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The Reputation Politics of the Filibuster

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ABSTRACT

Filibusters and efforts to defeat them shape the public reputation of U.S. senators and their parties. I develop a formal model to study how senators' concerns about their own and the opposing party's reputation influence their behavior in the Senate. In the model, a majority and opposition party bargain over policy. Each party earns a reputation with a core primary constituency which observes legislative bargaining and forms beliefs about its party's policy priorities. Filibusters and attempts to defeat them are costly and can therefore credibly signal that a party values a particular issue. I identify conditions under which parties use these costly procedural moves to preserve or enhance their reputation when the costs of obstruction deter purely policy-motivated parties from filibustering or attempting to defeat a filibuster. Alternatively, under certain conditions parties strategically choose not to pursue policy victories that they otherwise would either to protect their own reputation with a constituency that values other issues more highly or to deny the opposing party the opportunity to signal. I examine the model's empirical implications for the relative frequency of filibusters, cloture votes, and tabling motions and identify conditions under which the Senate is endogenously supermajoritarian.

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It is commonly accepted that filibusters influence the public reputation of U.S. senators and their parties. As Fisk and Chemerinsky (1997, p. 194) observed, for members of both an obstructionist opposition and a determined majority willing to wait out obstruction, "filibusters can be a courageous way of taking a stand, which can be popular with constituents." Alternatively, obstruction may harm a senator or party's reputation with a constituency that prefers its representatives to spend valuable legislative time addressing other issues. Mayhew (2010, p. 1147), summarizing a position expressed in two prominent studies of the filibuster (Koger, 2010; Wawro and Schickler, 2006), notes that

> "obstruction, as well as efforts to contain it, could incur costs or benefits in the realm of public opinion. Position taking might earn points with the public, but ugly spectacles could lose points, and majority strategists [have] to consider whether crack-downs [will] play well."

While filibusters and efforts to defeat them can be viable policymaking tactics for a party that believes it can wait its opponent out, the ultimate fate of a bill in the Senate is often known in advance of a filibuster or cloture vote. Some of the longest individual filibusters in the history of the Senate such as Strom Thurmond's 24-hour filibuster of the Civil Rights Act of 1957 and Ted Cruz's 21-hour speech in opposition to the Continuing Appropriations Act of 2014 only delayed the inevitable passage of the bill under consideration. Similarly, it is not uncommon for majority-party senators to introduce bills they know will be filibustered and engage in hopeless efforts to overcome filibusters. For example, in the 114th Congress, Lindsey Graham (R-SC) introduced the Pain-Capable Unborn Child Protection Act, a bill that would in most cases make the performance of an abortion illegal after 20 weeks. Senate Democrats filibustered the bill. Despite lacking the support of 60 senators necessary to invoke cloture, the Republican majority held a cloture vote anyway. The cloture motion failed 54-42. *The Washington Post* reported that "the result was expected. Democrats pledged to filibuster the bill ... and Republicans could not garner the 60 votes necessary to block it."[1] Republicans reintroduced the bill in the 115th Congress where it met the same fate but with an even wider margin of defeat on cloture, 51-46. A similar episode occurred in the

[1]"Senate Democrats Block GOP Bill Banning Late Abortions" by Mike DeBonis, *The Washington Post*, September 22, 2015.

117th Congress surrounding the For the People Act of 2021, an election reform bill. Although the bill had the support of only 50 senators, Majority Leader Chuck Schumer (D-NY) introduced the bill and responded to a Republican filibuster by filing for cloture. All 50 Republican senators voted to continue debate.

In such cases where the ultimate fate of a bill is known to all ahead of time, senators' interest in the way they are perceived by key constituencies can intuitively explain why filibusters and ostensible efforts to defeat them occur. Such dilatory moves are costly. Holding the floor, maintaining a quorum, and conducting cloture votes consume scarce floor time and require senators to expend physical and mental effort. By engaging in costly procedural tactics, senators can send a message to a constituency that a policy is important to them.

This is widely understood among observers of American politics and senators themselves. After Ted Cruz's marathon filibuster against funding for the Affordable Care Act in 2013, an editorial in *The Guardian* commented that "Cruz proved a zeal that no articulation of an idea or voting record could demonstrate. He proved it with his feet and back and legs. He proved it with his spine. He proved it with his apparently steel-clad bladder."[2] An analysis of the legislative episode surrounding the For the People Act of 2021 in *Vox* similarly noted that

> "the message was likely the real point: Whatever they might say publicly Democratic leaders fully understood that this bill had no path to becoming law under the current Senate rules. By holding a vote on it anyway, they were trying to tell activists demanding action that Democrats are on their side, and trying to tell the party's base of voters that this issue is a priority."[3]

Senators and their parties eagerly amplify these messages about themselves and their political opponents. In response to yet another futile attempt by Republican senators to pass the Pain-Capable Unborn Child Act in the 116th Congress, Chuck Schumer took to the Senate floor to implore Majority Leader Mitch McConnell (R-KY) to "stop wasting the few votes he does schedule with these shameless political stunts." The *New York Times'* reporting on the For the People Act noted that Republicans "mounted an aggressive campaign in congressional committees, on television, and finally on the Senate floor

[2]"Ted Cruz's Faux-Filibuster Over Obamacare" by Tom McCarthy, *The Guardian*, September 25, 2013.

[3]"The Predetermined Defeat of Democrats' Big Voting Rights Bill," by Andrew Prokop, *Vox*, June 22, 2021.

to portray the bill as a self-serving attempt to federalize elections to benefit Democrats."[4]

Despite widespread acceptance of the importance of reputation and its incorporation into recent theoretical models that study the influence of the filibuster on lawmaking in the Senate, our understanding of the role of reputation remains limited. Nearly, all positive studies of obstruction in the U.S. Senate acknowledge reputation as an important factor in explaining obstruction and its influence on lawmaking (Bell, 2011; Binder and Smith, 1997; Dion *et al.*, 2016; Fong and Krehbiel, 2018; Koger, 2010, 2016; Wawro and Schickler, 2006). Existing theories, however, do not integrate three key features necessary to explicitly examine how the possible reputation implications of obstruction factor into the strategic decisions of U.S. senators. First, the reputation of a party or a senator should arise endogenously from the beliefs of key constituencies who observe and understand the legislative bargaining process. Most models of obstruction incorporate reputation exogenously. Exogenous reputation implicitly assumes that filibusters credibly reveal something meaningful to a third party about the senators who filibuster or combat a filibuster. If reputation is treated endogenously, the factors that systematically influence when, why, and how obstruction influences senators' reputations can be studied by analyzing the beliefs of their constituencies. Second, filibusters and efforts to defeat them require the consent of two parties. The opposition cannot filibuster a bill that the majority does not introduce and the majority cannot attempt to defeat a filibuster that the opposition declines to initiate. Third, senators care not only about how they and their party are perceived but also about the opposing party's reputation.

I develop a model of legislative bargaining that integrates these three key features to examine how reputation influences lawmaking in the U.S. Senate. Two parties, an opposition and a majority, bargain over policy. Parties have opposing policy preferences and vary in terms of the intensity of their preferences. A party with high-intensity preferences on a given policy issue is more willing to endure obstruction than a low-intensity party which prefers to spend valuable time and resources on issues it values more highly. The intensity of each party's preferences are private information. Each party represents a constituency that also has either high- or low-intensity policy preferences. A party is rewarded if its constituency forms favorable beliefs about it. Each party also benefits if its opponent's reputation is harmed and suffers if its opponent's reputation improves.

In the model, filibusters and attempts to defeat them are costly for the opposition and majority. High-intensity parties suffer a lower cost than their low-intensity counterparts from obstruction. A party can leverage this cost

[4]"Republicans Block Voting Rights Bill" by Nicolas Fandos, *The New York Times*, June 22, 2021.

differential to send a credible message that it shares the values of a key constituency. Alternatively, parties may pay a reputational price for engaging in dilatory tactics to affect policy in an issue area that a key constituency does not prioritize highly. In this case, a party harms its reputation by sending a message that the constituency's interests are less important to it than other policy issues.

The model's main results identify when, how, and why reputational concerns influence parties' strategic behavior. I focus on an environment characteristic of the contemporary Senate in which the majority does not have enough members to invoke cloture. Under certain conditions, because of its interest in its own reputation, the majority engages in hopeless attempts to defeat a filibuster to send a message to a key constituency. Relatedly, I identify conditions under which the majority introduces bills it knows will be filibustered in order to signal to its constituency by fighting the inevitable filibuster. I also show that due to its concern about its own reputation, under certain conditions the opposition filibusters bills to protect its reputation with a constituency that highly values policy in the issue area that the bill affects. Under other conditions, the opposition declines to filibuster to protect its reputation with a constituency that prioritizes other policy issues.

The model also identifies how parties' interest in their opponent's reputation influences their behavior. I characterize conditions under which the majority leaves bills off of its legislative agenda that could potentially pass in order to deny the opposition the opportunity to use the filibuster as a means of messaging to a key constituency. Analogously, under certain conditions the opposition elects not to filibuster to prevent the majority from sending a message by fighting the filibuster.

I examine the implications of these strategic behaviors for legislative bargaining outcomes. In particular, I study how the costs of obstruction to each party and the value of a policy victory in the Senate influence the frequency with which filibusters and cloture votes occur. I also characterize conditions under which the Senate is de facto supermajoritarian.

Related Literature

Several theoretical models study the obstruction and its influence on legislative bargaining. While these models acknowledge the role of reputation and in some cases incorporate reputation explicitly, reputation is modeled exogenously. In Dion *et al.* (2016) and Atler and McGranahan (2000), reputation is one of several factors absorbed by an exogenous payoff from obstruction. Bawn and Koger (2008) explicitly associate their exogenous obstruction payoff with reputation. Fong and Krehbiel (2018) also acknowledge that signaling is relevant for explaining obstruction but do not explicitly include reputation

in their model.[5] The bargaining protocol between two parties that I employ is similar to these models but reputation is derived endogenously from the equilibrium beliefs of constituencies who observe legislative bargaining.

A larger empirical literature studies the filibuster and its influence on lawmaking processes and outcomes in the U.S. Senate (Binder and Smith, 1997; Evans and Oleszek, 2001; Fisk and Chemerinsky, 1997; Koger, 2010; Sinclair, 2014; Smith, 2014; Wawro and Schickler, 2006). Scholars have examined the factors that contribute to the use of the filibuster (Bell, 2011; Binder *et al.*, 2002; Mixon, Jr. *et al.*, 2003; Overby and Bell, 2004), how the majority responds to filibusters (Koger, 2016; Oppenheimer, 1985), and how the filibuster influences the majority's agenda (Curry and Lee, 2021; Eidelson, 2013; Nash and Shepherd, 2020; Sinclair, 1989).[6] This literature emphasizes two important aspects of filibuster politics that existing formal treatments do not. First, the majority's effort to defeat a filibuster can be just as much of a signaling device as a filibuster is for the opposition (Grimmer, 2010). Second, parties take into account not only their own reputation but also their opponent's when acting strategically within the procedural rules of the Senate (Lee, 2016). I incorporate the reputation of a party's opponent into its payoff and characterize conditions under which hopeless efforts to defeat a filibuster send credible signals about the majority's priorities to its constituency.

These hopeless efforts to defeat a filibuster are related to similar behaviors such as position taking (Mayhew, 1974; Rocca and Gordon, 2010), message legislation (Gelman, 2017, 2020; Gibbs *et al.*, 2021), and feigning (Lee, 2019) where politicians engage in performative policymaking to send a message to a constituency. Of particular relevance is Patty (2016) who develops a formal model to explicitly study hopeless acts of obstruction. In the model, an opposition player engages in a knowingly doomed campaign of costly obstruction in order to send a credible signal to a Bayesian third-party observer. Unlike other models of obstruction, the opposition's reputation is endogenous in Patty (2016). The legislative bargaining process leading to obstruction and the majority's response to obstruction, however, is not explicitly modeled. A fait accompli bill exists at the beginning of the game for the opposition to obstruct and the bill becomes law once the opposition stops obstructing. I focus on an environment in which the majority knows it cannot successfully defeat a filibuster. Efforts to defeat a filibuster only function to send a signal to a constituency. This is related to the decision of the opposition to delay a fait accompli bill in Patty (2016). To get to this stage in my model, the

[5]They remark in a footnote that signaling can be incorporated into their model by adding exogenous payoffs from the act of obstructing itself (Fong and Krehbiel, 2018, p. 3) as in Bawn and Koger (2008).

[6]A related literature studies the origins and persistence of the filibuster as an institution. Wawro and Schickler (2010) review this literature. See Reynolds (2017) and Judd and Rothenberg (2021) for recent contributions.

majority must first introduce a bill and the opposition must filibuster. I show that under certain conditions, parties strategically deny their opponent the opportunity to use dilatory tactics to signal.

Finally, the model is related to others that examine collective policymaking processes in which a policymaker values the reputation of another policymaker. In the motivating example of Groseclose and McCarty (2001) Congress may pass legislation that it knows the president will veto in order to expose the president's preferences as unfavorable to the electorate. Gieczewski and Li (2022) and Hirsch and Kastellec (2022) examine a setting in which an opposition player can engage in policy sabotage to strategically influence the reputation of an incumbent politician. In each of these models, only one policymaker's payoff depends on the other's reputation. Additionally, the policymaker who values the other's reputation is unaffected by their own reputation. In my model, both players value their own and their opponent's reputation. More closely related is Fox and Van Weelden (2010) who study a model in which a partisan overseer can veto an executive's proposal. As in my model, each policymaker values its own and the other policymaker's reputation. While the players may prefer that their colleague's reputation suffers, both earn their reputation with a principal who evaluates each individual's competence. In my model, the two parties represent different constituencies with opposing policy preferences who evaluate the degree to which their representative party shares their preferences.

Model

To present the setup of the model, I first describe a simple legislative bargaining game between two players, a majority party (M) and an opposition party (O). I then add reputation to the model by introducing a majority constituency (MC) and an opposition constituency (OC) who represent core primary voters or interest groups. Constituencies observe the legislative bargaining game and form beliefs about the policy priorities of the party that represents them. After presenting the setup of the model, I discuss its main features and assumptions before proceeding with the analysis.

Policy Preferences

The majority and opposition bargain over a binary policy space. The Senate may either leave an existing status quo policy in place or pass a bill replacing the status quo with an alternative. The opposition prefers the status quo and the majority prefers the alternative. Each party receives a policy payoff of $q > 0$ if the Senate adopts its preferred policy and 0 otherwise.

Party Types

Each party has private information about the *intensity* of its policy preferences. Party i has either *low-intensity* or *high-intensity* preferences, represented by its type, $\theta_i \in \Theta_i = \{H, L\}$ for $i \in \{M, O\}$. I refer to parties as *high* or *low* types for short. A party's type is its private information. The other party and the two constituencies only know that the party is a high type with prior probability 1/2. I explain below how the two types differ in terms of the costs they suffer from obstruction.

Sequence of Actions

Figure 1 summarizes the timing of legislative bargaining. The majority moves first by choosing whether to introduce a bill to replace the status quo, $b \in \{\textit{bill}, \textit{no bill}\}$. If the majority does not introduce a bill the game ends with the status quo in place. If the majority introduces a bill, the opposition either allows a vote or filibusters, $f \in \{\textit{filibuster}, \textit{allow vote}\}$. If the opposition allows a vote the status quo is replaced and the game ends. Implicitly, the bill passes with the majority voting in favor of the bill and the opposition voting against it. If the opposition filibusters the majority responds by either tabling the bill or fighting the filibuster, $w \in \{\textit{fight}, \textit{table}\}$.[7] Each action ends the game. The status quo remains in place regardless of which action the majority chooses in response to a filibuster. If the majority tables, it removes the bill from consideration. If the majority fights, it does so knowing that its attempt to defeat the filibuster will be unsuccessful.[8] This assumes that the opposition holds a sufficient number of seats in the Senate that the majority party cannot

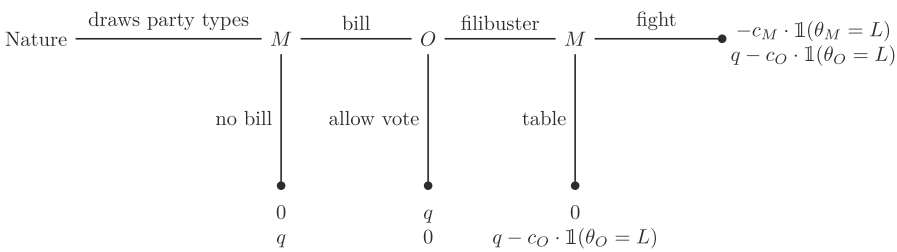

Figure 1: Game sequence. Legislative-bargaining payoffs for M and O are displayed, respectively, at each terminal node.

[7]The notation w may connote *wait out* a filibuster or *wage* a fight against a filibuster.

[8]In an earlier version of this paper I allow the outcome of the filibuster fight to be determined by a lottery, including a degenerate lottery in which the opposition's filibuster is defeated with certainty. Details available upon request.

invoke cloture.[9] To summarize, the legislative bargaining game is played with the following sequence of moves:

1. Nature draws party types, $\theta_i \in \Theta_i = \{H, L\}$ where $Pr(\theta_i = H) = \frac{1}{2}$.
2. The majority selects $b \in \{bill, no\ bill\}$. If $b = no\ bill$, the game ends with the status quo in place. If the $b = bill$, the game continues.
3. The opposition selects $f \in \{filibuster, allow\ vote\}$. If $f = allow\ vote$, the game ends with the status quo repealed. If $f = filibuster$, the game continues.
4. The majority selects $w \in \{fight, table\}$. The game ends with the status quo in place.

Legislative-Bargaining Payoffs

Legislative-bargaining payoffs for each party,

$$u_i(\theta_i, h_T) : \Theta_i \times H_T \to \mathbb{R}$$

are defined over their type and the four terminal histories of the legislative bargaining game,

$$H_T = \{no\ bill, allow\ vote, table, fight\}$$

A party receives the policy payoff of $q > 0$ if and only if its preferred policy is in place at the end of the game. The opposition's preferred policy, the status quo, remains in place unless the majority introduces a bill and the opposition allows a vote. Formally, the majority receives q if and only if $h_T = allow\ vote$. Otherwise the opposition receives q.

Allowing a vote is costless for the opposition. Introducing a bill, tabling, and not introducing a bill are costless actions for the majority.[10] Filibustering and fighting, on the other hand, are costly for the opposition and majority, respectively. Low types bear a higher cost from engaging in obstruction than low types. For simplicity, I assume that the high opposition does not pay a cost to filibuster and the high majority does not pay a cost to fight. The low opposition suffers $c_O > 0$ if it filibusters and the low majority $c_M > 0$ if it fights. In terms of legislative-bargaining outcomes and party types, the opposition pays c_O if and only if $\theta_O = L$ and $h_T \in \{fight, table\}$. The majority pays c_M if

[9] This characterizes the partisan composition of the Senate in every Congress since the 96th (1979–1981) with the exception of a brief period (July 2009–February 2010) during the 119th Congress.

[10] The equilibrium refinement I employ rules out equilibria that are not robust to a small cost of bill introduction.

and only if $\theta_M = L$ and $h_T = \textit{fight}$. Each party's legislative-bargaining payoff, $u_i(\theta_i, h_T)$, is the sum of its policy and cost payoff,

$$\begin{aligned} u_M(\theta_M, h_T) &= q \cdot \mathbb{1}(h_T = \textit{allow vote}) \\ &\quad - c_M \cdot \mathbb{1}(h_T = \textit{fight}) \cdot \mathbb{1}(\theta_M = L) \\ u_O(\theta_O, h_T) &= q \cdot [1 - \mathbb{1}(h_T = \textit{allow vote})] \\ &\quad - c_O \cdot \mathbb{1}(h_T \in \{\textit{fight}, \textit{table}\}) \cdot \mathbb{1}(\theta_O = L) \end{aligned}$$

Strategies

A behavior strategy for the majority consists of a *bill-introduction strategy* and a *response strategy*. The bill-introduction strategy is represented by $\sigma_b(\theta_M) \in [0, 1]$ which denotes the probability with which type θ_M chooses $b = \textit{bill}$. The majority's response strategy is represented analogously by $\sigma_w(\theta_M) \in [0, 1]$ which denotes the probability that $w = \textit{fight}$ for each type. A strategy for the opposition is a probability distribution over $\{\textit{filibuster}, \textit{allow vote}\}$ for each type. The probability with which type θ_O chooses $f = \textit{filibuster}$ is denoted $\sigma_f(\theta_O) \in [0, 1]$.

Constituencies

I now add reputation to the game. Each party represents a constituency which observes the actions that the two parties take and forms beliefs about their type but does not take any action itself. Each party's reputation depends on its constituency's beliefs about its type. Constituencies have high- or low-intensity preferences which are common knowledge. The intensity of constituency i's preference is denoted by $\gamma_i \in \{H, L\}$ where $i \in \{M, O\}$. Because constituencies do not take actions and influence the outcomes of legislative bargaining only through reputation, I do not explicitly specify payoffs for constituencies. Implicitly, like the parties that represent them, the OC prefers the status quo and the MC prefers repeal. I discuss constituencies and their preferences at greater length below.

Beliefs

Both constituencies and party $-i \neq i$ form beliefs about party i at each history of the game. The set of histories in the legislative bargaining game includes the four terminal histories in H_T as well as an initial history, h_0, and two nonterminal histories, *bill* and *filibuster*. The latter represent, respectively, the history at which the opposition acts after the majority introduces a bill and the history at which the majority responds to a filibuster after it introduces a bill and the opposition filibusters. The solution concept I use to analyze

the model, perfect Bayesian equilibrium (PBE), requires that party $-i$ and both constituencies share a common belief about party i's type at each history of the legislative bargaining game. The common probability with which they believe party i is a high type at each history $h \in H_T \cup \{h_0, \textit{bill}, \textit{filibuster}\}$ is denoted

$$\mu_i(h) \equiv Pr(\theta_i = H|h)$$

A party's reputation at each history is defined in terms of its constituency's beliefs about its type. Formally, party i's reputation at each history h is

$$r_i(h) = \begin{cases} \mu_i(h) & \text{if } \gamma_i = H \\ 1 - \mu_i(h) & \text{if } \gamma_i = L \end{cases}$$

which represents the probability with which constituency i believes that $\theta_i = \gamma_i$.

Reputation Bayesian Payoffs

Parties receive payoffs that depend on their own and their opponent's reputation at the end of the game. More precisely, reputation payoffs are defined over the set of terminal histories. Reputation payoffs are separated into *own-reputation* and *opponent-reputation* payoffs. Each party's own-reputation payoff is strictly increasing in its own reputation. Formally, each party receives an own-reputation payoff of

$$\alpha r_i(h_T)$$

at each $h_T \in H_T$ where $\alpha \geq 0$ is a real scalar. As I discuss at greater length in the following section, own-reputation payoffs are implicitly tied to an unmodeled primary election after legislative bargaining concludes where constituencies are more likely to support an incumbent who they believe shares its preferences than a challenger. In this way, an incumbent party's own-reputation payoff can be thought of as an expected reelection payoff for its members in their primary elections.

Each party's opponent-reputation payoff is decreasing in its opponent's reputation. Implicitly, parties obtain a higher payoff if its opponent loses electoral support from its constituency against a primary challenger. I additionally assume that a party is more sensitive to the reputation of a high-intensity opponent than a low-intensity opponent. Implicitly, because parties value policy, they prefer to face a low-intensity opponent in the future. A party therefore suffers greater loss if a high-intensity opponent consolidates the electoral support of its constituency than if a low-intensity opponent does so. For simplicity, I specifically assume that party $-i$'s reputation affects i's payoff if and only if $-i$ is a high type. Formally, each party receives an opponent-reputation payoff of

$$-\beta r_{-i}(h_T) \cdot \mathbb{1}(\theta_{-i} = H)$$

at each $h_T \in H_T$ where $\beta \geq 0$. To simplify analysis, I assume that $\alpha \geq \beta$. Under this assumption, parties value their own reputation at least as much as their opponent's.[11]

Total Payoffs

Each party's total payoff for the game is defined over its own type, its opponent's type, and the set of terminal histories as the sum of its legislative-bargaining, own-reputation, and opponent-reputation payoffs,

$$u_i(\theta_i, h_T) + \alpha r_i(h_T) - \beta r_{-i}(h_T) \cdot \mathbb{1}(\theta_{-i} = H)$$

Comments on Model

Table 1 summarizes notation and assumptions about the model's parameters. Before analyzing the model, I comment on several of its assumptions.

Parties

The majority and opposition are unitary actors in the model. The majority can be interpreted as the majority party leader who selects their party's legislative agenda, understands the intensity of their caucus' preferences, and decides whether to table a filibustered bill or invest the party's time and resources into fighting the filibuster. The assumption that the opposition defeats any legislation it filibusters limits the scope of the model to environments in which the opposition party holds a sufficient number of seats to prevent a cloture vote and is sufficiently cohesive and disciplined to outlast any attempt by the majority to defeat a filibuster. Given this assumption, the unitary actor who represents the opposition can be interpreted as the opposition party leader who understands the intensity of the party's preference for the status quo and chooses whether or not to direct the party's effort towards obstruction. Consistent with the existing theories of obstruction in the Senate, I assume that a party leader does not know the true intensity of the opposing party's preferences (Dion *et al.*, 2016; Wawro and Schickler, 2006).[12]

Costs of Obstruction

The opposition pays the cost of filibustering if and only if it chooses to filibuster. Initiating a filibuster requires the opposition to engage in time and resource-consuming activities to organize and begin holding the floor. The majority

[11] Fox and Van Weelden (2010) also make this assumption.

[12] A previous version of this paper assumed that parties know their own and their opponent's reputation. Details are available upon request.

Table 1: Notation.

Notation	Description	Assumptions
Party Types		
θ_i	Intensity of party i's preferences, $\theta_i \in \Theta_i = \{H, L\}$.	$Pr(\theta_i = H) = \frac{1}{2}$
Strategies		
b	Majority's initial action, $b \in \{no\ bill, bill\}$.	
$\sigma_b(\theta_M)$	Majority's bill-introduction strategy, $Pr(b = bill \mid \theta_M) = \sigma_b(\theta_M)$.	
f	Opposition's response to *bill*, $f \in \{filibuster, allow\ vote\}$.	
$\sigma_f(\theta_O)$	Opposition's strategy, $Pr(f = filibuster \mid \theta_O) = \sigma_f(\theta_O)$	
w	Majority's response to *filibuster*, $w \in \{fight, table\}$.	
$\sigma_w(\theta_M)$	Majority's response strategy, $Pr(w = fight \mid \theta_M) = \sigma_w(\theta_M)$.	
Beliefs and reputation		
h_T	Terminal history, $h_T \in H_T = \{no\ bill, allow\ vote, fight, table\}$.	
h	History, $h \in H_T \cup \{h_0, bill, filibuster\}$ where h_0 is the initial history.	
$\mu_i(h)$	Posterior belief that party i is a high type at history h.	
$r_i(h)$	Party i's reputation at history h, $r_i(h) = \mu_i(h)\mathbb{1}(\gamma_i = H) + (1 - \mu_i(h))\mathbb{1}(\gamma_i = L)$.	
Parameters		
q	Policy payoff if a party's preferred policy is adopted. Policy payoff is 0 otherwise.	$q > 0$
c_O	Cost of $f =$ *filibuster* for low opposition.	$c_O > 0$
c_M	Cost of $w =$ *fight* for low majority.	$c_M > 0$
α	Party i's own-reputation payoff at terminal history h_T is $\alpha r_i(h_T)$.	
β	Party i's opponent-reputation payoff is $-\beta r_{-i}(h_T) \cdot \mathbb{1}(\theta_{-i} = H)$.	$\alpha \geq \beta \geq 0$
γ_i	Intensity of constituency i's preferences, $\gamma_i \in \{H, L\}$.	
Analysis		
δ	Opposition's net expected opponent-reputation payoff from $f =$ *allow vote*.	
ρ	Majority's net expected policy and opponent-reputation payoff from $b =$ *bill*.	

suffers a cost if and only if it fights a filibuster. For the majority, agenda control makes the introduction of a bill a low cost activity. Tabling a bill after the opposition filibusters is similarly low cost as it only requires the majority leader to abandon the bill.[13] Fighting a filibuster, on the other hand, is costly. Majority-party senators must expend time and effort in coordination with copartisans to maintain a quorum and organize cloture votes. The time spent fighting imposes additional opportunity cost on senators by consuming scarce legislative time that could be spent on policymaking in other issue areas.

Most analyses of the filibuster observe that institutional reforms in the 1970s and shifts in the political environment since then have put downward pressure on c_O over the last several decades (Bell, 2011; Binder *et al.*, 2002; Koger, 2010). Increasing polarization and partisanship reduce the opportunity cost of filibustering to the opposition by shrinking the menu of potential bills that parties can cooperatively enact. The introduction of the tracking system in 1970 allowed the Senate to have more than one bill pending as unfinished business. As Binder and Smith (1997, p. 15) put it, the tracking system made filibustering "less costly to the filibustering senators — other senators would no longer be forced to hold the floor continuously to block legislation."

Conversely, scholars generally agree that opportunity cost reflected in c_M has generally risen over time (Binder *et al.*, 2002; Binder and Smith, 1997; Koger, 2010; Oppenheimer, 1985; Sinclair, 1989). Over the course of the twentieth century, scarce floor time became more valuable to the majority as the Senate's workload increased. The point in time within each Congress may affect c_M similarly. At the beginning of the first session, few bills may be prepared for consideration. As the end of the second session approaches, floor time becomes increasingly scarce. Time spent combating a filibuster is the time that cannot be spent on legislation that will die unless acted upon before adjournment (Heitshusen and Beth, 2017).

Policy

The value of a policy victory in the Senate, q, can be naturally interpreted as a parameterization of divided versus unified government. Under unified government, the opposition stands as the last line of defense against a change to the status quo. Under divided government the opposition may expect copartisans in the House of Representatives or White House to defeat a bill that passes in the Senate. With this interpretation, higher values of q are associated with unified government and lower values with divided. More generally, q can be associated with the degree to which policy in a particular issue area can

[13] Under the equilibrium refinement I employ, the assumption that bill introduction is costless does not substantively influence the model's results. As I discuss below, the refinement rules out an equilibrium in which the majority submits a bill and tables if a payoff-equivalent equilibrium exists in which the majority does not submit a bill.

be significantly altered. In this interpretation, q may be influenced by the degree to which veto players outside of the Senate will accept a change to the status quo. A high value of q can represent a president or House Speaker who is willing to accept a significant reform bill versus a low value of q that represents openness to only limited reform.

Constituencies

I interpret each constituency as an interest group, a core group of party voters and activists, or a major donor who is influential in a specific party's primaries. The direction and intensity of each constituency's preferences are known. For example, the American Federation of Teachers (AFT) may be considered a core Democratic party constituency with high-intensity preferences on education policy. While its stated positions on military spending, criminal justice reform, and immigration generally align with those of the Democratic party,[14] these issues are intuitively of lower priority than education policy. In terms of the model, its preferences on these other areas are low-intensity compared to its high-intensity preferences in education policy.[15]

Own-Reputation Payoffs

Own-reputation payoffs are based on the idea that constituencies prefer to be represented by a party that shares its intensity of preference. Implicitly, obstruction affects constituencies in the same manner that it affects parties. A low-intensity constituency suffers from obstruction more than a high constituency. Like a low party, a low constituency suffers from the redirection of its party's legislative resources toward filibustering or fighting a filibuster. It prefers scarce legislative resources be directed toward policy areas it values more highly. If a low constituency observes the legislative stage and learns that its representative party is a high type, although it may be pleased with a policy victory that the high type achieves, it punishes the party by directing electoral support to primary candidates it believes are more likely to share its priorities. In doing so, it is forward-looking: successfully replacing the incumbent with a representative that is more likely to share its values helps to ensure that future policy victories are sought only at an acceptable cost. High constituencies, on the other hand, seek representatives who are willing to expend potentially extensive time and resources to achieve a policy victory.

A party's increasing payoff from its own reputation is tied to the implicit electoral support it receives from its constituency and a desire for incumbent

[14]See *AFT 2020 Virtual Convention Report, July 28–30* at https://www.aft.org/about/resolutions.

[15]The National Rifle Association may be described analogously as a core Republican constituency with high-intensity preferences in policy areas related to firearm regulation.

members of the party to be reelected. The better a party's reputation is, the more support its members receive against primary challengers. Intuitively, the likelihood that an incumbent senator wins their primary should be positively associated with their party's reputation. The party prefers that its incumbent members win their primaries and therefore receives a payoff that is increasing in its own reputation.

Opponent-Reputation Payoffs

A party's preferences about its opponent's reputation are connected to the implicit effect of a party's reputation on the likelihood of its incumbent members winning their primary races. The way that the opposing party's primary outcomes affect a party is based on two additional ideas. First, an incumbent Senate candidate is more likely to win their general election race than a challenger who defeats the incumbent in the primary. If its opponent has a poor reputation and loses sufficient constituency support to prevail in the primary, the party may be able to pick up a seat that it would not were the opponent to have incumbency advantage. The party prefers to flip Senate seats and therefore gains when its opponent's reputation suffers and loses when its opponent's reputation is enhanced. Second, parties prefer their future opponents to be low-intensity types. This follows from their policy preferences: the less willing a party's opponent is to challenge or defend the status quo, the better the chance that their preferred policy is obtained in the future. If its opponent's reputation is favorable and is therefore likely to be reelected, a party suffers more if the opponent is high than if it is low.

Cross-Constituency Signaling

To simplify the model, I assume that a party's payoff does not depend on its constituency's beliefs about the opposing party. Implicitly, this assumes that the constituency does not condition its electoral support for the incumbent members of the party on its beliefs about the type of opponent that its party will face in the future. This is a somewhat restrictive assumption. Intuitively, a party may be able to elicit support from its base by pointing to evidence that the other party poses a threat to its policy interests. Incorporating this possibility is a natural avenue for extension.

Analysis

Analysis of the model proceeds as follows. I first describe the solution concept. I then describe a restriction on the parameter space to ease analysis in the main text and state a preliminary result. Next I analyze the majority's response strategy and the opposition's strategy. This pins down each party's

equilibrium behavior after the majority introduces a bill. I then use these results to characterize the majority's bill-introduction strategy and the model's equilibrium. After characterizing the model's equilibrium, I examine how reputation influences each party's equilibrium behavior. I then explore the model's empirical implications by analyzing how c_M, c_O, and q influence equilibrium outcomes. I focus on three particular outcomes: the frequency of filibusters, the proportion of cloture votes to tabling motions, and whether a de facto supermajority of senators is required to pass legislation.

Solution Concept

The solution concept is a refinement of PBE. As noted above, in a PBE both constituencies and party $-i$ share common beliefs about party i. Wherever possible, players use Bayes' rule to update their beliefs.[16] PBE also requires that players update their beliefs about a party only from the actions that the party takes.[17]

I develop a refinement to rule out equilibria that are supported by questionable off-path beliefs. I provide intuition for the refinement here and define it formally in the Online Appendix. I restrict attention to equilibria in which $\mu_M(bill) = 1/2$ if neither type of the majority introduces a bill. Substantively, this assumes that if the majority unexpectedly takes an action that imposes no direct cost on either type, the opposition and constituencies wait to update their beliefs about the majority until they observe its potentially costly response to a filibuster. For all other posterior beliefs, if a belief is undefined under Bayes' rule and other equilibria exist in which the belief is defined under Bayes' rule, I require the off-path belief to be selected from one of these alternative equilibrium beliefs. This restricts the extent to which constituencies punish or reward parties who deviate from an equilibrium by limiting the strength of a signal that a deviation sends.[18] For example, if $\gamma_O = H$ and c_O is sufficiently low that the low opposition always prefers to imitate the high opposition in order to defend its reputation, the OC does not interpret an unexpected filibuster as a signal of the opposition's type under the refinement. If c_O is sufficiently high that $\sigma_f(H) = 1$ and $\sigma_f(L) = 0$ are

[16]This requires players to update by Bayes' rule at every history reached with positive probability. For any nonterminal history reached with probability zero, players form a belief and use this belief in their subsequent Bayesian updating.

[17]The OC does not interpret the majority's action at the bill-introduction stage or its response to a filibuster as a signal of the opposition's type. If the majority does not introduce a bill the OC retains its prior belief about the opposition. Similarly, the MC does not learn any new information about the majority from the opposition's decision to filibuster or allow a vote.

[18]This refinement follows a logic developed by Reny (1992) and McLennan (1985). Essentially, if constituencies observe an unexpected action, they assume the party is playing a strategy that it could rationally play in another equilibrium and update their beliefs accordingly.

sequentially rational given $\mu_O(\textit{filibuster}) = 1$ and $\mu_O(\textit{allow vote}) = 0$, the OC interprets an unexpected filibuster as a signal that the opposition is a high type. I show below that for intermediate values of c_O where neither a pooling or fully separating strategy is consistent with equilibrium, a semiseparating strategy is possible in which $\sigma_f(H) = 1$ and $\sigma_f(L) \in (0, 1)$. If the opposition plays this strategy, the low opposition's probability of filibustering decreases as c_O rises. Under the refinement, the OC uses its belief $\mu_O(\textit{fight}) = [1+\sigma_f(L)]^{-1}$ in this equilibrium as its off-path belief in an equilibrium in which both types allow a vote. Because $\sigma_f(L)$ declines as c_O rises, the strength of the off-path signal is increasing in c_O.[19]

To reduce the number of equilibria, I apply an efficiency condition which removes equilibria that fail to satisfy a version of Pareto efficiency. Specifically, I focus on equilibria in which each party plays the best possible response to its opponent's strategy in the sense that no alternative equilibrium strategy makes both types better off. An additional efficiency condition removes equilibria that are not robust to the assumption that introducing a bill is costless. If multiple equilbria exist in which the opposition's strategy is the same and both types of the majority receive the same expected equilibrium payoff, I rule out an equilibrium if both types of the majority introduce a bill with a higher probability than an alternative. This removes equilibria in which the majority takes extra steps to receive a payoff it could obtain by not introducing a bill.

Finally, I focus on equilibria in which $\sigma_b(H) \geq \sigma_b(L)$. This condition is not necessary to obtain my results. It can be shown that $\sigma_b(H) \geq \sigma_b(L)$ in every PBE that satisfies the off-path belief and efficiency conditions.[20] Restricting attention to equilibria in which $\sigma_b(H) \geq \sigma_b(L)$ simplifies analysis of the model.

Preliminaries

To simplify exposition, I present results in the main text under Assumption 1.

Assumption 1. $\gamma_M = H$ *and* $c_M \notin (\frac{\alpha}{2}, \alpha)$.

[19] Alternative refinements adapted from the intuitive criterion or divinity in which constituencies interpret deviations without reference to the set of strategies that a rational party could play under identical conditions generate questionable results. If the OC forms its beliefs by considering which types could possibly benefit from a deviation and which types cannot, a marginal change in c_O can require a discontinuous change in the constituency's beliefs once c_O crosses a threshold. If the OC bases its beliefs on which type necessarily benefits from deviating when the other type benefits, it interprets an unexpected filibuster as strong evidence that the opposition is a high type even if c_O is near zero. The refinement I employ allows the strength of the evidence to vary continuously with c_O by anchoring off-path beliefs to strategies that a rational party could play under identical conditions.

[20] Details are available upon request.

I characterize the model's equilibrium for four cases: (i)–(ii) $c_M \leq \alpha/2$ for each $\gamma_O \in \{H, L\}$ and (iii)–(iv) $c_M \geq \alpha$ for each γ_O. All results presented in the main text are conditional on Assumption 1. I show formally in the Online Appendix that results in the main text are true under a more general condition. Because fighting never successfully defeats a filibuster, the majority fights only to signal that it is a high type. The majority, therefore, never fights in equilibrium if $\gamma_O = L$. This implies that the results presented in the main text under Assumption 1 for $c_M \leq \alpha/2$ hold more generally for $c_M \leq \alpha/2$ *or* $\gamma_M = L$ and that results for $c_M \geq \alpha$ are true for $c_M \geq \alpha$ and $\gamma_M = H$. A focus on $\gamma_M = H$ in the main text simplifies presentation by removing the "and/or γ_M" conditions.

Lemma 1 establishes a preliminary result regarding the majority's equilibrium strategy. The result facilitates analysis of the majority's response strategy and the opposition's strategy by reducing the number of equilibrium strategies to consider. I show in the Online Appendix that an equilibrium survives the refinement only if the majority's strategy satisfies Lemma 1.

Lemma 1. *The majority plays a pure bill-introduction strategy in equilibrium. In any equilibrium in which the majority's bill-introduction strategy is* $\sigma_b(H) = 1$, $\sigma_b(L) = 0$, *its response strategy is* $\sigma_w(H) = 1$, $\sigma_w(L) = 0$.

The first part of Lemma 1 implies that there are only three equilibrium bill-introduction strategies to consider: two in which the majority pools on the same pure bill-introduction strategy and one in which the majority separates at the bill-introduction stage. The second part of Lemma 1 states that in any equilibrium in which the majority separates on bill introduction, it also separates in response to a filibuster.

Majority's Response Strategy

I now characterize the majority's equilibrium strategy in response to a filibuster. The majority understands that any attempt to defeat a filibuster will be unsuccessful. It, therefore, receives an expected policy payoff of 0 whether it fights or tables. Because the OC does not interpret the majority's response as a signal of the opposition's type in equilibrium, the majority's expected opponent-reputation payoff is the same whether it fights or tables. Thus, only the majority's own-reputation payoff and the cost of fighting influence its decision. The difference between the majority's expected payoff if it fights and its expected payoff if it allows a vote is therefore

$$\alpha[\mu_M(\textit{fight}) - \mu_M(\textit{table})] - c_M \cdot \mathbb{1}(\theta_M = L) \tag{1}$$

It is sequentially rational for type θ_M of the majority to fight (table) in equilibrium if and only if (1) is greater (less) than zero. Lemma 2 characterizes the majority's equilibrium response strategy.

Lemma 2. *If $c_M \leq \frac{\alpha}{2}$, the majority's equilibrium response strategy is $\sigma_w(H) = \sigma_w(L) = 0$. If $c_M \geq \alpha$, its equilibrium response strategy is $\sigma_w(H) = 1$, $\sigma_w(L) = 0$.*

If $c_M \geq \alpha$, the low majority prefers to expose its type by tabling even if fighting convinces the MC that the majority is a high type. Fighting, therefore, signals to the MC that the majority shares its preferences. If $c_M \leq \alpha/2$, the cost of fighting is sufficiently low that the low majority always plays the same strategy as the high type in order to protect its reputation. In this case fighting is not a credible signal of the majority's type. Because fighting has no reputational value to the majority, both types table.

Opposition's Strategy

I now characterize the opposition's equilibrium strategy. It is useful to establish a nomenclature to refer to the strategy that the opposition plays and to describe an equilibrium in which the opposition plays a particular strategy. Table 2 summarizes this nomenclature. In Table 2, *AV* is short for *allow-vote* and *OS* is short for *opposition-separating*. As I show below, two varieties of semiseparating strategies are possible in equilibrium. In an *OSS(H)* equilibrium, the low opposition allows a vote with probability one and the high opposition mixes. In an *OSS(L)* equilibrium, the high opposition filibusters with probability one and the low opposition mixes. Table 2 reports specific probabilities in the OSS(H) and OSS(L) equilibria which I derive below. In the text I capitalize *Filibuster* when referring to a strategy in which $\sigma_f(H) = \sigma_f(L) = 1$ and an equilibrium in which the opposition plays $\sigma_f(H) = \sigma_f(L) = 1$ to distinguish these from the act of filibustering or the occurrence of a filibuster.

I first characterize the opposition's expected opponent-reputation payoff from each of its available actions. If the majority introduces a bill, the opposition and the MC update their beliefs about the majority's type. The

Table 2: Nomenclature: opposition's strategy.

Name	$\sigma_f(H)$	$\sigma_f(L)$
Filibuster	1	1
OSS(L)	1	$\frac{\alpha}{c_O-(q-\delta)} - 1$
OS	1	0
OSS(H)	$2 - \frac{\alpha}{q-\delta}$	0
AV	0	0

MC retains this belief if the opposition allows a vote. The opposition's expected opponent-reputation payoff if it allows a vote is therefore $-\beta[\mu_M(bill)]^2$. Its expected opponent-reputation payoff if it filibusters depends on its beliefs about how the high majority responds to a filibuster and how the MC interprets this response,

$$-\beta\mu_M(bill)[\sigma_w(H)\mu_M(fight) + (1-\sigma_w(L))\mu_M(table)]$$

Its net expected opponent-reputation payoff if allows a vote can therefore be expressed

$$\begin{aligned}\delta \quad &\equiv \quad \beta\mu_M(bill) \\ &\quad \times \Big[\sigma_w(H)\mu_M(fight) + (1-\sigma_w(H))\mu_M(table) - \mu_M(allow\ vote)\Big]\end{aligned}$$

Notice that $\delta = 0$ if $\mu_M(bill) = 1$ or $\sigma_w(H) = \sigma_w(L) = 0$. If $\mu_M(bill) = 1$, the MC and the opposition learn that the majority is a high type when it introduces a bill. The opposition expects the high majority to confirm its type in response to a filibuster. If $\sigma_w(H) = \sigma_w(L) = 0$, the opposition expects both types of the majority to table and therefore reveal no new information about its type in response to a filibuster. On the other hand, if $\mu_M(bill) = 1/2$ and the majority separates in response to a filibuster, a filibuster provides the high majority the opportunity to signal. The opposition can deny the high majority this opportunity by allowing a vote. The opposition's expected opponent-reputation payoff is therefore greater if it allows a vote than if it filibusters. Formally, $\delta = \beta/4$.

Remark 1.

$$\delta = \begin{cases} 0 & \text{if} \quad \mu_M(bill) = 1 \ \text{ or } \ \sigma_w(H) = \sigma_w(L) = 0, \\ \frac{\beta}{4} & \text{if} \quad \mu_M(bill) = \frac{1}{2},\ \sigma_w(H) = 1, \text{ and } \ \sigma_w(L) = 0. \end{cases}$$

Given δ, the difference between the opposition's expected payoff if it filibusters and its expected payoff if it allows a vote is

$$\begin{aligned} q - \delta + \alpha\big[\mu_O(filibuster) - \mu_O(allow\ vote)\big]\big[\mathbb{1}(\gamma_O = H) - \mathbb{1}(\gamma_O = L)\big] \\ -c_O \cdot \mathbb{1}(\theta_O = L) \end{aligned} \tag{2}$$

It is sequentially rational for type θ_O of the opposition to filibuster (allow vote) if and only if (2) is greater (less) than zero. I first characterize the opposition's equilibrium strategy for $\gamma_O = H$ and then its strategy for $\gamma_O = L$ (Figure 2).

Lemma 3. *Suppose $\gamma_O = H$. If $q < \delta$ and $c_O \leq \frac{\alpha}{2}$ the opposition's equilibrium strategy is AV. If $q \geq \delta$ or $c_O > \frac{\alpha}{2}$, its equilibrium strategy is Filibuster if $c_O \leq q - \delta + \frac{\alpha}{2}$, OSS(L) if $c_O \in (q - \delta + \frac{\alpha}{2}, q - \delta + \alpha)$, and OS if $c_O \geq q - \delta + \alpha$.*

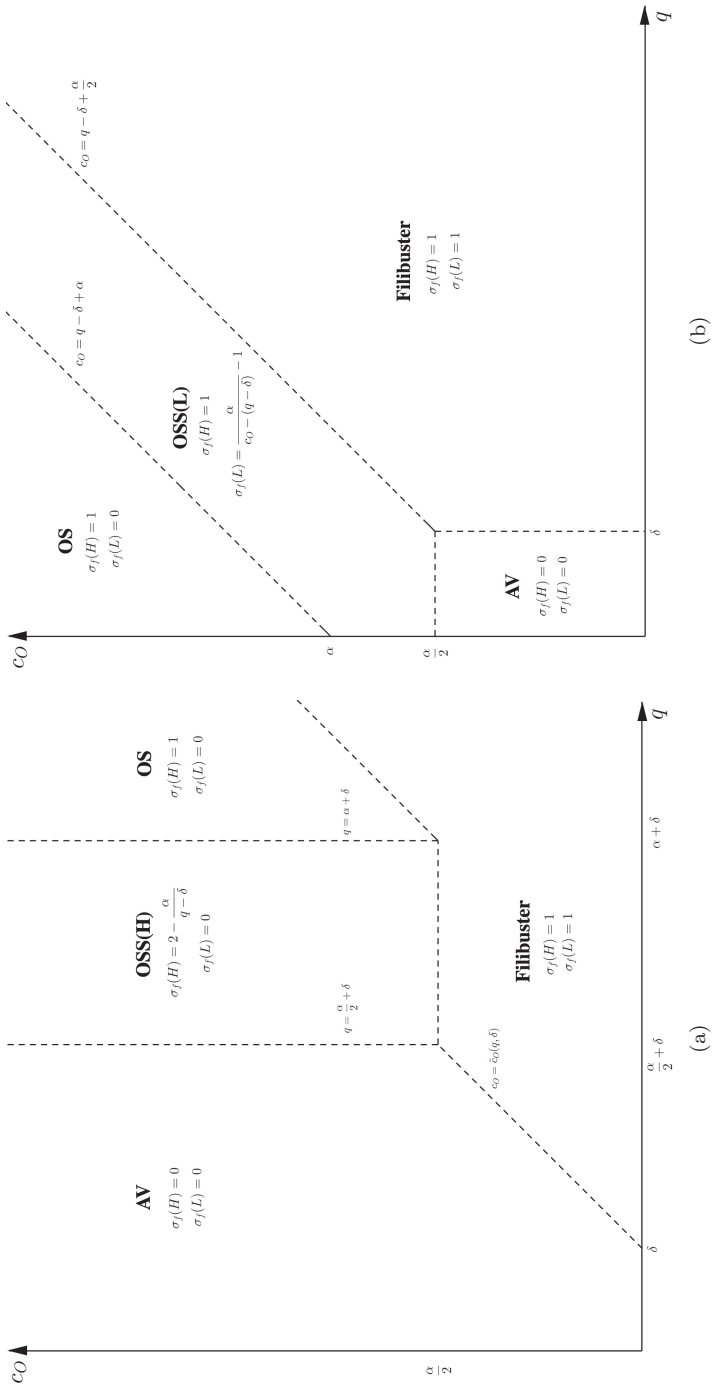

Figure 2: Opposition's equilibrium strategy. (a) $\gamma_O = L$, (b) $\gamma_O = H$.

If $\gamma_O = H$, the high opposition can never harm its reputation by defending the status quo because only the low opposition suffers a cost from filibustering. If $q \geq \delta$, the value of defending the status quo is sufficiently high relative to any harm the high opposition expects to suffer by allowing the majority to signal that it prefers to filibuster even if doing so reveals nothing about its type. If the high opposition filibusters in equilibrium, the low opposition suffers damage to its reputation if it allows a vote. Its willingness to filibuster depends on c_O. If $c_O \leq q - \delta + \alpha/2$, the low opposition plays the same strategy as the high type and preserves its initial reputation. If $c_O \geq q - \delta + \alpha$, the cost of filibustering is sufficiently high that it allows a vote with probability one. For $c_O \in (q - \delta + \alpha/2, q - \delta + \alpha)$, the low opposition plays a mixed strategy in which it filibusters with probability

$$\sigma_f(L) = \frac{\alpha}{c_O - (q - \delta)} - 1$$

where $\sigma_f(L)$ is found by substituting $\mu_O(\textit{fight}) = [1 + \sigma_f(L)]^{-1}$ and $\mu_O(\textit{allow vote}) = 0$ into (2) and finding the $\sigma_f(L)$ that equates (2) to zero. Notice that the low opposition's probability of filibustering continuously decreases from one to zero as c_O rises.

If $q < \delta$, the policy value of defending the status quo is sufficiently low that the high opposition is unwilling to provide the majority with the opportunity to signal unless filibustering improves its own reputation to a sufficient degree. If $c_O \leq q - \delta + \alpha/2$, the low opposition plays the same strategy as the high opposition in order to defend its reputation. In this case filibustering does not provide evidence to the OC that the opposition is a high type. Both types of the opposition therefore allow a vote. If $c_O > q - \delta + \alpha/2$, the low opposition is unwilling to filibuster with probability one. A filibuster, therefore, signals that the opposition is more likely to be a high type than a low type. The strength of this signal is increasing in c_O. Under the refinement, if $c_O \in (q - \delta + \alpha/2, q - \delta + \alpha)$ the OC's off-path belief in an AV equilibrium is anchored to its posterior belief in an OSS(L) equilibrium, $\mu_O(\textit{filibuster}) = \alpha^{-1}[c_O - (q - \delta)]$. The cutpoint at which the signal becomes sufficiently strong that the high opposition is indifferent between filibustering and allowing a vote is $c_O = \alpha/2$. If $c_O \geq q - \delta + \alpha$, under the refinement the OC's off-path belief matches its posterior belief in an OS equilibrium, $\mu_O(\textit{filibuster}) = 1$. Thus for all $c_O > \alpha/2$, the high opposition filibusters with probability one and the low opposition allows a vote with positive probability.

I now characterize the opposition's equilibrium strategy for $\gamma_O = L$.

Lemma 4. *Suppose $\gamma_O = L$. Define a function*

$$\tilde{c}_O(q,\delta) \equiv \begin{cases} q-\delta & \text{if } \ q \leq \frac{\alpha}{2}+\delta, \\ \frac{\alpha}{2} & \text{if } \ q \in (\frac{\alpha}{2}+\delta, \alpha+\delta), \\ q-\delta-\frac{\alpha}{2} & \text{if } \ q \geq \alpha+\delta. \end{cases}$$

If $c_O \leq \tilde{c}_O(q,\delta)$, the opposition's equilibrium strategy is Filibuster. If $c_O > \tilde{c}_O(q,\delta)$, its equilibrium strategy is AV if $q \leq \frac{\alpha}{2}+\delta$, OSS(H) if $q \in (\frac{\alpha}{2}+\delta, \alpha+\delta)$, and OS if $q \geq \alpha+\delta$.

If $q \leq \frac{\alpha}{2}+\delta$, the value of a policy victory is sufficiently low that the high opposition is unwilling to damage its reputation to protect the status quo. In this case the high opposition plays the same strategy as the low opposition. The opposition's strategy for $q \leq \frac{\alpha}{2}+\delta$ therefore depends on the low opposition's willingness to filibuster. If $q \leq \delta$, majority signaling deters the low opposition from filibustering. If $q > \delta$, the low opposition filibusters only if the cost of filibustering is sufficiently low. Because the high opposition mimics the low type in every equilibrium if $q \leq \frac{\alpha}{2}+\delta$, the OC does not interpret an unexpected allowed vote as a signal that the opposition is a low type. The low opposition therefore filibusters if and only if $c_O \leq q$. Thus if $q \leq \frac{\alpha}{2}+\delta$, both types filibuster if $q > \delta$ and $c_O \leq q$. Otherwise both types allow a vote.

If $q \geq \alpha+\delta$, the value of a policy victory is sufficiently high that the high opposition is willing to expose its type in order to block a change to the status quo even if it can appear congruent with the low OC by allowing a vote. The OC therefore interprets *allow vote* in every equilibrium as a signal that the opposition is a low type. If $c_O \leq q-\delta-\alpha/2$, the low opposition passes on the opportunity to signal its type in order to defend the status quo. If $c_O > q-\delta+\alpha/2$ it allows a vote.

If $q \in (\alpha/2+\delta, \alpha+\delta)$, the high opposition is willing to harm its reputation in defense of the status quo but only to a limited degree. If the low opposition allows a vote with probability one, the high opposition filibusters with probability

$$\sigma_f(H) = 2 - \frac{\alpha}{q-\delta}$$

which is found by substituting $\mu_O(\textit{filibuster}) = 1$ and $(1-\mu_O(\textit{allow vote})) = [2-\sigma_f(H)]^{-1}$ into (2) and finding the $\sigma_f(H)$ that equates (2) to zero. Note that probability with which the high type filibusters in an OSS(H) equilibrium continuously increases in q from zero to one on the interval $q \in (\delta+\alpha/2, \delta+\alpha)$. By mixing between its two available actions, the high opposition limits the precision of the signal that allowing a vote sends to the OC. Alternatively, both types of the opposition may filibuster with probability one. Under

the refinement, the OC uses its interpretation of *allow vote* in an OSS(H) equilibrium, $\mu_O(\textit{allow vote}) = 1 - (q - \delta)\alpha^{-1}$, to interpret a deviation in a Filibuster equilibrium. Substituting this belief and $\mu_O(\textit{filibuster}) = 1$ into (2) shows that for all $q \in (\delta + \alpha/2, \delta + \alpha)$ the low opposition filibusters if $c_O \leq \alpha/2$ and allows a vote otherwise.[21]

Majority's Bill-Introduction Strategy

I now analyze the majority's bill-introduction strategy. I use the nomenclature in Table 3 to refer to an equilibrium in terms of the majority's equilibrium strategy. The acronym *NB* refers to *no bill* and *MS* to *majority separating*.

I first characterize the majority's expected policy and opponent-reputation payoff. In every PBE the OC retains its prior belief about the opposition if the majority does not introduce a bill. Because the majority correctly believes the opposition is a high type with probability 1/2 at the start of the game, its expected opponent-reputation payoff if $b = \textit{no bill}$ is $-\beta/4$. Because the OC only updates its beliefs about the opposition from actions that the opposition takes, $r_O(\textit{table}) = r_O(\textit{fight}) = r_O(\textit{filibuster})$ in every equilibrium. The majority's net expected policy and opponent-reputation payoff if $b = \textit{bill}$ is therefore

$$\begin{aligned} \rho \quad \equiv \quad & q\left(\frac{2 - \sigma_f(H) - \sigma_f(L)}{2}\right) \\ & - \frac{\beta}{2}\left(\sigma_f(H) r_O(\textit{filibuster}) + (1 - \sigma_f(H)) r_O(\textit{allow vote}) - \frac{1}{2}\right) \end{aligned}$$

Notice that $\rho = q$ if both types of the opposition allow a vote. If both types of the opposition filibuster with probability one, then $\rho = 0$. In each case the majority expects the opposition's type to remain hidden if it introduces a

Table 3: Nomenclature: majority's strategy.

Name	$\sigma_b(H)$, $\sigma_b(L)$	$\sigma_w(H)$, $\sigma_w(L)$
Bill–Table	1, 1	0, 0
Bill–MS	1, 1	1, 0
MS–MS	1, 0	1, 0
NB–Table	0, 0	0, 0

[21] Although the policy value of defending the status quo is increasing on this interval, the cost threshold below which the low opposition chooses to allow a vote is constant. As q rises, *allow vote* becomes stronger evidence that the opposition is a low type. The additional policy utility that the low opposition receives from filibustering as q rises is offset by an increase in the reputation value of allowing a vote.

bill. If $\sigma_f(H) > \sigma_f(L)$, the majority secures passage of the bill with positive probability and indirectly reveals information about the opposition's type if it introduces a bill. If $\gamma_O = L$, introducing a bill positions the high opposition to harm its reputation. In this case $\rho > 0$. If $\gamma_O = H$, introducing a bill allows the high opposition to improve its reputation by filibustering. In this case the majority faces a tradeoff between its expected policy and opponent-reputation payoffs. Substituting $\sigma_f(H) = 1$ and $\sigma_f(L) < 1$ into ρ and applying Bayes' rule yields the term in Remark 2.

Remark 2.

$$\rho = \begin{cases} 0 & \text{if } \sigma_f(H) = \sigma_f(L) = 1, \\ \left(\frac{1-\sigma_f(L)}{2}\right)\left(q - \frac{\beta}{2(1+\sigma_f(L))}\right) & \text{if } \sigma_f(H) > \sigma_f(L) \quad \text{and} \quad \gamma_O = H. \end{cases}$$

Otherwise, $\rho > 0$.

I now identify how ρ and the majority's expected own-reputation payoff influences its decision whether to introduce a bill. From Lemma 2, both types table in every equilibrium if $c_M \leq \alpha/2$. The majority's response to a filibuster therefore provides no new information to the MC. Lemma 1 establishes that both types of the majority play the same bill-introduction strategy in every equilibrium in which both types table. Because the two types are distinguished only by their cost of fighting, each type receives an identical expected payoff from introducing a bill. Because of this, under the refinement the MC does not interpret an unexpected action at the bill-introduction stage as a signal of the majority's type. The majority therefore expects its type to remain hidden whether it introduces a bill or not. Thus, only policy and the opposition's reputation, ρ, influence its decision to introduce a bill. Under the efficiency condition I apply to equilibrium, the majority introduces a bill if and only if $\rho > 0$. Thus if $c_M \leq \alpha/2$, the majority's strategy is Bill-Table if $\rho > 0$ and NB-Table if $\rho \leq 0$.

For $c_M \geq \alpha$, Lemma 2 establishes that the majority separates in response to a filibuster in every equilibrium. If both types of the opposition filibuster with probability one, the high majority expects to reveal congruence with the MC by fighting if it introduces a bill. The low majority, on the other hand, expects to reveal incongruence. Under the efficiency criterion I employ, only the high majority introduces a bill. Rather than take extra steps to reveal incongruence, the low majority reveals its type at the bill-introduction stage. Thus the majority's strategy is MS–MS if the opposition's strategy is filibuster. If the opposition allows a vote with positive probability, introducing a bill allows the high opposition to signal. In the $c_M \leq \alpha/2$ case, this deters the majority from introducing a bill if $\rho \leq 0$. For $c_M \geq \alpha$, if the high opposition signals by filibustering, the high majority signals by fighting the filibuster.

Because parties value their own reputation at least as highly as their opponent's ($\alpha \geq \beta$), the high majority strictly prefers to introduce a bill. Thus, the high majority introduces a bill in every equilibrium if $c_M \geq \alpha$. Because of this, the MC interprets *no bill* as a signal that the majority is a low type in every equilibrium. The low majority's type is, therefore, revealed if it either does not introduce a bill or introduces a bill and the opposition filibusters. If it introduces a bill and the opposition allows a vote, it earns a reputation of $\mu_M(\textit{allow vote}) = \mu_M(\textit{bill})$ where $\mu_M(\textit{bill}) = 1$ in a MS–MS equilibrium and $\mu_M(\textit{bill}) = 1/2$ in a Bill–MS equilibrium. In a MS–MS equilibrium, the low majority fools the MC into believing it is a high type if the opposition allows a vote. In a Bill–MS equilibrium, it preserves its initial reputation. I show in the Online Appendix that for $\alpha \geq \beta$, the low majority strictly prefers to introduce a bill in the hope of preserving its reputation if the opposition allows a vote with positive probability.[22] Thus if $c_M \geq \alpha$, the majority's strategy is MS–MS if the opposition's strategy is filibuster and Bill–MS otherwise.

Remark 3. If $c_M \leq \frac{\alpha}{2}$, the majority's strategy is Bill–Table if $\rho > 0$ and NB-Table otherwise. If $c_M \geq \alpha$, the majority's strategy is MS–MS if the opposition's strategy is Filibuster and Bill–MS otherwise.

Equilibrium

I now characterize the model's equilibrium for four cases: (i) $c_M \leq \alpha/2$ and $\gamma_O = L$, (ii) $c_M \leq \alpha/2$ and $\gamma_O = H$, (iii) $c_M \geq \alpha$ and $\gamma_O = H$, and (iv) $c_M \geq \alpha$ and $\gamma_O = L$. With the nomenclature defined in Tables 2 and 3, it is straightforward to describe an equilibrium in terms of both parties' strategies. I use a three-part hyphenated label that describes the majority's bill-introduction strategy first, the opposition's strategy second, and the majority's response strategy last. For example, in a Bill–OS–MS equilibrium both types of the majority introduce a bill, the opposition separates, and the majority separates in response to a filibuster.

I first characterize the equilibrium for the two cases in which $c_M \leq \alpha/2$ (Figure 3).[23] If $c_M \leq \alpha/2$, the cost of fighting is sufficiently low that the majority's actions do not reveal credible information about its type. Both types table in equilibrium and introduce a bill if and only if its expected policy and opponent-reputation payoff, ρ, is sufficiently high. From Remark 3, the majority's strategy is Bill–Table if $\rho > 0$ and NB–Table if $\rho \leq 0$. Because both types of the majority play the same strategy in equilibrium, the opposition's net expected opponent-reputation payoff from filibustering is $\delta = 0$. The opposition's strategy is therefore given by Lemma 4 for $\delta = 0$ if $\gamma_O = L$ and Lemma 3 for $\delta = 0$ if $\gamma_O = H$.

[22] More precisely, I show that the low opposition strictly prefers to introduce a bill for all opposition strategies consistent with Lemmas 3 and 4 in which $\sigma_f(L) < 1$.

[23] Figures 3–7 display $q \in [0, 4]$ and $c_O \in [0, 4]$ for $\alpha = \beta = 2$.

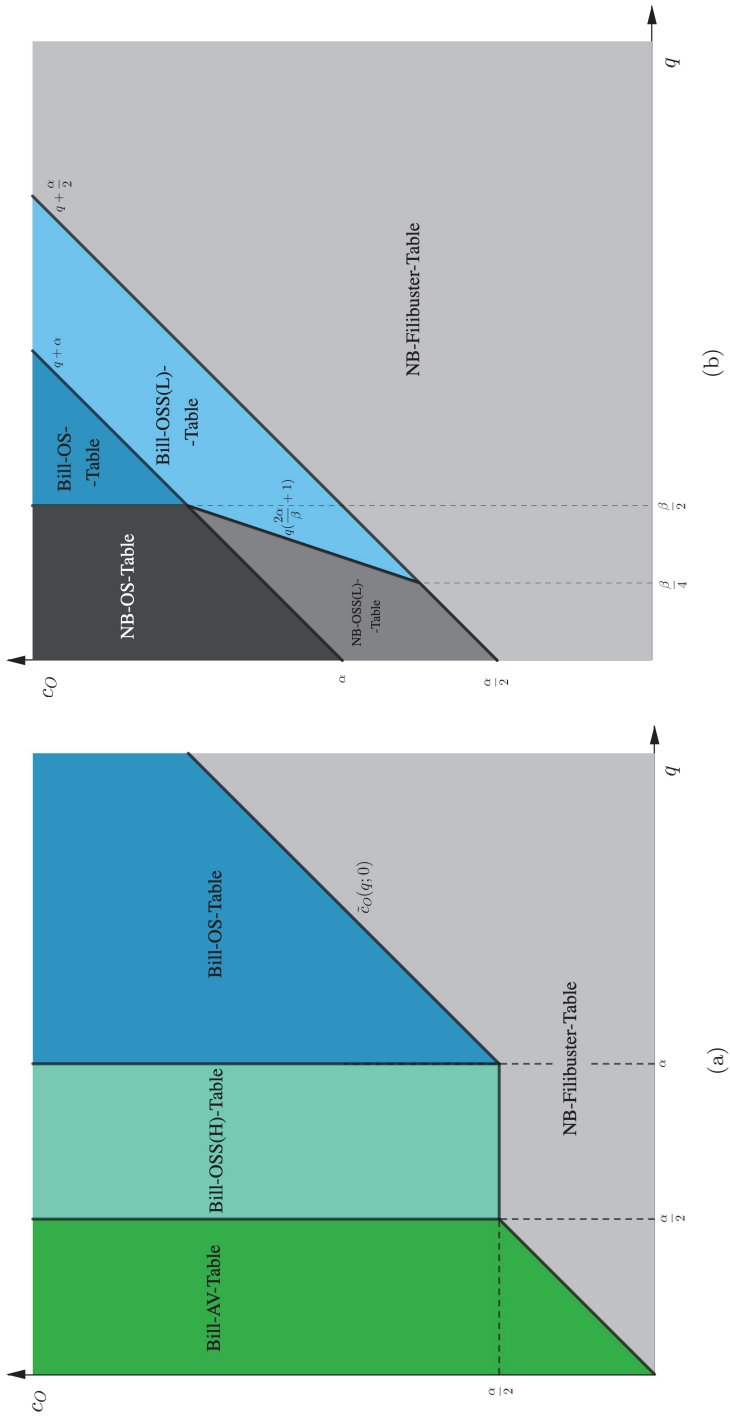

Figure 3: Equilibrium if $c_M \leq \frac{\alpha}{2}$. (a) $\gamma_O = L$, (b) $\gamma_O = H$.

For $\gamma_O = L$, Remark 2 shows that $\rho > 0$ unless the opposition's strategy is Filibuster. From Lemma 4, the opposition's equilibrium strategy is Filibuster if $c_O \leq \tilde{c}(q, 0)$. Without the threat of signaling by the high opposition, the majority introduces a bill if the opposition allows a vote with positive probability. If $c_O > \tilde{c}(q, 0)$, the low opposition allows a vote and the high opposition's probability of filibustering increases in q as described in Lemma 4.

Proposition 1. *Suppose $c_M \leq \frac{\alpha}{2}$ and $\gamma_O = L$. If $c_O \leq \tilde{c}_O(q, 0)$ the equilibrium is NB–Filibuster–Table. If $c_O > \tilde{c}_O(q, 0)$, the equilibrium is Bill–AV–Table if $q \leq \frac{\alpha}{2}$, Bill–OSS(H)–Table if $q \in (\frac{\alpha}{2}, \alpha)$, and Bill–OS–Table if $q \geq \alpha$.*

For $\gamma_O = H$, Lemma 3 implies that the opposition's strategy is Filibuster if $c_O \leq \alpha/2$. In this case the majority chooses not to introduce a bill rather than take extra steps to receive the same payoff. If $c_O > q + \alpha$, the opposition's strategy is OS. Substituting $\sigma_f(L) = 0$ into Remark 3 shows that $\rho > 0$ if and only if $q > \beta/2$. If $c_O \in (q + \alpha/2, q + \alpha)$, the opposition's strategy is OSS(L). Substituting $\sigma_f(L) = [\alpha(c_O - q)^{-1} - 1]$ into Remark 2 shows that $\rho > 0$ if and only if

$$q > \frac{\beta}{2}\left(\frac{c_O - q}{\alpha}\right)$$

Notice that the inequality fails if $q \leq \beta/4$ and holds if $q > \beta/2$. For $q \in (\beta/4, \beta/2]$ and $c_O \in (q + \alpha/2, q + \alpha)$, the majority introduces a bill if and only if c_O is sufficiently low. As c_O rises, the signal that the filibuster sends about the opposition's type becomes strong enough to prevent the majority from facilitating this signal by introducing a bill.

Proposition 2. *Suppose $c_M \leq \frac{\alpha}{2}$ and $\gamma_O = H$. If $c_O \leq q + \frac{\alpha}{2}$ the equilibrium is NB–Filibuster–Table. If $c_O \in (q + \frac{\alpha}{2}, q + \alpha)$, the equilibrium is NB–OSS(L)–Table if $q \leq \frac{\beta}{2}\left(\frac{c_O - q}{\alpha}\right)$ and Bill–OSS(L)–Table otherwise. If $c_O \geq q + \alpha$, the equilibrium is NB–OS–Table if $q \leq \frac{\beta}{2}$ and Bill–OS–Table otherwise.*

I now characterize equilibrium for the two cases in which $c_M \geq \alpha$ (Figure 4). For $c_M \geq \alpha$, Remark 3 establishes that the majority's strategy is MS–MS if the opposition's strategy is Filibuster and Bill–MS otherwise. The opposition's expected opponent-reputation payoff depends on the majority's bill-introduction strategy. If the majority's strategy is MS–MS, the opposition expects the high majority's type to be revealed whether it filibusters or allows a vote. If the majority's strategy is Bill–MS, the opposition allows the majority to signal if it filibusters. Formally, $\delta = 0$ if the majority plays MS–MS and $\delta = \beta/4$ if the majority plays Bill–MS.

For $\gamma_O = L$, Lemma 4 establishes that if $\delta = 0$, the opposition's strategy is Filibuster if and only if $c_O \leq \tilde{c}_O(q, 0)$. Thus if $c_M \geq \alpha$ and $\gamma_O = L$, a MS–Filibuster–MS equilibrium exists if and only if $c_O \leq \tilde{c}_O(q, 0)$. If the $\delta = \beta/4$, the opposition allows a vote with positive probability if $c_O > \tilde{c}_O(q, \beta/4)$.

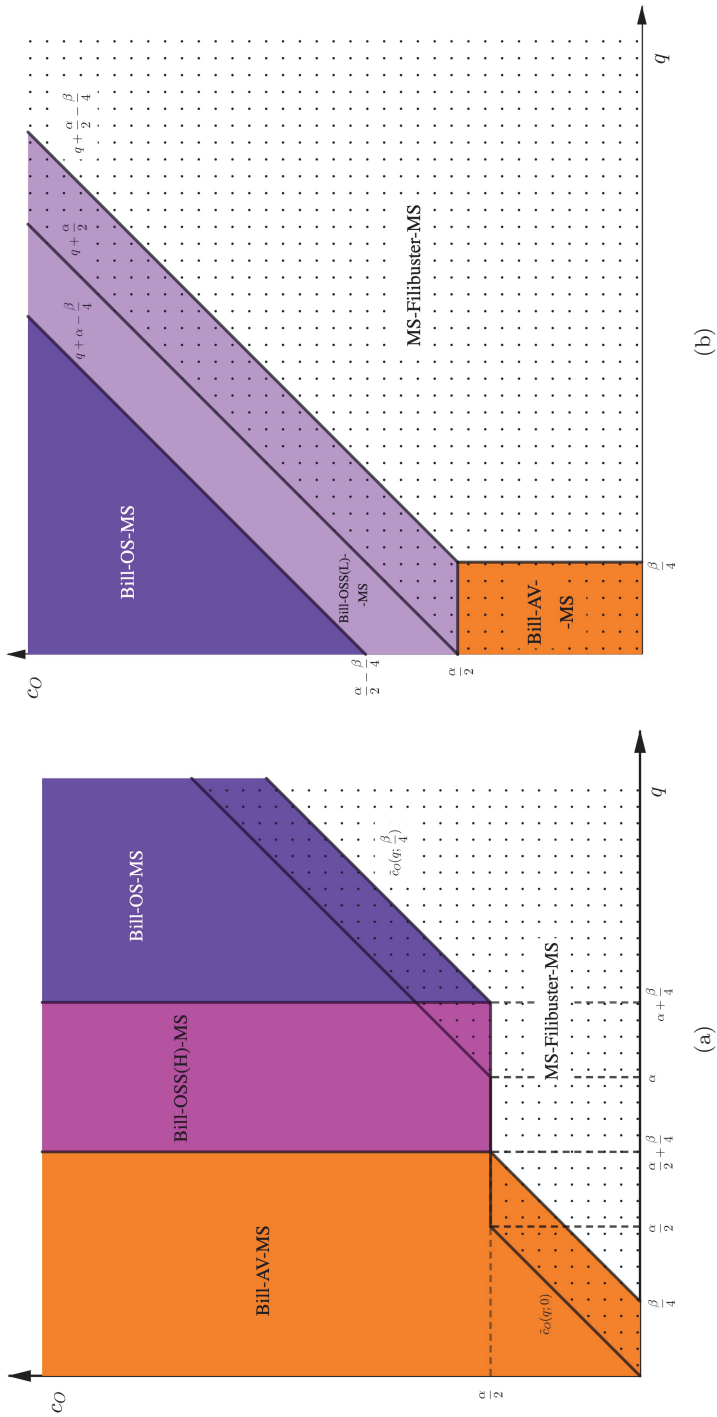

Figure 4: Equilibrium if $c_M \geq \alpha$. (a) $\gamma_O = L$, (b) $\gamma_O = H$.

Therefore if $c_M \geq \alpha$ and $\gamma_O = L$, a Bill–MS equilibrium exists if and only if $c_O > \tilde{c}_O(q, \beta/4)$. In the Bill–MS equilibrium, the low opposition allows a vote with probability one and the high majority's probability of filibustering increases in q as described in Lemma 4.

Proposition 3. *Suppose $c_M \geq \alpha$ and $\gamma_O = L$. A MS–Filibuster–MS equilibrium exists if and only if $c_O \leq \tilde{c}_O(q, 0)$. A Bill–MS equilibrium exists if and only if $c_O > \tilde{c}_O(q, \frac{\beta}{4})$. The Bill–MS equilibrium is Bill–AV–MS if $q \leq \frac{\alpha}{2} + \frac{\beta}{4}$, Bill–OSS(H)–MS if $q \in (\frac{\alpha}{2} + \frac{\beta}{4}, \alpha + \frac{\beta}{4})$, and Bill–OS–MS if $q \geq \alpha + \frac{\beta}{4}$.*

For $\gamma_O = H$, Lemma 3 establishes that if $\delta = 0$, the opposition's strategy is Filibuster if and only if $c_O \leq q + \alpha/2$. Thus if $c_M \geq \alpha$ and $\gamma_O = H$, a MS–Filibuster–MS equilibrium exists if and only if $c_O \leq q + \alpha/2$. For $\delta = \beta/4$, Lemma 3 implies that a Bill–AV–MS equilibrium exists if $c_O \leq \alpha/2$ and $q < \beta/4$. In this case, filibustering sends an insufficiently strong signal to the OC for the high opposition to allow the high majority to signal by fighting. If $c_O > \alpha/2$ and $q < \beta/4$, the strength of the signal is sufficiently strong that the high opposition filibusters with probability one. If $q \geq \beta/4$, the high opposition filibusters with probability one and the low opposition allows a vote with positive probability if and only if $c_O > q + \alpha/2 - \beta/4$. In each case the low opposition's probability of filibustering in the Bill-MS equilibrium decreases in c_O and increases in q as described in Lemma 3.

Proposition 4. *Suppose $c_M \geq \alpha$ and $\gamma_O = H$. A MS–Filibuster–MS equilibrium exists if and only if $c_O \leq q + \frac{\alpha}{2}$. A Bill–MS equilibrium exists if and only if $c_O \leq \frac{\alpha}{2}$ and $q < \frac{\beta}{4}$. A Bill–OSS(L)–MS equilibrium exists if and only if $c_O \in (\max\{\frac{\alpha}{2}, q - \frac{\beta}{4} + \frac{\alpha}{2}\}, q - \frac{\beta}{4} + \alpha)$. A Bill–OS–MS equilibrium exists if and only if $c_O \geq q - \frac{\beta}{4} + \alpha$.*

Effect of Reputation

I now analyze the influence of reputation on the parties' equilibrium behavior. To facilitate this analysis, Corollary 1 characterize the model's equilibrium for $\alpha = \beta = 0$.

Corollary 1. *If $\alpha = \beta = 0$, the equilibrium is NB–Filibuster–Table if $c_O \leq q$ and Bill-OS-Table if $c_O > q$.*

Figure 5 illustrates Corollary 1. Because the majority understands that any attempt to defeat a filibuster will be unsuccessful, it has no reason to fight if $\alpha = 0$. It therefore tables in equilibrium. In order to defend the status quo, the high opposition always filibusters. No concern about appearing incongruent with its constituency ($\alpha = 0$) or enabling the high majority to signal ($\beta = 0$) deters it from filibustering. The low opposition filibusters if and only if $c_O \leq q$.

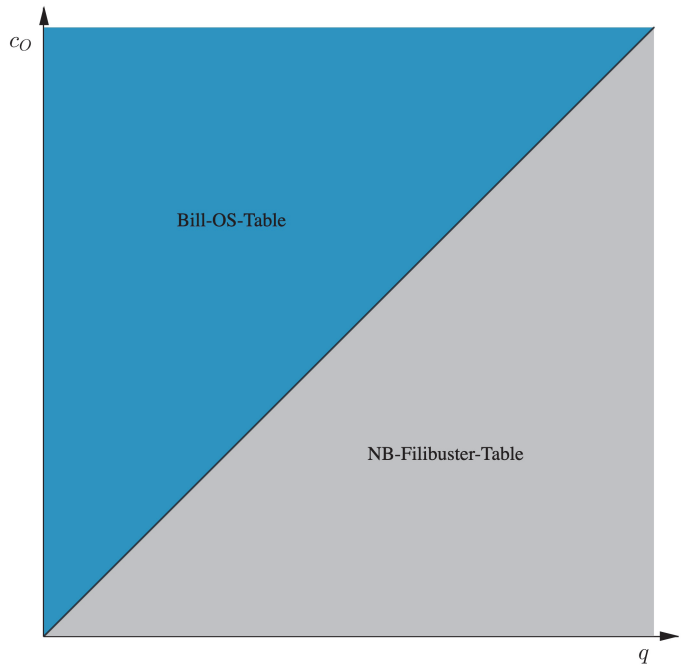

Figure 5: Equilibrium if $\alpha = \beta = 0$.

At the bill-introduction stage, the majority introduces a bill if and only if the opposition allows a vote with positive probability. No threat of high opposition signaling deters it from introducing a bill if the low opposition allows a vote and no interest in signaling to its constituency induces it to introduce a bill if both types filibuster. It therefore introduces a bill if and only if $c_O > q$.

I analyze the influence of parties' interests in their own reputation on their equilibrium behavior by comparing parties' equilibrium strategies for $\alpha > \beta = 0$ to $\alpha = \beta = 0$. The high majority fights only to send a message to its constituency. The message is credible if and only if c_M is sufficiently high and the signaling induces it to introduce a bill if and only if $\alpha > 0$.

Proposition 5. *If $\alpha = 0$ the majority tables in every equilibrium and introduces a bill if and only if the opposition allows a vote with positive probability. If $\alpha > 0$ the high majority introduces a bill and fights in every equilibrium if $c_M \geq \alpha$.*

No own-reputation incentive is necessary for the high opposition to filibuster. If $\alpha = 0$, it always blocks a change to the status quo. If $\gamma_O = H$ and $\alpha > 0$, filibustering may give the high opposition the added benefit of improving its

reputation but this is not necessary. If $\gamma_O = H$, the opposition's concern about its own reputation influences its behavior only by inducing the low opposition to filibuster for higher values of c_O than it otherwise would in order to avoid appearing incongruent. Specifically, it filibusters with positive probability for $c_O > q$ only if $\alpha > 0$. If $\gamma_O = L$ on the other hand, the high majority may allow a vote in equilibrium to protect its reputation. If $c_O > q$ the cost of filibustering is sufficiently high that a filibuster signals to the OC that the opposition is a low type. If $q < \alpha/2$, value of a policy victory in the Senate is sufficiently low that the high opposition is unwilling to harm its reputation in defense of the status quo. If both conditions are met, the high opposition allows a vote to keep its type hidden. Additionally, if $\gamma_O = L$ and $\alpha > 0$, low opposition allows a vote for lower values of c_O than it does for $\alpha = 0$ in order to signal to the low OC.

Proposition 6. *If $\alpha = 0$, the high opposition filibusters and the low opposition filibusters if and only if $c_O \leq q$. If $\alpha > \beta = 0$ and $\gamma_O = H$, the high opposition filibusters and the low opposition filibusters if $c_O \leq q + \frac{\alpha}{2}$. If $\alpha > \beta = 0$ and $\gamma_O = L$, the high opposition allows a vote with positive probability if $q < \alpha$ and $c_O > \min\{q, \frac{\alpha}{2}\}$, and the low opposition allows a vote if $q > \frac{\alpha}{2}$ and $c_O > \max\{\frac{\alpha}{2}, q - \frac{\alpha}{2}\}$.*

Proposition 6 can be visualized by comparing Figures 3a and 5. The former depicts the model's equilibrium for $\gamma_O = L$ and $c_M \leq \alpha/2$ where the opposition's endogenous expected opponent-reputation payoff is 0 whether it filibusters or allows a vote.

I now consider the influence of opponent reputation on parties' equilibrium behavior by comparing results for $\beta = 0$ to $\beta > 0$. If $\beta = 0$, the majority always introduces a bill if the opposition allows a vote with positive probability. If $\beta > 0$ and $\gamma_O = H$, opposition signaling may deter the majority from introducing a bill. For $c_M \geq \alpha$, the majority's incentives to defend or improve its reputation overwhelm any deterrent for the high majority. If $c_M \leq \alpha/2$, on the other hand, the majority's actions in equilibrium provide no information to the MC about its type. In this case the threat of opposition signaling deters the majority from introducing a bill if q is sufficiently low.

Proposition 7. *If $\beta = 0$, the majority introduces a bill if the opposition separates. If $\beta \geq 2q$, $\gamma_O = H$, and $c_M \leq \frac{\alpha}{2}$, the majority does not introduce a bill if the opposition separates.*

If $\gamma_O = L$, opposition signaling never deters the majority from introducing a bill. Rather, if the high opposition filibusters with a higher probability than the low opposition, the majority positions the high opposition to harm its reputation by introducing a bill. Note, however, that the prospect of indirectly harming its opponent's reputation has no effect on the majority's equilibrium

bill-introduction strategy. If $\beta = 0$ and the high opposition filibusters with a higher probability than the low opposition, the majority introduces a bill in order to secure a policy victory. If $\beta > 0$, the damage that the majority indirectly does to the high opposition's reputation is simply a nice bonus for the majority. In this sense then there are no *blame game bills* (Groseclose and McCarty, 2001) where the majority introduces a bill in order to force the opposition to harm its reputation. The possibility of a policy victory is sufficient to compel it to introduce a bill.

For the opposition, the threat of majority signaling deters it from filibustering only if $\beta > 0$ and $c_M \geq \alpha$. If $\beta = 0$ or $c_M \leq \alpha/2$, the high opposition filibusters in every equilibrium if $\gamma_O = H$. If $\beta > 4q$ and $c_M \geq \alpha$, the value of defending the status quo is sufficiently low that the high opposition is unwilling to allow the high majority to signal unless filibustering also improves its own reputation. If $c_O \leq \alpha/2$, filibustering does not send a sufficiently strong signal (if any signal at all) to induce the high opposition to filibuster.

Proposition 8. *Suppose $\gamma_O = H$. If $\beta = 0$, the high opposition filibusters in every equilibrium. If $\beta \geq 4q$ and both types of the majority introduce a bill, both types of the opposition allow a vote if $c_M \geq \alpha$ and $c_O \leq \frac{\alpha}{2}$.*

For $\gamma_O = L$, the high opposition may allow a vote in order to avoid signaling incongruence. If the high opposition additionally expects the filibuster to facilitate messaging by the high majority, it allows a vote for lower c_O and higher q than it does if it only fears harming its own reputation.[24]

Equilibrium Outcomes

In this section, I examine the model's empirical implications by analyzing how c_M, c_O, and q influence equilibrium outcomes. I first consider the model's implications regarding the frequency with which filibusters occur by studying how the model's parameters affect the equilibrium probability of a filibuster. I then consider the model's implications regarding the proportion of cloture votes to tabling motions. Finally, I analyze the conditions under which the Senate is supermajoritarian.

Probability of a Filibuster

Several scholars have documented an increase in the use of the filibuster over time, particularly since the 1970s (Bell, 2011; Binder and Smith, 1997; Koger, 2010; Smith, 2014). The model focuses on legislative bargaining on a single policy issue for which the majority and opposition have opposing preferences.

[24]This region is $c_O \in (\tilde{c}_O(q;0), \tilde{c}_O(q;\beta/4))$ for $q \leq \alpha/2 + \beta/4$, represented by the parallelogram in the lower left corner of Figure 4a.

Accordingly, it is somewhat limited in its ability to explain the frequency of filibusters. Outside of the model, the frequency of filibusters may be influenced by variation in the quantity of policy issues on which parties disagree. The model does, however, permit analysis of the probability that a filibuster may occur on a single issue over which the two parties have opposing preferences. Figure 6 illustrates the probability with which a filibuster occurs in each of the four cases analyzed.[25]

Comparing the left two graphs in Figure 6 to the two on the right suggests that c_M generally has a positive effect on the frequency of filibusters. If $\gamma_O = H$, filibusters are always possible if $c_M \geq \alpha$. If $\gamma_O = H$ and $c_M \leq \alpha/2$, filibusters are possible only if c_O and q are sufficiently high. Similarly for $\gamma_O = L$, unless $c_O \geq \alpha/2$ and $q \in (\alpha/2, \alpha/2 + \beta/4)$, filibusters are possible for $c_M \leq \alpha/2$ only if they are possible for $c_M \geq \alpha$.[26] This effect of c_M on the probability of filibusters is generated by the message that fighting a filibuster sends to the high MC. For low c_M, the majority introduces a bill only if the opposition allows a vote. For high c_M, the high majority introduces a bill to provoke a filibuster and signal to its constituency by fighting. If c_M has risen along with the frequency of filibusters over the past 50 years as many scholars suggest, the model's results suggest that majority signaling helps to explain this observed correlation.

The model suggests a generally positive relationship between q and the frequency of filibusters if $c_M \geq \alpha$. In this case high majority always introduces a bill either to signal by fighting a filibuster or to obtain a policy victory. Filibusters fail to occur with positive probability in equilibrium only if both types of the opposition allow a vote with probability one. This occurs only if q is sufficiently low such that either the opposition is unwilling to harm its reputation to defend the status quo or allow the majority to signal by fighting. As discussed above, q may be considered higher under unified than divided government. If c_M has become sufficiently high since the 1970s to facilitate majority signaling, the model suggests a positive relationship between unified government and the likelihood of a filibuster in the contemporary Senate.

If $c_M \leq \alpha/2$, on the other hand, filibusters occur only if q and c_O are sufficiently high. Moreover, the value of q necessary for a filibuster to occur is increasing in c_O. For sufficiently high values of q, both types of the opposition filibuster if c_O is sufficiently low. Note that this implies a positive relationship between c_O and the probability of a filibuster if q is sufficiently high and $c_M \leq \alpha/2$. Although the probability with which the opposition filibusters is decreasing in c_O if q is sufficiently high, without the ability to signal its type

[25]More precisely, Figure 6 displays the equilibrium probability that the game ends in either *table* or *fight*, each of which are preceded by a filibuster.

[26]For $c_O \geq \alpha/2$ and $q \in (\alpha/2, \alpha/2 + \beta/4)$, majority signaling deters the opposition from filibustering if $c_M \geq \alpha$ but not if $c_M \leq \alpha/2$.

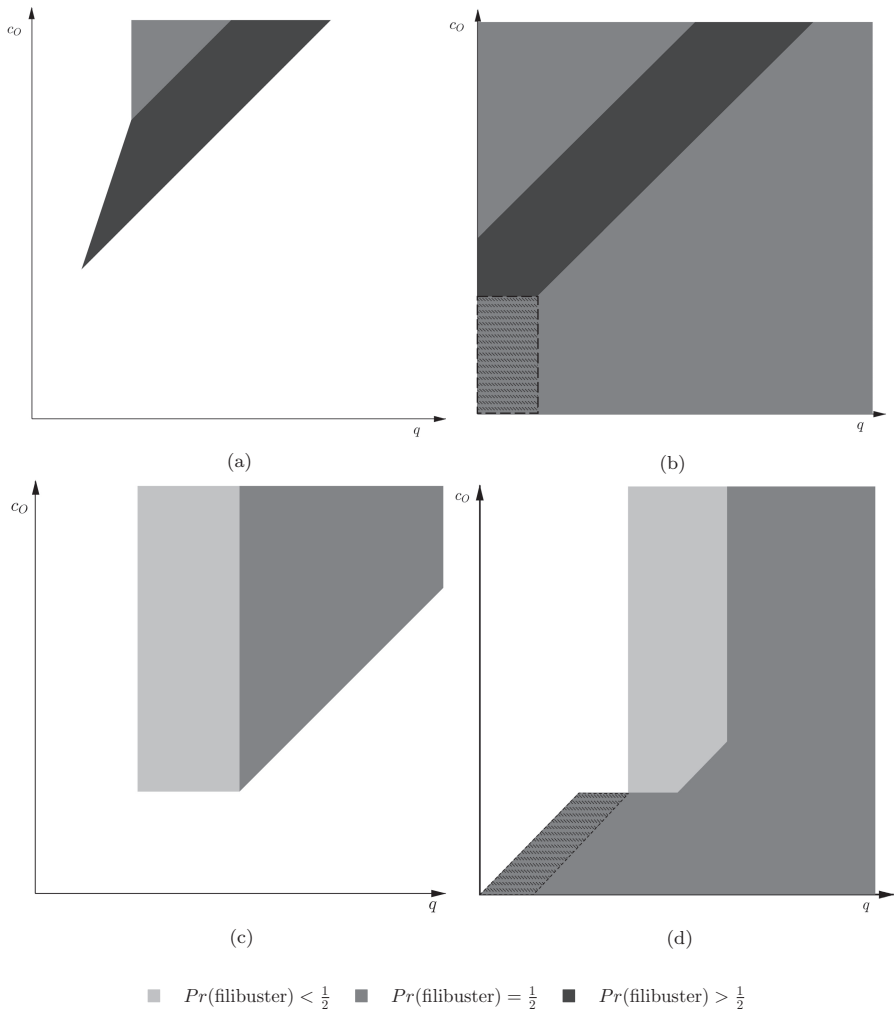

Figure 6: Equilibrium probability of a filibuster. In unshaded regions no equilibrium exists in which the game ends in *fight* or *table* with positive probability. In the thatched regions, an equilibrium in which the probability of a filibuster is 1/2 and an equilibrium in which the probability of a filibuster is zero exist (a) $\gamma_O = H$ and $c_M \leq \frac{\alpha}{2}$, (b) $\gamma_O = H$ and $c_M \geq \alpha$, (c) $\gamma_O = L$ and $c_M \leq \frac{\alpha}{2}$, and (d) $\gamma_O = L$ and $c_M \geq \alpha$.

by fighting, the majority introduces a bill only if the opposition allows a vote with positive probability. For sufficiently low values of q, filibusters fail to occur for all c_O. If the opposition's strategy is not Filibuster, either the threat of opposition signaling deters the majority from introducing a bill ($\gamma_O = H$)

or the high opposition is unwilling to harm its reputation to defend the status quo ($\gamma_O = L$).

A similar relationship between c_O and the probability of a filibuster holds for $c_M \geq \alpha$ and $\gamma_O = H$. Filibusters occur with positive probability in every equilibrium unless $c_O \leq \alpha/2$. For such a low c_O, filibustering provides little if any information about the opposition's type. Its concerns about majority signaling can therefore deter it from filibustering if q is sufficiently low. If $c_M \geq \alpha$ and $\gamma_O = L$, on the other hand, a negative relationship between c_O and the probability of a filibuster is possible. In this case, the low opposition either filibusters or allows a vote with probability one. If c_O is sufficiently low that both types of the opposition filibuster, only the high majority provokes the filibuster to signal by fighting it. If c_O rises enough, the low opposition allows a vote. The low majority responds by introducing a bill to obtain a policy victory. The probability of observing a filibuster therefore does not increase. If q is sufficiently low that the high opposition allows a vote with positive probability to avoid harming its reputation, a rise in c_O results in a decline in the probability of a filibuster.

Cloture Votes vs. Tabling Motions

The majority's primary tactic for fighting filibusters in the contemporary Senate is cloture (Koger, 2010). While less dramatic than the traditional tactic of forcing the opposition to hold the floor, Lee (2016, p. 66) notes that in the contemporary Senate, cloture votes may "effectively communicate what a congressional majority party stands for, even when they have nothing to achieve in policy terms." In the model's equilibrium, these messaging cloture votes occur only if c_M is high enough for the message to be credible. The probability that the game ends in *fight* is therefore increasing in increasing c_M. Conditional on a filibuster occurring, the probability that the game ends in *table* is decreasing in c_M. This suggests that c_M has a positive effect on the frequency of cloture votes and the proportion of cloture votes to tabling motions. Several scholars have documented a steady increase in the number of cloture votes and proportion of cloture votes to tabling motions since the 1970s (Algara and Zamadics, 2019; Binder *et al.*, 2002; Koger, 2010). If c_M has steadily risen during this period (Binder and Smith, 1997), the results of the model help to provide an explanation for this trend.

The 60-Vote Senate

Figure 7 depicts regions of the parameter space in which the game ends in *allow vote* with probability zero in every equilibrium. In each case the Senate is endogenously supermajoritarian. The model reveals two sources of

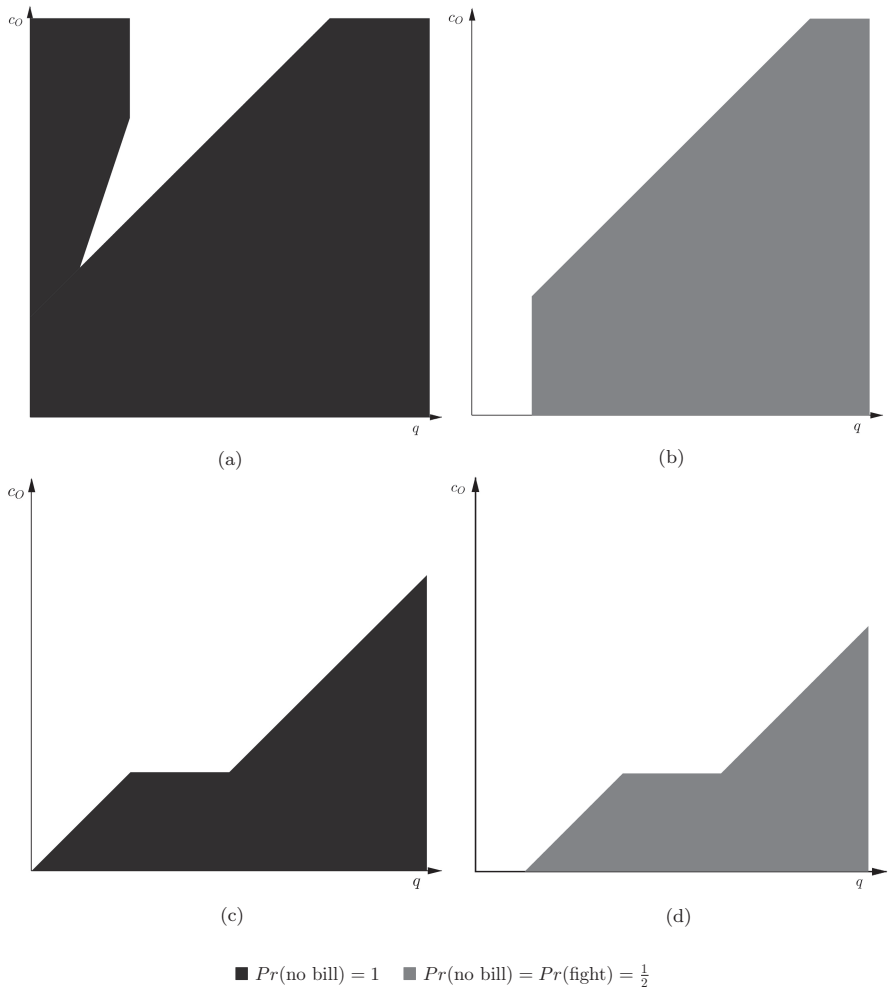

Figure 7: The Senate is supermajoritarian in shaded regions. An equilibrium exists in which the game ends in *allow vote* with positive probability only in unshaded regions. (a) $\gamma_O = H$ and $c_M \leq \frac{\alpha}{2}$, (b) $\gamma_O = H$ and $c_M \geq \alpha$, (c) $\gamma_O = L$ and $c_M \leq \frac{\alpha}{2}$, and (d) $\gamma_O = L$ and $c_M \geq \alpha$.

supermajoritarianism. First, a bill does not pass without the support of the opposition if both types of the opposition filibuster with probability one. This occurs if q is sufficiently high and c_O is sufficiently low. Second, if $\gamma_O = H$ and c_O is sufficiently high such that the low opposition allows a vote with positive probability, opposition signaling may deter the majority from introducing a bill. As illustrated in Figure 7a, this occurs if q is sufficiently low and $c_M \leq \alpha/2$.

A common explanation for the emergence of the 60-vote Senate points to declining costs of filibustering to the opposition after the early 1970s (Binder *et al.*, 2002; Binder and Smith, 1997; Koger, 2010; Oppenheimer, 1985; Sinclair, 1989). The results of the model are consistent with this explanation, particularly if $q \geq \beta/2$ in which case majority signaling never deters the high opposition from filibustering. Results for $q < \beta/2$, however, show that low c_O is neither necessary nor sufficient for the 60-vote Senate. To see that low c_O is not necessary, note in Figure 7 that if $q < \beta/4$ and $c_M \geq \alpha$, it is possible for a bill to pass with a simple majority of votes even if c_O is near zero. If $\gamma_O = L$, this is due to the opposition's unwillingness to appear incongruent when the policy consequences of the passage of a bill in the Senate are minimal. If $\gamma_O = H$, the opposition allows a bill with low policy consequences to pass in the Senate to prevent majority signaling. To see that low c_O is not sufficient, notice in Figure 6a that if $q \leq \beta/4$, $\gamma_O = H$, and $c_M \leq \alpha/2$, the Senate is supermajoritarian for all c_O. The low opposition allows a vote with positive probability if $c_O \geq q + \alpha/2$ which makes the filibuster a credible signal for the high opposition. If $q \leq \beta/4$, this deters the majority from making an attempt to change the status quo. If $q \in (\beta/2, \beta/4)$, a rise in c_O can even cause supermajoritarianism locally by making a filibuster a more precise signal of the opposition's type.

Conclusion

I examine how reputational interests shape the strategic behavior of parties in the U.S. Senate where costly acts of obstruction may reveal information to key constituencies about a party's policy priorities. While the scope of the model is limited to settings in which a bill does not have the support of a sufficient number of senators to invoke cloture, the analysis generates several potentially useful insights into the influence of reputation on lawmaking processes and outcomes in the Senate.

The results of the model show how parties take actions they would not if only interested in policy in order to improve or protect their reputation. If the cost of fighting a filibuster is sufficiently high, the majority introduces bills its knows will be filibustered in order to send message to a key constituency by engaging in a futile attempt to defeat the filibuster. I also identify conditions under which opposition filibusters a bill that it otherwise would not to avoid harming its reputation with a constituency that values the policy issue that the bill addresses. Under alternative conditions, I find that the opposition declines to filibuster a bill it otherwise would to avoid harming its reputation with a constituency that values other policy issues more highly. The model also shows how parties' concerns about their opponent's reputation can shape their behavior. If the policy implications of bills passed in the Senate are minimal

(for example, under divided government), the majority may refuse to introduce bills that could potentially pass to prevent the opposition from filibustering. Similarly, the opposition may allow votes on bills that it could defeat with a filibuster to deny the majority the opportunity to fight the filibuster.

In addition to disclosing how these reputational interests influence parties' strategic behaviors, the model admits substantive implications concerning the frequency with which filibusters occur, the proportion of cloture votes versus tabling motions in response to filibusters, and the conditions under which the Senate is endogenously supermajoritarian. Results suggest a positive relationship between the cost of fighting a filibuster to the majority and the frequency of filibusters. As this cost rises, majorities with high-intensity preferences introduce bills they know will be filibustered and engage in futile attempts to overcome the filibuster to signal to a key constituency. The same mechanism yields a positive relationship between the cost of fighting a filibuster for the majority and the proportion of cloture votes to tabling motions. These results help to rationalize an observed increase in the frequency of filibusters, the number of cloture votes, and the proportion of cloture votes to tabling motions since the 1970s when the opportunity costs of fighting a filibuster began to rise. Results also suggest a positive relationship between unified government and the frequency of filibusters if the cost of fighting a filibuster is high enough to function as a credible signal of the majority's preferences. Under unified government, the opposition stands as the last line of defense against a bill becoming law. The majority exploits the opposition's determination to defend the status quo to send a message by provoking and fighting a filibuster. Under divided government where the policy consequences of a bill passed in the Senate are muted by veto players outside of the Senate, the opposition allows a vote to deny the majority the chance to signal.

The model also suggests that low costs of filibustering to the opposition are a salient factor in determining whether the senate is de facto supermajoritarian if the passage of a bill in the Senate has significant policy implications (e.g., under unified government). In this case the opposition always defends the status quo if the cost of filibustering is sufficiently low. If costs of filibustering rise a sufficient amount, the opposition filibusters only if it intensely values policy. Although the majority may enable the opposition to improve its reputation by introducing a bill, it accepts this risk in the hope of obtaining a meaningful policy victory. If parties expect a bill to have little practical effect on policy on the other hand, the positive relationship between the cost of filibustering and supermajoritarianism breaks down. This result discloses a mechanism through which proposals to curtail supermajoritarianism with reforms designed to raise the cost of filibustering may fail. A rule that forces filibustering senators to physically hold the floor may inadvertently raise the credibility of a filibuster as a signal that a senator shares the values of a key

constituency. In response, the majority may leave bills off the agenda to deny the opposition this platform.

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