2 - j(F2,s)| = |F2-j(F1,s)| = |F2-j(F3,s)|$, then accept any offer.
  - *F3* acceptability constraint:
    - If $|F3 - j(F3,s)| \geq |F3-j(F1,s)|$, accept any offer.
    - If $|F3 - j(F3,s)| < |F3-j(F1,s)|$, reject any offer $c_1^3 > 0$.

<u>*F1's offer*</u>

F1's chooses to make an offer that maximizes its utility subject to three constraints. One constraint is $\{c_1^2, c_1^3\} \in [0,1]$. The second (acceptability) constraint is that *F2* or *F3* will accept it. A third constraint is incentive compatibility. This constraint is $min\ (U_1(c_1^2, F2\ accepts),\ U_1(c_1^3, F3\ accepts)) \geq U_1(offer\ rejected)$, where $U_1(c_1^2, F2\ accepts) = -c_1^2|F1-j(F1,s)| - (1- c_1^2)|F1 - j(F2,s)|$, $U_1(c_1^3, F3\ accepts) = -c_1^3|F1-j(F1,s)| - (1- c_1^3)|F1 - j(F3,s)|$ and then $U_1(offer\ rejected)$ depends on the consequence of *F2*'s offer to *F3*. Below, we determine *F1*'s offer with respect to the four mutually exclusive and collectively exhaustive consequences listed in Lemma 6.

<u>Case 1. If $|F2 - j(F3,s)| - |F2-j(F2,s)| > 0 > |F3-j(F3,s)| - |F3-j(F2,s)|$ and $min([|F3 - j(F3,s)| - |F3-q|]/[|F3 - j(F3,s)| - |F3-j(F2,s)|], 1) \geq (|F2-q| - |F2-j(F3,s)|) / (|F2-j(F2,s)| - |F2-j(F3,s)|)$, then the consequence of a failed offer from F1 is: $c_2^3 = min([|F3 - j(F3,s)| - |F3-q|]/[|F3 - j(F3,s)| - |F3-j(F2,s)|], 1)$ and *F3* accepts.</u>

This case has four collectively exhaustive subcases, A-D.

A. If $|F2 - j(F2,s)| \geq |F2-j(F1,s)|$ and $|F3 - j(F3,s)| \geq |F3-j(F1,s)|$, *F2* and *F3* will accept any offer.
   - If $|F2 - j(F2,s)| \geq |F2-j(F1,s)|$ and $|F3 - j(F3,s)| \geq |F3-j(F1,s)|$ and $|F1-j(F1,s)| \leq min(|F1-j(F2,s)|, |F1-j(F3,s)|)$, then $c_1^2=1$ and *F2 accepts.*
   - If $|F2 - j(F2,s)| > |F2-j(F1,s)|$, Lemma 5 renders $|F1-j(F2,s)| < |F1-j(F1,s)|$ impossible.
   - If $|F2 - j(F2,s)| = |F2-j(F1,s)|$ and $|F3 - j(F3,s)| \geq |F3-j(F1,s)|$ and $|F1-j(F2,s)| < |F1-j(F1,s)|$ and $|F1-j(F2,s)| \leq |F1-j(F3,s)|$, then $c_1^2=0$ and *F2 accepts.*
   - If $|F3 - j(F3,s)| > |F3-j(F1,s)|$, Lemma 5 renders $|F1-j(F3,s)| < |F1-j(F1,s)|$ impossible.
   - If $|F2 - j(F2,s)| \geq |F2-j(F1,s)|$ and $|F3 - j(F3,s)| = |F3-j(F1,s)|$ and $|F1-j(F3,s)| < min(|F1-j(F1,s)|, |F1-j(F2,s)|)$, then $c_1^3=0$ and *F3 accepts.*

B. If $|F2 - j(F2,s)| \geq |F2-j(F1,s)|$ and $|F3 - j(F3,s)| < |F3-j(F1,s)|$, *F2* will accept any offer.
   - If $|F2 - j(F2,s)| \geq |F2-j(F1,s)|$ and $|F3 - j(F3,s)| < |F3-j(F1,s)|$ and $|F1-j(F1,s)| \leq min(|F1-j(F2,s)|, |F1-j(F3,s)|)$, then $c_1^2=1$ and *F2 accepts.*
   - If $|F2 - j(F2,s)| > |F2-j(F1,s)|$, Lemma 5 renders $|F1-j(F2,s)| < |F1-j(F1,s)|$ impossible.
   - If $|F2 - j(F2,s)| = |F2-j(F1,s)|$ and $|F3 - j(F3,s)| < |F3-j(F1,s)|$ and $|F1-j(F2,s)| < |F1-j(F1,s)|$ and $|F1-j(F2,s)| \leq |F1-j(F3,s)|$, then $c_1^2=0$ and *F2 accepts.*
   - If $|F2 - j(F2,s)| \geq |F2-j(F1,s)|$ and $|F3 - j(F3,s)| < |F3-j(F1,s)|$ and $|F1-j(F3,s)| < min(|F1-j(F1,s)|, |F1-j(F2,s)|)$, then $c_1^3=0$ and *F3 accepts.*

C. If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|\geq|F3-j(F1,s)|$, $F3$ will accept any offer.

- If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|\geq|F3-j(F1,s)|$ and $|F1-j(F1,s)| \leq min(|F1-j(F2,s)|, |F1-j(F3,s)|)$, then $c_1^3=1$ and $F3$ *accepts.*
- If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|\geq|F3-j(F1,s)|$ and $|F1-j(F2,s)| < min(|F1-j(F1,s)|, |F1-j(F3,s)|)$, then $c_1^2=0$ and $F2$ *accepts.*
- If $|F3 - j(F3,s)|>|F3-j(F1,s)|$, Lemma 5 renders $|F1-j(F3,s)|<|F1-j(F1,s)|$, $|F1-j(F2,s)|$ impossible.
- If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|=|F3-j(F1,s)|$ and $|F1-j(F3,s)| < min(|F1-j(F1,s)|, |F1-j(F2,s)|)$, then $c_1^3=0$ and $F3$ *accepts*.

For notational simplicity, let $c^*{}_2^3= min([|F3 - j(F3,s)| -|F3-q|]/[|F3 - j(F3,s)|-|F3-j(F2,s)|],1)$, $M_1^2(c^*{}_2^3)=min((1- c^*{}_2^3)((|F2-j(F3,s)|-|F2-j(F2,s)|)/(|F2-j(F1,s)|-|F2-j(F2,s)|)),1\}$ and $M_1^3(c^*{}_2^3)= min(c^*{}_2^3((|F3-j(F2,s)|-|F3-j(F3,s)|)/(|F3-j(F1,s)|-|F3-j(F3,s)|)),1\}$. The last two terms are the minimal acceptable offer for the case where all three factions most prefer their own faction's joint bills.

D. If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|<|F3-j(F1,s)|$, $F2$ and $F3$ require minimum power shares to enter agreements.

- If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|<|F3-j(F1,s)|$ and $|F1-j(F1,s)| < min(|F1-j(F2,s)|, |F1-j(F3,s)|)$, and
  - $M_1^2(c^*{}_2^3)|F1-j(F1,s)|+(1- M_1^2(c^*{}_2^3))|F1-j(F2,s)|\leq min(c^*{}_2^3|F1-j(F2,s)|+(1- c^*{}_2^3)|F1-j(F3,s)|, M_1^3(c^*{}_2^3)|F1-j(F1,s)|+(1- M_1^3(M_2^3))|F1-j(F3,s)|)$, then $c_1^2= M_1^2(c^*{}_2^3)$ and $F2$ *accepts.*
  - $M_1^3(c^*{}_2^3)|F1-j(F1,s)|+(1- M_1^3(c^*{}_2^3))|F1-j(F3,s)|< M_1^2(c^*{}_2^3)|F1-j(F1,s)|+(1- M_1^2(c^*{}_2^3))|F1-j(F2,s)|$ and $M_1^3(c^*{}_2^3)|F1-j(F1,s)|+(1- M_1^3(c^*{}_2^3))|F1-j(F3,s)|\leq c^*{}_2^3|F1-j(F2,s)|+(1- c^*{}_2^3)|F1-j(F3,s)|$, then $c_1^3= M_1^3(c^*{}_2^3)$ and $F3$ *accepts.*
  - $c^*{}_2^3|F1-j(F2,s)|+(1- c^*{}_2^3)|F1-j(F3,s)|<min([M_1^2(c^*{}_2^3)|F1-j(F1,s)|]+[(1- M_1^2(c^*{}_2^3))|F1-j(F2,s)|], [M_1^3(c^*{}_2^3)|F1-j(F1,s)|]+[(1- M_1^3(c^*{}_2^3))|F1-j(F3,s)|])$, then $c_1^2=0$ and $F2$ *rejects.*
- If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|<|F3-j(F1,s)|$ and $|F1-j(F2,s)|<|F1-j(F1,s)|$ and $|F1-j(F2,s)|\leq|F1-j(F3,s)|$, then $c_1^2=0$ and $F2$ *accepts.*
- If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|<|F3-j(F1,s)|$ and $|F1-j(F3,s)|<min(|F1-j(F1,s)|, |F1-j(F2,s)|)$, then $c_1^3=0$ and $F3$ *accepts.*

Case 2: If $|F2 - j(F3,s)|-|F2-j(F2,s)|>0>|F3-j(F3,s)|-|F3-j(F2,s)|$ and $min([|F3 - j(F3,s)|-|F3-q|]/[|F3 - j(F3,s)|-|F3-j(F2,s)|],1)<(|F2-q|-|F2-j(F3,s)|)/ (|F2-j(F2,s)|-|F2-j(F3,s)|)$, then the consequence of a failed offer from $F1$ is $L=q$ (i.e., $c_2^3= 1$and $F3$ rejects).

This case has the same four subcases as case 1. The first three subcases of case 2 are identical to subcases A, B, and C of case 1. For notational simplicity, let $M_1^2(q)=min((|F2-j(F2,s)|-|F2-q|)/(|F2-j(F2,s)|-|F2-j(F1,s)|), 1)$ and let $M_1^3(q)$ be defined analogously. These terms are the minimal acceptable offer for the case where all three factions most prefer their own faction's joint bills.

E. If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|<|F3-j(F1,s)|$, $F2$ and $F3$ require minimum power shares to enter agreements.

- If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|<|F3-j(F1,s)|$ and $|F1-j(F1,s)| < min(|F1-j(F2,s)|, |F1-j(F3,s)|)$, and
  - $M_1^2(q)|F1-j(F1,s)|+(1- M_1^2(q))|F1-j(F2,s)|\leq min(|F1-q|, M_1^3(q)|F1-j(F1,s)|+(1- M_1^3(q))|F1-j(F3,s)|)$, then $c_1^2= M_1^2(q)$ and $F2$ *accepts.*
  - $M_1^3(q)|F1-j(F1,s)|+(1- M_1^3(q))|F1-j(F3,s)|< M_1^2(q)|F1-j(F1,s)|+(1- M_1^2(q))|F1-j(F2,s)|$ and
  - $M_1^3(q)|F1-j(F1,s)|+(1- M_1^3(q))|F1-j(F3,s)|\leq |F1-q|$, then $c_1^3= M_1^3(q)$ and $F3$ *accepts.*
  - $|F1-q|<min([M_1^2(q)|F1-j(F1,s)|]+[(1- M_1^2(q))|F1-j(F2,s)|], [M_1^3(q)|F1-j(F1,s)|]+[(1- M_1^3(q))|F1-j(F3,s)|])$, then $c_1^2=0$ and $F2$ *rejects.*
- If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|<|F3-j(F1,s)|$ and $|F1-j(F2,s)|<|F1-j(F1,s)|$ and $|F1-j(F2,s)|\leq|F1-j(F3,s)|$, then $c_1^2=0$ and $F2$ *accepts.*
- If $|F2 - j(F2,s)|<|F2-j(F1,s)|$ and $|F3 - j(F3,s)|<|F3-j(F1,s)|$ and $|F1-j(F3,s)|<min(|F1-j(F1,s)|, |F1-j(F2,s)|)$, then $c_1^3=0$ and $F3$ *accepts.*

Case 3: If $min(|F3 - j(F3,s)|-|F3-j(F2,s)|, |F2 - j(F3,s)|-|F2-j(F2,s)|)\geq 0$, then $c_2^3=1$ and $F3$ accepts.

Since, $c_2^3=0$ and $c_2^3=1$ are mirror images with respect to acceptability constraints, we can characterize the dynamics of both using a single case.

A. If $|F2–j(F2,s)|\geq|F2\text{-}j(F1,s)|$ and $|F3–j(F3,s)|=|F3\text{-}j(F1,s)|=|F3\text{-}j(F2,s)|$, *F2* and *F3* will accept any offer.

- If $|F2–j(F2,s)|\geq|F2\text{-}j(F1,s)|$ and $|F3–j(F3,s)|=|F3\text{-}j(F1,s)|=|F3\text{-}j(F2,s)|$ and $|F1\text{-}j(F1,s)|\leq min(|F1\text{-}j(F2,s)|, |F1\text{-}j(F3,s)|)$, then $c_1^2=1$ and *F2 accepts*.
- If $|F2 – j(F2,s)|>|F2\text{-}j(F1,s)|$, Lemma 5 renders $|F1\text{-}j(F2,s)|<|F1\text{-}j(F1,s)|$ impossible.
- If $|F2–j(F2,s)|=|F2\text{-}j(F1,s)|$ and $|F3–j(F3,s)|=|F3\text{-}j(F1,s)|=|F3\text{-}j(F2,s)|$ and $|F1\text{-}j(F2,s)|< min(|F1\text{-}j(F1,s)|, |F1\text{-}j(F3,s)|)$, then $c_1^2=0$ and *F2 accepts*.
- If $|F2–j(F2,s)|\geq|F2\text{-}j(F1,s)|$ and $|F3–j(F3,s)|=|F3\text{-}j(F1,s)|=|F3\text{-}j(F2,s)|$ and $|F1\text{-}j(F3,s)|< min(|F1\text{-}j(F1,s)|, |F1\text{-}j(F2,s)|)$, then $c_1^3=0$ and *F3 accepts*.

B. If $|F2 – j(F2,s)|<|F2\text{-}j(F1,s)|$ and either $|F3 – j(F3,s)|<|F3\text{-}j(F1,s)|$ or $|F3 – j(F3,s)|=|F3\text{-}j(F1,s)|>|F3\text{-}j(F2,s)|$, all offers >0 will be rejected (since the consequence of rejection is *j(F2,s)*). Therefore, $c_1^2=0$, *F2 rejects* and *L=j(F2,s)*.

C. If $|F2 – j(F2,s)|\geq|F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|<|F3\text{-}j(F1,s)|$ or $|F3 – j(F3,s)|=|F3\text{-}j(F1,s)|>|F3\text{-}j(F2,s)|$, only *F2* will accept an offer.

- If $|F2 – j(F2,s)|\geq|F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|<|F3\text{-}j(F1,s)|$ or $|F3 – j(F3,s)|=|F3\text{-}j(F1,s)|>|F3\text{-}j(F2,s)|$ and $|F1\text{-}j(F1,s)| \leq |F1\text{-}j(F2,s)|$, then $c_1^2=1$ and *F2 accepts*.
- If $|F2 – j(F2,s)|=|F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|<|F3\text{-}j(F1,s)|$ or $|F3 – j(F3,s)|=|F3\text{-}j(F1,s)|>|F3\text{-}j(F2,s)|$ and $|F1\text{-}j(F2,s)| < |F1\text{-}j(F1,s)|$, then $c_1^2=0$ and *F2 accepts.*
- If $|F2 – j(F2,s)|>|F2\text{-}j(F1,s)|$, Lemma 5 renders $|F1\text{-}j(F2,s)|<|F1\text{-}j(F1,s)|$ impossible.

D. If $|F2 – j(F2,s)|<|F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|=|F3\text{-}j(F1,s)|=|F3\text{-}j(F2,s)|$, only *F3* will accept a non-zero offer. F1 coalesces with F3 unless it strictly prefers *F2*'s joint bill to any other.

- If $|F2 – j(F2,s)|<|F2\text{-}j(F1,s)|$ and $|F3– j(F3,s)|=|F3\text{-}j(F1,s)|=|F3\text{-}j(F2,s)|$ and $|F1\text{-}j(F1,s)|\leq min(|F1\text{-}j(F2,s)|, |F1\text{-}j(F3,s)|)$, then $c_1^3=1$ and *F3 accepts.*
- If $|F2 – j(F2,s)|<|F2\text{-}j(F1,s)|$ and $|F3– j(F3,s)|=|F3\text{-}j(F1,s)|=|F3\text{-}j(F2,s)|$ and $|F1\text{-}j(F2,s)|<|F1\text{-}j(F1,s)|$ and $|F1\text{-}j(F1,s)|\leq|F1\text{-}j(F3,s)|$, then $c_1^2=0$.
- If $|F2 – j(F2,s)|<|F2\text{-}j(F1,s)|$ and $|F3– j(F3,s)|=|F3\text{-}j(F1,s)|=|F3\text{-}j(F2,s)|$ and $|F1\text{-}j(F3,s)|< min(|F1\text{-}j(F1,s)|, |F1\text{-}j(F2,s)|)$, then $c_1^3=0$ and *F3 accepts.*

D. If $|F2 – j(F2,s)| \geq |F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|>|F3\text{-}j(F1,s)|$, then *F2* will accept any offer while F3 will only allow *F1* to give away a limited amount. Faction 1 coalesces with 2 unless it strictly prefers 3's joint bill to any other.

- If $|F2 – j(F2,s)| \geq |F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|>|F3\text{-}j(F1,s)|$ *and* $|F1\text{-}j(F1,s)| \leq min(|F1\text{-}j(F2,s)|, |F1\text{-}j(F3,s)|)$, then $c_1^2=1$ *and F2 accepts.*
- If $|F3 – j(F3,s)|>|F3\text{-}j(F1,s)|$, Lemma 5 renders $|F1\text{-}j(F3,s)|<|F1\text{-}j(F1,s)|$ impossible.
- If $|F2 – j(F2,s)|>|F2\text{-}j(F1,s)|$, Lemma 5 renders $|F1\text{-}j(F2,s)|<|F1\text{-}j(F1,s)|$ impossible.
- If $|F2 – j(F2,s)|=|F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|>|F3\text{-}j(F1,s)|$ and $|F1\text{-}j(F2,s)|<|F1\text{-}j(F1,s)|$ and $|F1\text{-}j(F1,s)|\leq|F1\text{-}j(F3,s)|$, then $c_1^2=0$ *and F2 accepts.*

F. If $|F2 – j(F2,s)| < |F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|>|F3\text{-}j(F1,s)|$, then 2 will reject any non-zero offer while 3 will only allow 1 to give away a limited amount.

- If $|F2 – j(F2,s)|<|F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|>|F3\text{-}j(F1,s)|$ and $|F1\text{-}j(F1,s)|\leq min(|F1\text{-}j(F2,s)|,|F1\text{-}j(F3,s)|)$, then $c_1^3=1$ *and F3 accepts.*
- If $|F2 – j(F2,s)|<|F2\text{-}j(F1,s)|$ and $|F3 – j(F3,s)|>|F3\text{-}j(F1,s)|$ and $|F1\text{-}j(F2,s)|<|F1\text{-}j(F1,s)|$ and $|F1\text{-}j(F2,s)|\leq |F1\text{-}j(F3,s)|$, then $c_1^2=0$ *and F2 accepts.*
- If $|F3 – j(F3,s)|>|F3\text{-}j(F1,s)|$, Lemma 5 renders $|F1\text{-}j(F1,s)|>|F1\text{-}j(F3,s)|$ impossible.

Proof of Proposition 2. The equilibrium described above is unique. For any set of parameter values, it yields a unique prediction of offers, responses, and the legislative outcome. If the ideal points of all players remain constant, there can be no change in the offers or the outcome. There exist changes in the ideal point of the president or the Senate that are sufficient to change the joint bill of at least one coalition (using the algorithm). Some changes are sufficient to change at least one House faction's preferences over the three potential joint bills that can emerge. There exist such preference changes that are sufficient to change the offer that Faction 1 or 2 will make in equilibrium. Therefore, there exist changes in the senate or president's ideal point that change the balance of power in the House.

References

Aldrich, John H., Jeffrey D. Grynaviski, and David W. Rohde. 1999. "Three Models of a Legislature with Two Parties." Manuscript prepared for the MIT Conference on Congress and Political Parties.

Aldrich, John H., and David W. Rohde. 2000. "The Consequences of Party Organization in the House: The Role of the Majority and Minority Parties in Conditional Party Government," in Polarized Politics: Congress and the President in a Partisan Era (CQ Press, 2000) ed. by Jon R. Bond and Richard Fleisher.

Bach, Stanley. 2001. *Resolving Legislative Differences in Congress: Conference Committees and Amendments between the Houses*. Report for the Congress by the Congressional Research Service. Washington DC: Library of Congress.

Bovitz, Gregory L., and Thomas H. Hammond. 2001. "The Logic of Congressional Organization: A Multi-Institutional Rationale." Presented at the Annual Meeting of the Midwest Political Science Association, Chicago.

Carson, Jamie and Ryan Vander Wielen. 2002. Legislative Politics in a Bicameral System: Strategic Conferee Appointments in the U.S. Congress. Annual Meeting of the Northeastern Political Science Association, Providence, Rhode Island.

Carey, Mary Agnes. 1999. "Hastert's Choice of Conferees Diminishes Prospects for Survival Of House's Managed Care Bill." *Congressional Quarterly Weekly Report*. November 6, page 2657.

Cox, Gary, and Mathew D. McCubbins. 1993. *Legislative Leviathan: Party Government in the House.* Berkeley and Los Angeles: University of California Press.

Diermeier, Daniel, and Roger Myerson. 1999. "Bicameralism and its Consequences for the Internal Organization of Legislatures." *American Economic Review* 89:1182-96

Fenno, Richard. 1966. *The Power of the Purse: Appropriation Politics in Congress*. Boston: Little Brown.

Ferejohn, John. 1975. Who Wins in Conference Committees? *The Journal of Politics*, 37: 1033-1046.

Kedar, Orit. 2005. "When Moderate Voters Prefer Extreme Parties: Party Balancing in Parliamentary Elections." *American Political Science Review* 99: 185-200.

Krehbiel, Keith. 1991. *Information and Legislative Organization*. Ann Arbor: University of Michigan Press.

Lazarus, Jeff and Nathan Monroe. 2003. "The Speaker's Discretion: Conference Committee Appointments from the 97th - 106th Congresses." Paper presented at the annual meeting of the American Political Science Association, August 28-31, 2003, Philadelphia, PA.

Longley, Lawrence, and Walter Oleszek. 1989. *Bicameral Politics. Conference Committees in Congress.* New Haven and London: Yale University Press.

Lupia, Arthur, and Kaare Strom. 1995. “Coalition Termination and the Strategic Timing of Parliamentary Dissolutions.” *American Political Science Review* 89: 648-665.

Manley, John. 1973. The Conservative coalition in Congress. *American Behavioral Scientist*. Nov/Dec, No 2: 223-247.

Marsh, Michael, and Paul Mitchell. 1999. "Office, Votes, and Then Policy: Hard Choices for Political Parties in the Republic of Ireland.” In Wolfgang Müller and Kaare Strøm (eds.) *Policy, Office, or Votes? How Political Parties in Western Europe Make Hard decisions.* Cambridge: Cambridge University Press.

Shepsle, Kenneth A. 1978. *The Giant Jigsaw Puzzle: Democratic Committee Assignments in the Modern House.* Chicago: University of Chicago Press.

Shepsle, Kenneth A., and Barry R. Weingast. 1987. "The Institutional Foundations of Committee Power," *American Political Science Review*, 81:85-104.

Sin, Gisela. 2005. “A Test of the Constitutional Theory of Legislative Organization.” Dissertation chapter, University of Michigan.

Steiner, Gilbert. 1951. *The Congressional Conference Committee*. Urbana: University of Illinois Press.

Strom, Gerald S., and Barry S. Rundquist. “A Revised Theory of Winning in House-Senate Conference.” *American Political Science Review*, 71: 448-453.

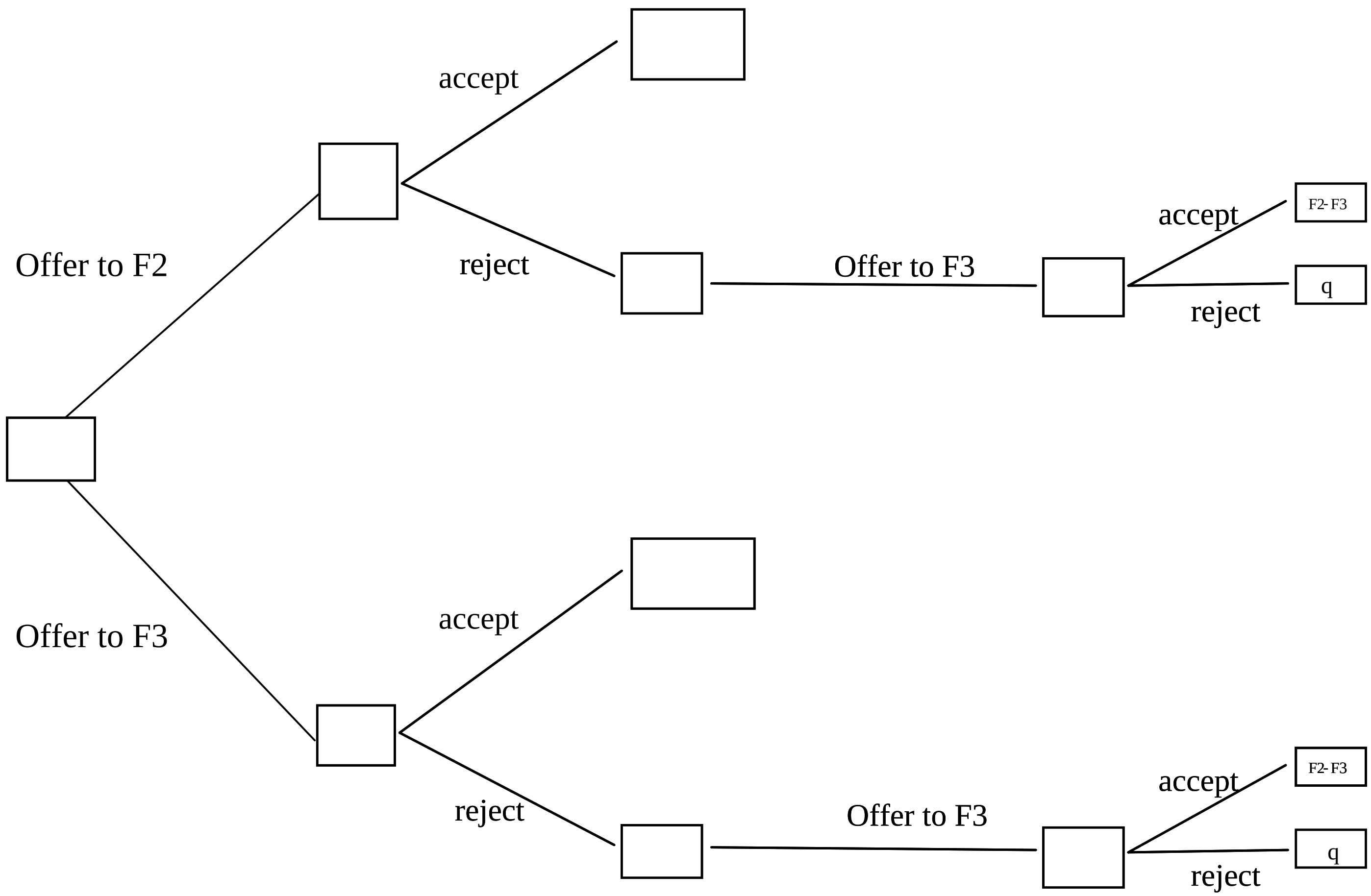
Tsebelis, George. 2002. *Veto Players: How Political Institutions Work*. Princeton, N.J.: Princeton University Press.

Tsebelis, George and Jeannette Money. 1997. *Bicameralism.* New York: Cambridge University Press.

Vogler, David. 1970. “Patterns of One House Dominance in Congressional Committees.” *Midwest Journal of Political Science* 14: 303-320.

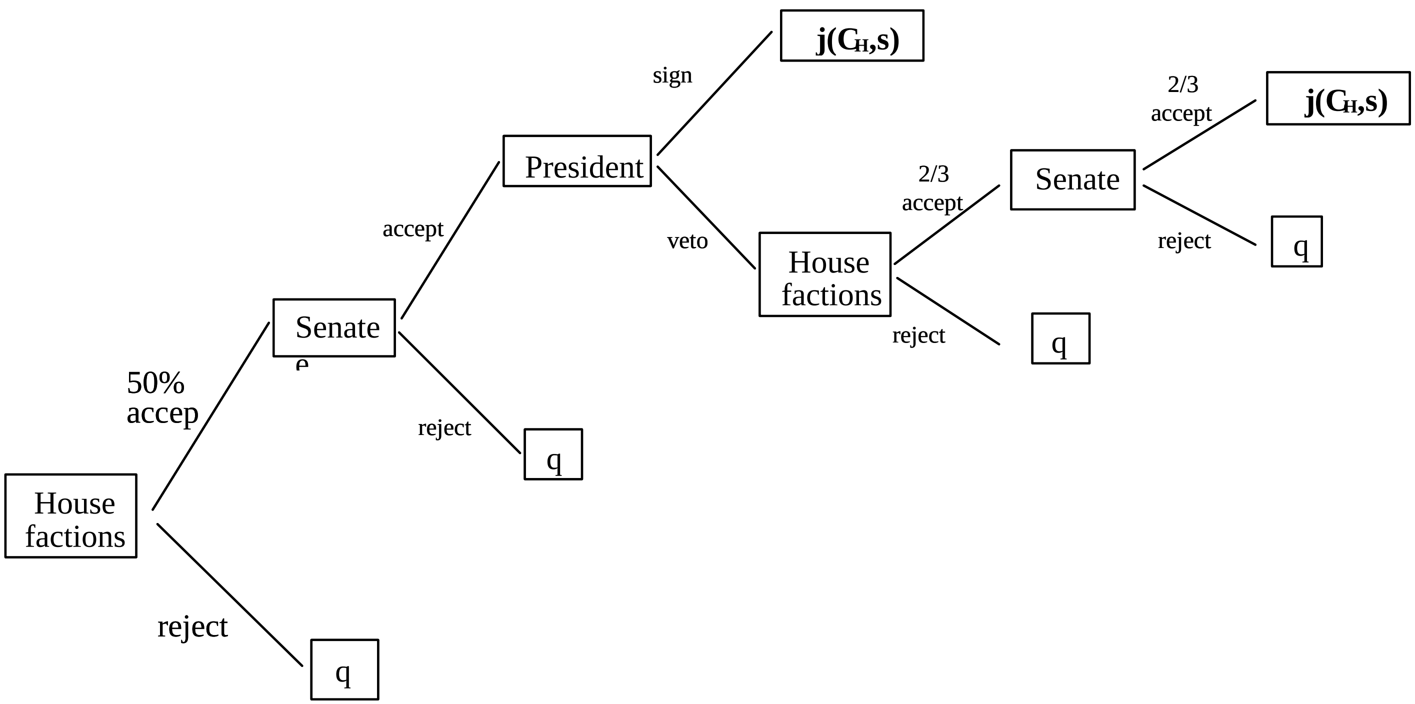
Williamson, Oliver E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications.* New York: The Free Press.

Figure 1



Offer to F2
accept
reject
Offer to F3
accept
F2- F3
q
reject
Offer to F3
accept
reject
Offer to F3
accept
F2- F3
q
reject

Figure 2



House factions
50% accep
reject
q
Senate
e
accept
reject
q
President
sign
j(CH,s)
veto
House factions
2/3 accept
reject
q
Senate
2/3 accept
j(CH,s)
reject
q

Figure 3

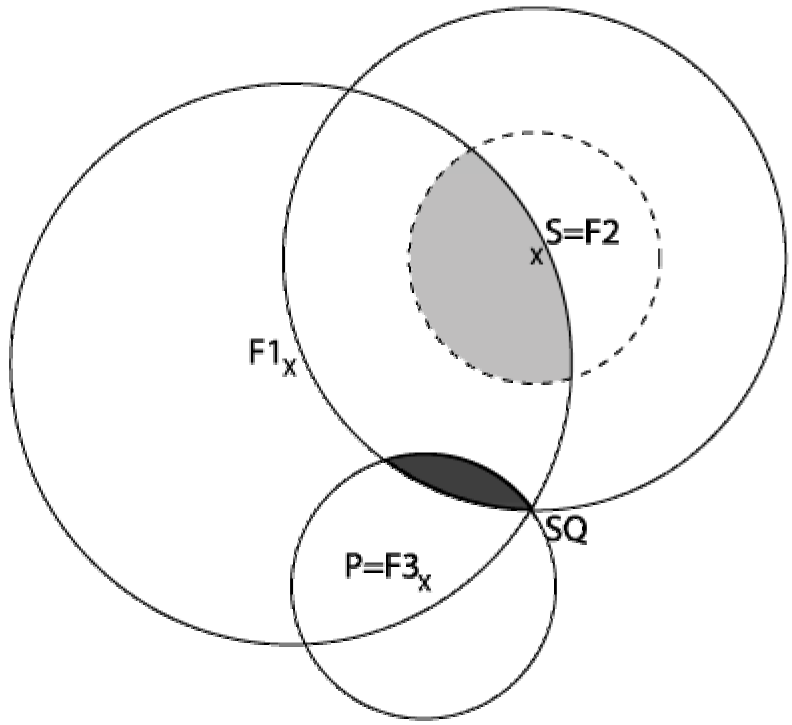
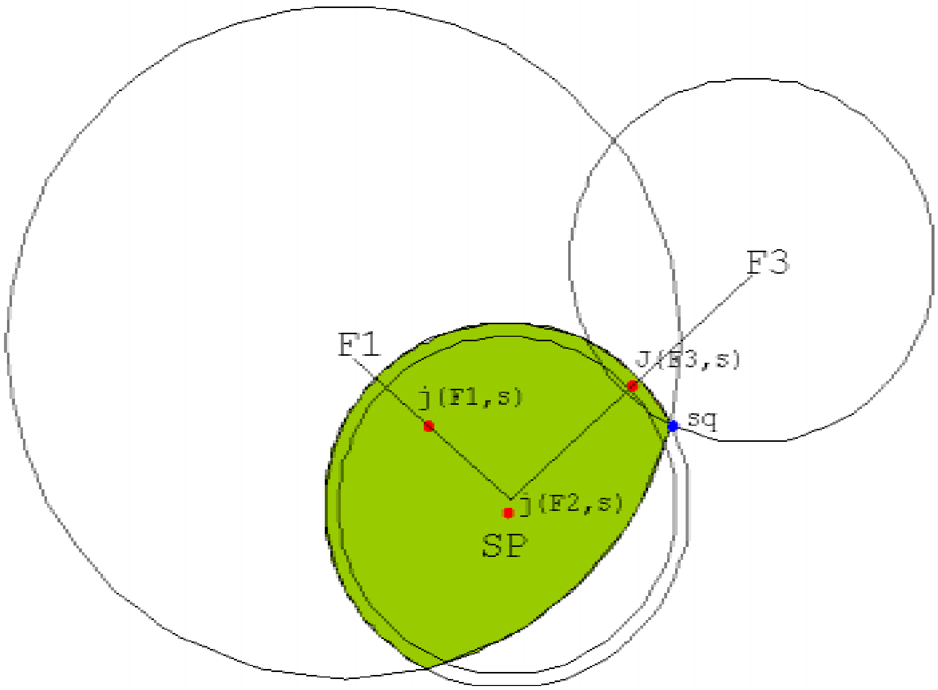


Figure 4

The Senate and President have the same ideal point as F2.



The President moves to faction F3's ideal point

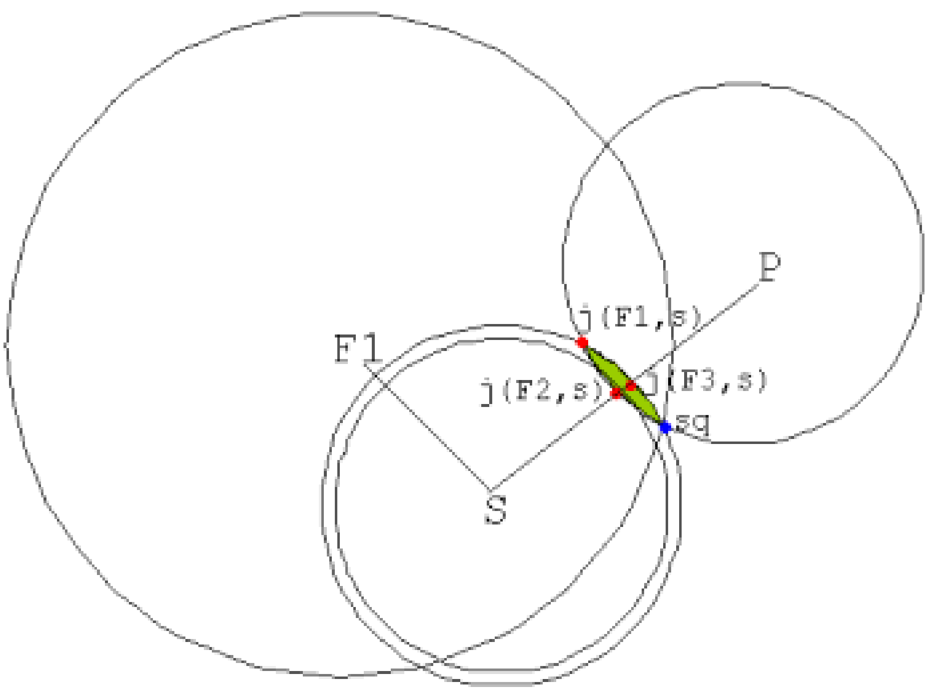
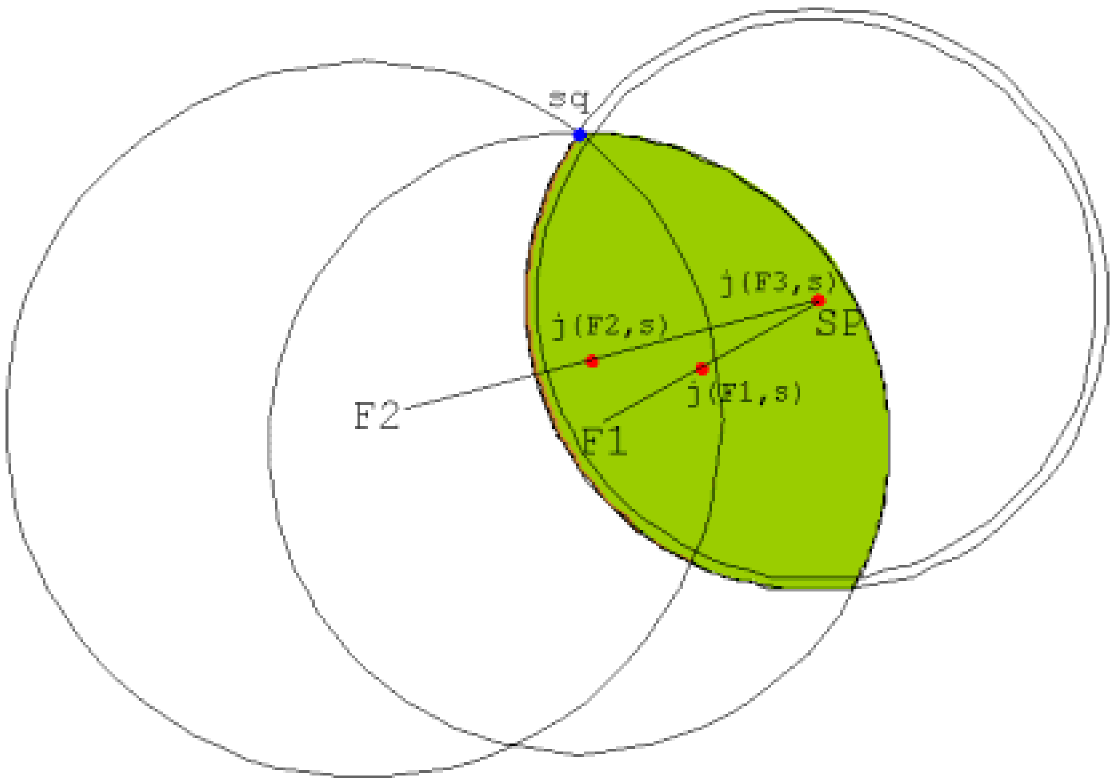


Figure 5



All else constant, faction F1 achieves greater policy utility by having a member of faction F2 serve as House conferee.

Figure 6