Polarization and Presidential Prerogative:
An Analysis of Legislative Bargaining Under Signing Statements

Ashley Moraguez
Emory University
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Abstract

Presidents have unilateral prerogatives that they often use to seemingly undo bargains struck in the legislative process. The president’s prerogative powers influence not only the political outcomes we see but also affect the process by which legislators craft policy in the first instance. Why do legislators commit to bargains within the legislature, if the president can unravel those deals? In answering this question, I focus on the president’s ability to issue signing statements on legislation and its effect on legislative bargaining. I argue that legislators bargain over their policy and electoral interests in the face of looming presidential action and that this induces legislators to commit to bargains, even when they know the president will not maintain their agreements. The results of the model provide predictions about inter- and intra-branch bargaining distinct from extant models of veto bargaining. I evaluate one of these primary predictions—that signing statements are more likely when congressional polarization is low. Using data on partisan polarization and executive signing statements from 1981 until 2012, I find that signing statements are less likely in the aggregate and on any given bill at lower levels of congressional polarization.
The Constitution of the United States grants the president an explicit role in the legislative process in the form of the veto. However, in addition to having the power to block legislation from becoming law, presidents often have the ability to alter what a law means. Bureaucratic directives are important tools for shaping the law, and signing statements often lay the groundwork for future interpretation of legislation. At the most basic level, a signing statement is simply a short document that presidents issue at the time that they sign a bill into law (Bradley and Posner 2006, Cooper 2002; 2005, Kelley 2003, Cutrone 2008, Kelley and Marshall 2008; 2010). However, these statements, which were once used for rhetorical purposes, have evolved into a means by which the president can alter policy outcomes. With a signing statement, the president can refuse to enforce or reinterpret provisions of legislation; in essence, he can provide his opinions for how a law should be enforced. Though not provided for in the Constitution, these statements have come to play a major role in the policy process and have concrete consequences for the implementation of policy.

In 2006, for instance, the George W. Bush administration faced significant opposition in Congress to the reauthorization of the USA PATRIOT Improvement and Reauthorization Act, stemming from concerns over civil liberties. Many legislators, especially in the Senate, demanded restrictions on the government’s ability to conduct searches and access private information under the bill. To avoid a filibuster that could have derailed the legislation, the Bush administration agreed to accept provisions that provided for congressional oversight of executive actions under the law (Savage 2007). On the same day Bush signed the legislation into law, however, he issued a signing statement upon the bill. The statement declared that the administration would construe any reporting and oversight provisions “in a manner consistent with the President’s constitutional authority to...withhold information the disclosure of which could impair foreign relations, national security, the deliberative processes of the Executive, or the performance of the Executive’s constitutional duties.”¹ The statement thus nullified the very provisions of the legislation that were responsible for its passage through Congress in the first place. That President Bush both had the power and the will to issue signing statements to affect the implementation of policy was, at this point, no secret to the members of Congress; just three months before, Bush had agreed to the McCain Torture Ban, only to use a signing statement that implicitly reneged on the bargain to which

¹The text of this signing statement can be found at www.whitehouse.gov/news/releases/2006/03/20060309-8.html.
both he and Congress had agreed.\textsuperscript{2} This example highlights a puzzle of legislative behavior: why did these legislators agree to invoke cloture if they knew Bush opposed the oversight provisions and could issue a statement that undermined the concession?

The use of signing statements to affect the implementation of policy is not a new phenomenon. As the executive branch has grown, so too have the policy powers available to the president. Presidents have come to employ executive orders, national security directives, presidential memoranda, as well as signing statements to supplement their veto power in the legislative process. In fact, presidents have issued signing statements to influence policy far more regularly than they have exercised their constitutional right to veto legislation since the 1970s.\textsuperscript{3} Figure 1 demonstrates the disparity in the usage of these presidential powers. Despite this, much of the literature on the presidency has focused solely on the veto. While the veto gives the president negative power over legislation, this scholarship shows that it also gives the president a more subtle influence over the

\textsuperscript{2}The text of this signing statement in regards to the McCain Torture Ban can be found at: \url{http://www.presidency.ucsb.edu/ws/index.php?pid=65259}

\textsuperscript{3}The signing statement was used occasionally for policy reasons in the 19th and early 20th centuries but was not used very often until Carter’s presidency. In 1986, under Reagan, signing statements became institutionalized as part of the Legislative History section of the \textit{United States Code Congressional and Administrative News} (Kelley 2007).
legislative process—that is, legislators try to anticipate and avoid the veto and, in doing so, incorporate the president’s preferences into the form of legislation (Krehbiel 1998, Cameron 2000, McCarty 1997). Given this pervasive influence of the veto on the policy process and the legislative calculus, it should follow that other presidential powers also have an impact on legislative bargaining. The scholarship on the prerogative powers of the presidency has largely focused on the effect these tools have on policy outcomes. It has not, however, examined the effect that these various policy tools have on crafting policy in the first instance. Do bargains struck in Congress anticipate subsequent executive action? Do legislators build their expectations into the laws they write? Can executive powers undermine, or perhaps facilitate, intra-branch bargaining? These prerogative powers of the office, I argue, can actually have important implications for the propensity for policy change in the American separation of powers system, for interactions between the branches, and perhaps, most importantly, for bargaining within the legislature itself.

In this paper, I analyze these dynamics through the specific case of the signing statement. Much of the literature on bargaining between the president and Congress assumes the president has a take-it-or-leave-it choice on legislation that has passed both chambers of Congress. However, the signing statement allows the president to manipulate policy outcomes after legislators have already agreed to a bargain in the legislature. This, I argue, creates a bargaining problem for legislators, which serves as the focal point of the project. The primary research questions herein addressed are: Why do legislators commit to bargains within the legislature, if the president can unravel those deals with a signing statement? That is, if the signing statement creates an inability on the part of the president to commit to keeping legislative bargains in tact, how (and why) do legislators come to agreements in the first place?

To answer these questions, I develop a formal model of bargaining between the executive and legislative branches under signing statements. I argue that presidential prerogatives such as the signing statement allow legislators to bargain over two separable dimensions; rather than just bargaining over the eventual policy outcome, legislators also bargain over the location of the policy proposal. That is, legislators are motivated by both position-taking and policy concerns and will have to balance these goals in making their voting and coalition decisions. The ability of legislators to bargain over two dimensions and reap benefits from two different policies has implications for the output we see from the legislature. The model reveals that, while the signing statement can
frustrate congressional bargaining under some conditions, it can also facilitate legislative bargains that would not otherwise have occurred. The dynamics of interest focus on how the president’s policy powers affect dynamics within the legislature, before policies even pass through the chambers. As such, the model yields predictions about legislative productivity, policy change, and gridlock distinct from other models of veto bargaining. I evaluate one of these primary predictions—that signing statements are more likely when congressional polarization is low. Using data on partisan polarization and executive signing statements from 1981 until 2012, I find that signing statements are less likely in the aggregate and on any given bill at lowers levels of congressional polarization. In what follows, I situate the signing statement in the extant literature on policy bargaining, set up the model and walk through its solution, as well as provide an empirical analysis of the relationship between polarization and signing statements. I conclude with a discussion of the implications that signing statements have for legislative productivity, policy change, and representation.

1 Bargaining Between and Within the Branches

Legislation is the product of bargaining. First, legislators must overcome a collective action problem in the legislature for legislation to be sent to the president (Aldrich 1995, Cox and McCubbins 1993; 2005). However, legislative bargaining does not occur in a vacuum—legislators must also consider the preferences and actions of other political actors in making their decisions to support or oppose legislation. Particularly, legislators must bargain under expectations for how the president will respond to bills that are sent to the executive branch for approval. These bargaining dynamics between the president and Congress can have implications for bargaining within the legislature, the focus of this project. As the president is equipped with various policy powers, legislators must consider his preferences when crafting legislation.

The scholarship on the presidency distinguishes the president’s veto from the unilateral powers of the office. The accepted definition of unilateral power is the “formal capacity of the president to make law on his own” (Moe and Howell 1999b). Much of the literature on the signing statement considers it among the unilateral powers of the presidency (Devins 2007, Kelley and Marshall 4Lee (2009) argues that the collective action problem of legislators has been exaggerated in the literature; I am sympathetic to her argument, but I do think that polarization has worsened the collective action problem, especially when the majority party is split on an issue.
In contrast, I argue that the signing statement is better understood in the bargaining context, as a power that the president can wield in his policy interactions with Congress. The signing statement can only be issued upon legislation that Congress has passed—the president’s ability to reinterpret or change the policy is constrained by the bill to which the legislature agreed. However, the signing statement does expand the scope of presidential influence; it gives the president greater control over the fate of the policy and the ability to extract greater concessions than when he simply signs a bill into law.

While this tool, as such, gives the president direct control over policy outcomes, it is likely that the signing statement, like the veto, also has a more pervasive effect on the policy process, through what has been termed “second face of power” (Bachrach and Baratz 1962). That is, the president need not actually exercise the veto for it to have an influence over the shape of public policy. Even when he does not exercise the power, legislators are aware of the credible threat of him doing so and curb legislation towards his preferences. Though the “second face” is a less overt form of power, it gives the president substantially more control over legislation than the number of vetoes would suggest. Given that signing statements are exercised far more frequently than are vetoes and that they are often issued on high-profile legislation, legislators likely temper the proposals to which they agree, the concessions they make and the coalitions they join in expectation of a signing statement that could affect the policy outcome in some way. If this is the case, the president has a more refined influence over the policy process and legislative bargaining than that which the veto alone provides.

I examine how the president’s direct hand in the legislative process, through the veto and the signing statement, gives the president a more subtle influence over legislative action. In addition to examining how the president’s two powers shape the form that legislation takes, I also consider how legislators bargain with one another in the face of looming presidential action. The key insight I advance is that the “second face”, or legislative anticipation, of presidential power affects the ability of legislators to bargain with one another earlier in the legislative process, well before presidential action takes place.
2 Theoretical Foundations

To examine these effects, I build a formal model to address the general question of how (or whether) political actors with divergent and competing preferences can overcome these differences to enact policy change. The defining feature of most of the models that address this question is that when legislation passes through both chambers of Congress, it is sent to the president as a take-it-or-leave-it offer (Cameron and McCarty 2004). My interest, however, lies in a political environment in which the president has a wider choice in how to respond to legislation. I model the interactions between legislators and a president equipped with a trichotomous decision between signing, vetoing, and issuing signing statements on legislation. The addition of the signing statement to a model of veto bargaining complicates bargaining not only between the president and the legislature, but also among legislators themselves.

As discussed, legislators confront a bargaining problem that involves fostering a large enough enacting coalition to pass a bill through Congress. An implicit assumption in veto bargaining models is that legislative coalitions, once formed, are stable, as the president can only accept or reject a bill. If a legislator commits to a coalition, she can be certain that the agreements will be upheld. The bargaining problem, however, is exacerbated in a political environment in which signing statements are a viable option for the president. If the president can issue a signing statement and alter the meaning of a law or choose which parts to enforce, this undermines the stability of legislative coalitions—legislators cannot be certain that their agreements will be kept in tact. This, then, should make the legislators less willing to commit to bargains in the first place. The puzzle, then, becomes why legislators would and do enter into policy bargains in such an environment.

The formal model I develop resolves this puzzle. The model builds directly from canonical models of veto bargaining (see Krehbiel 1998, Cameron 2000, McCarty 1997 for notable examples) but specifically addresses the bargaining tensions that legislators confront when faced with a president who can issue signing statements. I argue that ability of the president to issue signing statements with policy implications creates room for legislative bargaining through position-taking incentives; that is, I argue that signing statements allow legislators to bargain over two dimensions, a policy and a position-taking dimension, separately. The signing statement does so by creating a situation in which legislators can publicly vote for a policy proposal but receive a policy payoff relative to
a different policy outcome, one that the president has re-set with a signing statement. Legislative bargaining on these two dimensions results in conditions under which it is rational for legislators to commit to bargains within the legislature, even when they anticipate a presidential signing statement that will undermine the deal and, perhaps, shift the policy outcome in an adverse way. The incorporation of the signing statement into the veto bargaining process results in predictions about the policy process that differ from those in extant models.

2.1 Players and the Sequence of Play

The model proposed here consists of three actors: the president and two legislators, a proposer and a veto player. As legislation is the product, in part, of bargaining within the legislature, I model two legislators to capture these dynamics. The proposer is the legislator with agenda setting power in the legislature. The veto player is a legislator who must accept the proposal for it to advance; she is meant to capture the bargaining and collective action problem that legislators face in passing policy through the legislature. As legislation is also the product of bargaining between the executive and legislative branches, the president also has a pivotal role in inducing policy change in the model.

Each actor has an ideal point, or a most preferred position, in a unidimensional policy space, \( \mathbb{R} \). I assume that all ideal points, policy proposals, and outcomes can be represented on the same policy space. The president’s ideal point is \( P \in \mathbb{R} \), the veto player’s is \( l \in \mathbb{R} \) and the proposer’s is \( L \in \mathbb{R} \). The legislative proposer has the first move of the game; she is tasked with choosing whether or not to propose a bill. If she chooses not to propose, an exogenous status quo, \( q \), remains as the standing policy. If the proposer chooses to propose, she sets some policy, \( \beta \in \mathbb{R} \). The policy, \( \beta \), is then considered under a closed rule by the legislative veto player whose vote is necessary for the bill to advance through Congress. If the veto player accepts the offer, the game proceeds; the legislation, \( \beta \), passes through the legislature and is sent to the president. In the final stage of the game, the president is presented with the policy and has a trichotomous choice over whether to sign the bill into law, veto the bill, or whether to issue a signing statement on the bill upon signing it into law. If the president signs the bill into law, \( \beta \) prevails. If the president vetoes \( \beta \), \( q \) remains the policy. In the event of a signing statement, the president is able to manipulate or shift the policy outcome in the policy space to a new location, \( B \in \mathbb{R} \).
2.2 Strategies

A strategy for the proposer, $L$, is a policy choice, $\beta \in \emptyset \cup \mathbb{R}$. A strategy for the legislative veto player, $l$, is response to a proposal, $\rho \in \{\text{accept, reject}\}$. A strategy for the president, $P$, is a pair $\sigma = (s, B)$, where $s$ is a response to a policy such that $s \in \{\text{sign, veto, ss}\}$, and $B \in \emptyset \cup \mathbb{R}$ is a location of a signing statement.

2.3 The Players and Their Goals—An Overview

In this section, I explicate the goals of each of the actors in the model and specify their utility functions.

2.3.1 The President

The president conceivably has multiple goals while in office; a president in his first term may have reelection goals and presidents can be motivated to strengthen or protect their office. In the use of his legislative tools, however, I argue that the president primarily cares about policy outcomes. Many models assume that the president is solely policy-motivated in his use of the veto (see McCarty 1997, Krehbiel 1998 and Cameron 2000 for notable examples). Cameron argues that constitutional design “almost guarantees periods when the president and Congress differ over major policy objectives” (by which he means periods of divided government) and when the two branches disagree on policy, “the president has a strong incentive to use the veto” (2000, 9). Much of the empirical work on vetoes supports this claim.

Similarly, I argue that policy-oriented signing statements are used to shape policy outcomes and to affect the implementation of legislation to achieve policy goals.\(^5\) They give the president the additional leverage to acquire such gains. Some of the literature on executive use of signing statements (and other executive prerogative powers) argues that the president uses these tools to strengthen the office of the president; it is undoubtedly the case that signing statements have been used to protect executive power from legislative encroachment (Moe and Howell 1999a, Cooper 2005, Pfiffner 2008, Ostrander and Sievert 2013). However, I argue that these goals are ancillary to

\(^5\)Some signing statements, known as “rhetorical” statements are issued for position-taking or credit claiming reasons. I do not consider these statements in this model of bargaining; I am interested in those statements that offer the president’s interpretation of or manipulate the policies passed by Congress.
securing policy gains. Presidents likely seek to strengthen their office in order to gain influence in the policy-making process. While presidents may and often do justify their use of signing statements in constitutional language, these institutional defenses are likely meant to protect the policy gains from criticism or, worse yet, overturning by other political actors (namely, Congress and the courts).

There is some evidence to justify the assumption that presidents use signing statements for policy reasons, much like they do vetoes. Kelley and Marshall (2009) argue that signing statements play an important part in the veto bargaining process and are often coordinated with veto threats to give the president a greater hand in shaping policy. Some of the most controversial signing statements have been issued in the aftermath of executive dissatisfaction with the veto bargaining process, such as the statements on the McCain Torture Ban and on the PATRIOT Act Reauthorization. In addition, the literature provides evidence that policy-oriented signing statements are more likely under divided government, when political actors have divergent policy preferences (Kelley and Marshall 2008, Cutrone 2008).6

As such, the president in the model derives the crux of his utility based on the location of the policy outcome relative to his ideal point. The primary element of his utility function is given by $-(P - x_o)^2$, where $P$ is the president’s ideal point and $x_o$ is the location of policy outcome in the same undimensional space; that is, the president suffers a quadratic utility loss as the policy outcome diverges from his preferred point in the policy space. Thus, if the president signs a bill into law, his utility is $-(P - \beta)^2$, where $\beta$ is the bill that Congress passed and sent for his approval. His utility from vetoing the bill is $-(P - q)^2$, where $q$ is the location of the status quo in policy space. The president’s utility to issuing a signing statement, however, is more complicated than his utility for signing or vetoing legislation. I conceptualize the signing statement as shift of the policy in the policy space from that which Congress proposed to a new location closer to the president’s ideal point. The president still suffers a quadratic loss in the distance between his ideal point and the location of the policy set with the signing statement, but the president is also assessed two costs for issuing a signing statement in the model, which will temper his ability to completely alter the policy Congress passed.

If the president issues a signing statement, he accrues a cost of $-(B - \beta)^2$ and a fixed cost of

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6Kelley and Marshall (2010) do find that constitutional signing statements are more likely under unified government, which conflicts with earlier findings
Here, $-(B - \beta)^2$ represents a cost that varies as a function of how far the president moves the policy he sets with the signing statement, $B$, from that which Congress issues, $\beta$. As $(B - \beta)^2$, the square distance between the signing statement and the bill proposal, increases, this sliding cost also increases. Practically, this cost represents the inability of the president to completely change the meaning or intent of the congressional bill with a signing statement; the signing statement changes policy on a provision by provision basis and cannot remove any text or rewrite the policy. In practice, this cost can be seen as a reputation loss to the president for using these extra-constitutional powers. The farther a president shifts the policy from the one intended by Congress with a signing statement, the more he is stretching the scope of his extra-constitutional powers and the more likely it is to adversely affect his reputation, making it a costly endeavor.

In addition to this sliding cost, the president is also assessed a fixed cost for issuing a signing statement ($c$ in his utility function). This fixed cost represents the initial resource or opportunity cost to issuing a signing statement. Most signing statements are prepared by the Justice Department and approved by the Office of Management and Budget and require a certain amount of expertise and labor, for signing statements dissect congressional laws provision by provision in order to find sections that the president disagrees with. Dedicating such resources (staff, time, expertise, etc) to a particular bill means that those resources cannot be used for other issues or bills or for the use of other presidential powers.

As such, the president’s utility function is given by:

$$U_p(\sigma) = \begin{cases} 
-(P - \beta)^2 & \text{if sign} \\
-(P - q)^2 & \text{if veto} \\
-(P - B)^2 - (B - \beta)^2 - c & \text{if signing statement}
\end{cases}$$

2.4 Congress

Consistent with much of the literature on legislative behavior, I assume that the legislators have multiple goals (Fenno 1973, Arnold 1990, Hall 1996, Schickler 2001, Smith and Remington 2001, Cox and McCubbins 2005). In particular, I assume there are two elements to congressional preferences. The first is that legislators are policy-motivated. Legislators, however, may also be motivated by reelection.
Mayhew (1974) argued that remaining in office can be seen as the proximate goal of legislators. Unlike the president, legislators do not have term limits and, especially in the House, are constantly running for reelection and campaigning. Legislators do not want to vote in ways that will jeopardize their career in office by voting against constituent preferences on salient issues. As such, I assume legislators have quadratic preferences over the location of policy proposals, given by \(-\alpha(i - x_p)^2\), where \(i\) is the legislator’s ideal point, either \(l\) or \(L\), and \(x_p\) is the location of the proposal in space.

The value of \(x_p\) depends on the value of the bill the proposer has proposed, \(\beta\), or the value of the status quo, \(q\), if no proposal is made or if a legislator votes nay on the bill. The \(\alpha\) parameter represents the weight that each legislator puts on position-taking relative to policy. I assume \(\alpha \geq 0\); the higher \(\alpha\) is, the more a legislator will care about the proximity of the bill proposal to her ideal point relative to the proximity of the policy outcome to her ideal point. This exercise can be seen as a legislative attempt to publicly signal their constituents about their positions on issues.

Practically, the utility loss associated with the distance between a legislator’s ideal point and the proposal location can be interpreted as a loss in constituent support.

In addition to caring about constituent evaluations, legislators in the model care about policy outcomes. This assumption is well-founded in the research on congressional politics. Fenno (1973), despite focusing on electoral goals, notably documented that legislators care about particular policy outcomes. Empirical work on legislative behavior has corroborated Fenno’s finding—in particular, the body of work on ideal point estimation has shown that legislators tend to vote along ideological lines and that a single ideological dimension can explain much of the variation in legislative voting behavior (Poole and Rosenthal 1997; 2000, Clinton, Jackman and Rivers 2004). I assume the legislators receive policy utility \(-(i - x_o)^2\); that is, legislators also experience a quadratic loss in utility as the policy outcome diverges from their ideal points in the policy space. In this term, \(x_o\) represents the location of the actual policy outcome in policy space. Critical to the model, this policy may be different than the one proposed. \(x_o\) can take on the value of the congressionally passed bill, \(\beta\), only if a proposal is made that both the veto player and the president accept. \(x_o\) will take the form of the status quo if no proposal is made or if the bill is rejected. Finally, \(x_o\) can take the form of a new policy location, \(B\), when the president has an incentive to shift the policy with a signing statement. Below, I provide the utilities to each legislator for all possible contingencies of the model.
The legislative veto player’s utilities are given by:

\[
U_l(\rho; \beta, \sigma) = \begin{cases} 
-(1 + \alpha)(l - q)^2 & \text{if } \beta = \emptyset \\
-(1 + \alpha)(l - \beta)^2 & \text{if } \beta \in \mathbb{R}, \rho = \text{accept}, \& s = \text{sign} \\
-\alpha(l - \beta)^2 - (l - q)^2 & \text{if } \beta \in \mathbb{R}, \rho = \text{accept}, \& s = \text{veto} \\
-\alpha(l - \beta)^2 - (l - B)^2 & \text{if } \beta \in \mathbb{R}, \rho = \text{accept}, \& s = \text{ss} 
\end{cases}
\]

The proposer’s utility function is as follows:

\[
U_L(\beta; \rho, \sigma) = \begin{cases} 
-(1 + \alpha)(L - q)^2 & \text{if } \beta = \emptyset \\
-(1 + \alpha)(L - \beta)^2 & \text{if } \beta \in \mathbb{R}, \rho = \text{accept}, \& s = \text{sign} \\
-\alpha(L - \beta)^2 - (L - q)^2 & \text{if } \beta \in \mathbb{R}, \rho = \text{accept}, \& s = \text{veto} \\
-\alpha(L - \beta)^2 - (L - B)^2 & \text{if } \beta \in \mathbb{R}, \rho = \text{accept}, \& s = \text{ss} 
\end{cases}
\]

The potential for competing incentives captured in these utility functions could induce strategic behavior among legislators. In a political environment in which proposals do not map cleanly into outcomes, legislators, in many instances, will need to decide whether to use their legislative powers as a public stance or as a means to a policy end. Such strategic balancing of goals has ramifications for the bargaining that takes place within the legislature and between the branches, which is the central focus of this project. Competing goals will directly influence the voting and coalition decisions legislators will make, especially in anticipation of presidential response to legislation.

### 2.5 Modeling Choices

In addition to those already discussed, the model also rests on further assumptions. First, I assume that all bargaining within and between the executive and legislative branches takes place under complete information. The actors are completely informed about each other’s preferences and actions when they make their decisions. Under this assumption, legislators, thus, will be able to
fully anticipate presidential actions. There is reason to believe that complete information is not just a simplifying assumption for the model; evidence shows that legislators do get fair warning of the use of the president’s policy powers. For instance, Cameron (2000) finds that, under divided government, almost a quarter of all bills presented to the president between 1945 and 1992 received a veto threat at some point in the process, meaning that presidents often do signal their policy discontent to Congress. Similarly, there is reason to believe that legislators have information about the president’s use of signing statements before they occur. For instance, Congress was fully aware of the Bush administration’s opposition to the McCain Torture Ban, as he issued a veto threat claiming as much before the bill passed through Congress. The literature on signing statements has shown that this is a common phenomenon. Rice (2010) and Kelley and Marshall (2009) find that signing statements are often accompanied by veto threats, indicating the parts of legislation with which the president takes issue.

In addition, I abstract away from many of the dynamics that are important in terms of the implementation of policy. First, the model assumes that Congress cannot overturn a signing statement or a veto once issued. Obviously, this is not true. The Constitution provides a formal process by which the veto can be overturned by the legislature. Congress also has some recourse against signing statements. While there is no formal procedure by which to overturn the effect of a signing statement, Congress can pass subsequent legislation to do so, require greater oversight of bureaucratic implementation, or withhold funding for implementation (Kelley 2007). Though these measures are relatively rare, they are important and likely do influence the presidential calculus in exercising these powers. Relatedly, I also assume that once a signing statement is issued, the agencies charged with the enforcement of laws will implement the signing statement as the president intends. That is, for the purposes of this model, I assume there is no bureaucratic shirking and that executive agencies are faithful agents to the president and will follow his directives rather than the text of the law passed by Congress. This assumption is a simplifying assumption of the model; in reality, bureaucrats likely do have their own policy preferences (Arnold 1980, Lewis 2008). However, there is some reason to think that bureaucrats do consider the wishes of the president when a signing statement is attached to the legislative history of a law. The Government Accountability Office

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conducted an examination of the implementation of appropriations legislation for FY 2006; in this report, they found that provisions that were singled out in presidential signing statements were often not implemented as Congress intended.\textsuperscript{8} While this does not necessarily mean that signing statements are enforced as the president intends, it does show that it is possible that the bureaucrats tasked with implementing laws are responsive to these presidential documents. Together, these assumptions are made in order to facilitate solving the model and to isolate the dynamics of interest: that is, the upstream effects of the signing statement.

3 Equilibrium Analysis

To analyze the model, I identify and characterize a subgame perfect Nash equilibrium. I begin with a discussion of the president’s equilibrium strategy, then move on to a discussion of the strategy of the legislative veto player. I conclude with a description of the proposer’s calculus and a discussion of the model’s testable implications.

3.1 Equilibrium Behavior of the President

As the the president is motivated by policy concerns, he will use the powers of his office to ensure that policy outcomes are as close as possible to his ideal point, $P$. In the model, the president only has a move if the proposer and the receiver agree to a policy. In this case, three actions are open to him: the president can sign the bill into law, veto the bill, or the president can issue a signing statement upon signing the bill. When the president issues a signing statement, he is presented with a continuous choice over where in the policy space to reset the policy. The unconstrained optimal signing statement, then, is given by:

$$B^* = \frac{P + \beta}{2}$$

\textsuperscript{8}The GAO report can be found at: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CDIQFjAB&url=http\%3A\%2F\%2Fwww.gao.gov\%2Fdecisions\%2Fappro\%2F308603.pdf&ei=dw5TUvWXOYr69QSWn4HoCw&usg=AFQjCNFKtuR1Xbx1vDkcNk74TRUNp_zm0g&bvm=bv.53537100,d.eWU
Substantively, this represents the president’s incentive to shift any given bill from Congress, $\beta$, to the midpoint between his ideal point and the proposal upon issuing a signing statement. Because the signing statement is a costly action, he will not have the incentive to move the policy any closer than this midpoint. As there is no check on the president’s ability to issue a signing statement in the model, if the president issues a signing statement, the policy will always shift to this new location in the policy space.\footnote{Note that this optimum is independent of the fixed cost, $c$, to a signing statement. When the president maximizes his utility for issuing a signing statement, he always has an incentive to shift the policy to the midpoint between his preferred location and the proposal, regardless of the value of $c$. As $c$ is an exogenous parameter and is always assessed upon the issuance of a statement, it does not affect this calculus.}

**Lemma 1** In any given subgame perfect Nash equilibrium, the president’s strategy takes the form of: \footnote{These decision rules assume that the status quo is greater than the President’s ideal point. Here, $\kappa_2$ and $\kappa_3$ represent cutpoints of the values $P - \sqrt{2c}$ and $P + \sqrt{2c}$, respectively. $\kappa_4$ and $\kappa_4$ represent $P - \sqrt{2P^2 - 4Pq + 2q^2 - 2c}$ and $P + \sqrt{2P^2 - 4Pq + 2q^2 - 2c}$.}

$$
\sigma(\beta)^* = \begin{cases} 
\text{s=sign, } B = \emptyset & \text{if } \begin{cases} 
2P - q \leq \beta \leq q & \text{and } c \geq \frac{q^2 - 2Pq + P^2}{2} \\
\kappa_2 \leq \beta \leq \kappa_3 & \text{and } c < \frac{q^2 - 2Pq + P^2}{2} 
\end{cases} \\
\text{s=veto, } B = \emptyset & \text{if } \begin{cases} 
\beta \notin [2P - q, q] & \text{and } c \geq \frac{q^2 - 2Pq + P^2}{2} \\
\beta \notin [\kappa_1, \kappa_4] & \text{and } c < \frac{q^2 - 2Pq + P^2}{2} 
\end{cases} \\
\text{s=ss, } B = B^* & \text{if } \begin{cases} 
\kappa_1 \leq \beta \leq \kappa_2 & \text{and } c < \frac{q^2 - 2Pq + P^2}{2} \\
\kappa_3 \leq \beta \leq \kappa_4 & \text{and } c < \frac{q^2 - 2Pq + P^2}{2} \\
\emptyset & \text{if } c \geq \frac{q^2 - 2Pq + P^2}{2} 
\end{cases}
\end{cases}
$$

When costs are sufficiently low to issuing a signing statement (when $c < \frac{q^2 - 2Pq + P^2}{2}$), then signing statements are in the equilibrium strategy of the president. The president’s decision on which power to utilize depends on how close (far) the proposals are from his ideal point. Figure 2 shows the partitioned policy space in regards to the president’s equilibrium strategy when the fixed cost is below this critical threshold.

As Figure 2 demonstrates, when the fixed cost to a signing statement is below the threshold, policy proposals from Congress that are close enough to the president’s ideal point will be signed into law as is. If the policy proposal lies between $\kappa_2$ and $\kappa_3$ (see Figure 2), the policies are already
The Policy Spaced Partitioned by the President’s Strategy

Figure 2: The President’s Low-Cost Decision Calculus. In this diagram, P represents the president’s ideal point. Q is the position of the status quo in the policy space and $Q'_p$ is the reflection point of Q about P. The policy space is partitioned into five sections based on the president’s optimal strategies. Those bills proposed closest to the president’s ideal point (between $k_2$ and $k_3$) are close enough to the president’s ideal point to be signed into law. Proposals between cutpoints $k_1$ and $k_2$ and between cutpoints $k_3$ and $k_4$ will receive a signing statement in equilibrium. These policies are far enough from the president’s ideal point that the policy gains from the signing statement outweigh the costs. Those proposals to the left of cutpoint $k_1$ and to the right of cutpoint $k_4$ will be vetoed according to the president’s strategy. In these regions, the sliding cost is prohibitive.

reflective of the president’s preferences, so the costs of a signing statement are not worth the possible gains. As the policy proposals move past those cutpoints and further from the president’s ideal point in either direction, then the president will begin to issue signing statements. In these regions, the policies are far enough from the president’s ideal point to warrant the costs associated with issuing a signing statement. However, as policy proposals move even further from the president’s ideal point in either direction (to the left of $k_1$ or the right of $k_4$), towards the extremes of the policy space, then the sliding cost to issuing a signing statement, $(B - \beta)^2$, becomes prohibitively high to warrant any policy gains. The president will veto policies proposed in these regions because he will be better off with the status quo than he would be by issuing a signing statement or signing the proposal. The result of the president’s calculus is a policy space divided symmetrically around the president in terms of his preferred action.

If the fixed cost of a signing statement increases so that $c \geq \frac{q^2 - 2Pq + P^2}{2}$, then the president will no longer find it in his best interest to issue signing statements in regards to the policy proposals he receives from Congress. In this situation, the signing statement falls out of the equilibrium
strategy of the president because the cost always outweighs the possible policy gains, in all regions of the policy space. In this case, the president’s strategy becomes identical to that of the president in extant models, such as those of Krehbiel (1998) and Cameron (2000). That is, when the costs are sufficiently high, the president will sign any bills that are closer to his ideal point than is the status quo and veto all others. Because of the theoretical interest in the effect of signing statements on legislative bargaining, I hereafter focus analytic attention on the low-cost equilibrium, in which signing statements are possible.

**Result 1** The president has an incentive to exercise all three of his policy choices. Signing statements are more likely when the fixed cost to issuing one is low.

### 3.2 The Legislative Veto Player’s Equilibrium Behavior

Such presidential action is contingent upon successful policy bargaining in the legislature. Before a policy is sent to the president in the model, the legislative veto player has an up-or-down choice to make on the proposal. Knowing how the president will respond to the policy, the veto player is tasked with accepting or rejecting the offer that the proposer makes. If she accepts the offer, she receives a position-taking kickback relative the policy proposal and a policy payoff relative to the policy outcome determined by presidential action. If she, instead, rejects the offer, the status quo prevails. The veto player’s goal is to make the choice that results in a policy proposal and a policy outcome as close as possible to her ideal point.

If the veto player receives a proposal which she knows the president will either sign or veto, her strategy is only to accept the offer if it is closer to her ideal point than is the status quo, as her policy and/or position-taking utilities will be assessed in the distance between her ideal point and the proposal. If the president signs the law, she can only be made better off with a proposal closer to her ideal point than is the status quo, as both parts of her utility will be assessed in the distance between herself and the bill. In the case of an anticipated veto, she cannot gain on policy grounds, as the status quo will prevail as the policy outcome, but she can accept proposals closer to her ideal point than it is, so as to reap position-taking benefits.

In response to bills that are proposed in regions of the policy space in which signing statements are expected, the veto player’s calculus is more complicated. Since a signing statement shifts the policy towards the president’s ideal point, the veto player must balance the position-taking payoff
Figure 3: A Diagram of the Veto Player’s Decision Calculus. This figure shows an example of the veto player’s strategy in response to a proposal. The veto player, $l$, will only accept proposals that will get vetoed or signed by the president if they lie within the $\omega_l(\text{accept})$ winset, which is defined by the location of the status quo, $Q$, and its reflection point around the veto player, $Q_l$. The veto player’s accept range (winset) for proposals made in the signing statement region of the policy space is distinct from that for bills in the other regions. This winset is a function of how much the veto player cares about position-taking, as well as other factors. In the diagram, the signing statement winset for two different position-taking weights are depicted, to demonstrate how the logic works. When the veto player’s weight on position-taking is sufficiently low, for instance, the veto player will accept any proposals in the signing statement region that are within the winset $\omega_l(\text{ss-low})$. Proposals in this region will make the veto player better off than would the status quo, in expectation of a signing statement. However, the more the veto player cares about position-taking, the smaller this region becomes (as shown with $\omega_l(\text{ss-high})$), as she will have a stronger desire for the proposal to be closer to her ideal point.

she will get from the proposal from the legislature, $\beta$, and the policy payoff that she will receive from the policy shift induced by the signing statement, $B^* = \frac{P + \beta}{2}$. Instead of making the decision to accept or reject the offer solely in reference to the proximity of the proposal and of the status quo to her ideal point, the veto player makes the decision of whether to accept a proposal that will receive a signing statement in reference to several additional factors, including the location of the president’s ideal point and how much weight she places on position-taking relative to policy (the $\alpha$ parameter). Thus, the decision calculus in expectation of a signing statement results in an acceptance range that is distinct from the preferred-to set by which the veto player makes her decisions in response to proposals made in the veto and sign regions of the policy space.\footnote{The veto player will accept all policies between $\frac{4\alpha l + 2l - P - 2\sqrt{(4\alpha^2 + 5\alpha + 1)q^2 - (8\alpha^2 + 10\alpha + 2)lq + (4\alpha^2 + 4\alpha + 1)I^2 + 2\alpha lP - \alpha P^2}}{4\alpha + 1}$.
shows how these distinct winsets play out in practice for one configuration of preferences.

**Lemma 2** *In any subgame perfect Nash equilibrium, the legislative veto player will accept any proposal closer to her ideal point, \( l \), than is the status quo, in anticipation of presidential acceptance or rejection of the bill. In expectation of a signing statement, the veto player’s decision to accept a proposal will depend on her position-taking incentives and the locations of the status quo, the proposal, and the president’s ideal point.*

### 3.3 The Proposer’s Calculus

The legislative veto player’s actions are contingent upon action by the proposer in the legislature. In the simplest sense, the proposer faces a choice between proposing legislation or not. If the proposer chooses to propose, she then has a choice over where to set the policy proposal in the policy space. The proposer’s goal is to propose a policy as close as possible to her own ideal point that will result in a policy outcome as close as possible to her ideal point; she optimizes over both her position-taking and policy interests. However, in trying to accomplish this goal, the proposer is constrained by the strategies of the other two actors and the array of preferences in the policy space. She will propose the best possible policy, given these constraints.

For any configuration of preferences, the proposer may have several possible proposals to choose among. The weight the legislators place on position-taking, the cost of signing statements, and the general political environment will further condition the proposals that are possible and the decisions the proposer will ultimately make. Three possible proposals could be open to the proposer for any given combination of preferences and parameter values; given that the proposer is informed of the preferences of the other actors, she could choose to propose a bill that will be signed into law, one that will receive a signing statement, or one that will result in gridlock.\(^{12}\)

In the general sense, for the proposer to have an incentive to propose a bill that will be signed into law in any situation, the bill must be closer to her ideal point than is the status quo; whether this is possible will depend on those policies the veto player and the president are willing to accept *en toto*. Similarly, the proposer will only have an incentive to propose policies that will result in gridlock if they are closer to her ideal point than is the status quo, as it is the only way that she can reap any position-taking benefit from a proposal that maintains the status quo. When considering a proposal that will receive a signing statement, the optimal strategy for the proposer is not to

\[
\frac{40 + 2l - P + 2\sqrt{(4\alpha^2 + 5\alpha + 1)q^2 - (8\alpha^2 + 10\alpha + 2)(q + (4\alpha^2 + 4\alpha + 1))^2 + 2\alpha(P - \alpha P^2)}}{4\alpha + 1}
\]

\(^{12}\)This could be the result of a veto or of legislative gridlock.
propose a policy as close as possible to her own ideal point, as is her strategy for proposals in other regions. Since the president will shift the policy towards his own ideal point with a signing statement, the proposer will anticipate this and make a proposal that maximizes her own utility in the expectation of this presidential action. The optimal proposal that the proposer can make in expectation that \( s^* = ss \) is:

\[
\tilde{\beta}_{ss} = \frac{L(4\alpha + 2) - P}{4\alpha + 1}
\]

This optimal proposal is a function of the proposer’s distance from the president, as well as the weight the proposer puts on her position-taking interest, \( \alpha \). Thus, in proposing legislation that will receive a signing statement, the proposer wants to propose a bill as close as possible to \( \tilde{\beta}_{ss} \), rather than to her own ideal point. This optimal proposal is, critically, always to the opposite side of the proposer’s ideal point than is the president. The logic for this is that the proposer is attempting to compensate for the presidential shift in the outcome towards his own ideal point. If the proposer proposed her own ideal point and the president issued a signing statement, he would shift the outcome away from her ideal point. This would be suboptimal for the proposer— the proposer is actually worse off in proposing her own ideal point than she would be in proposing a policy that is opposite her than is the president. The more the proposer cares about position-taking, however, the closer \( \tilde{\beta}_{ss} \) will be to her ideal point, even if that means losing on the policy dimension because of a signing statement. The proposer is constrained in maximizing her proposals with respect to \( \tilde{\beta}_{ss} \). In order for the proposer to propose \( \tilde{\beta}_{ss} \), it need be in the signing statement region of the policy space and in the veto player’s signing statement winset. If this is not the case, the proposer’s best (constrained) option is to propose the policy as close as possible to \( \tilde{\beta}_{ss} \) that is in those regions.

**Lemma 3** In any subgame perfect Nash equilibrium, the proposer will only propose bills closer to her own ideal point than is the status quo in anticipation of gridlock or acceptance of the bill. In expectation of a signing statement, the proposer will instead propose policies as close as possible to another location in space, which depends on her position-taking incentives and the location of the president’s ideal point. However, the proposer is constrained in maximizing with respect to this optimum by the other actors. The proposer will choose not to propose only when these options fail to improve upon the utility she receives from maintaining the status quo.

To further explicate the proposer’s calculus, I have provided an example of policy bargaining from the model. Figure 4 displays one possible array of preferences assuming a moderate proposer.
and an extreme conservative status quo relative to the other actors.\footnote{Note that the policy space is technically symmetric around the president, in terms of signing statement and veto regions. However, in this configuration, since the president is the most liberal of the actors, the other half of the policy space is not relevant to the bargaining taking place.} One option open to the proposer in this configuration is to propose her ideal point, which will lead to legislative gridlock (maintenance of the status quo). The proposer’s ideal point lies in a region of the policy space for which the president will issue signing statements; in order for a proposal in such a region to advance and induce policy change, it must also lie within the veto player’s signing statement winset, denoted as $\omega_l(ss)$ in Figure 4. As the proposer’s ideal point does not lie in this region, if she proposes her ideal point, the veto player will reject the proposal, preferring the status quo. Despite impending rejection, the proposer may have an incentive to propose this policy under some conditions, solely for position-taking reasons.

Figure 4: A Spatial Demonstration of the Proposer’s Decision-making. For this configuration, the proposer has two viable proposals she can make. First, she can propose her ideal point, L, which will be rejected by the veto player and result in legislative gridlock (the outcome will be the status quo at $\star_1$). The other alternative open to the proposer is to propose the lower bound of the veto player’s signing statement winset, which will receive a signing statement from the president that will result in a policy outcome at $\star_2$.

Because of the proximity of the status quo to the veto player’s ideal point, l, there is no policy that the proposer can offer that will be signed into law en toto. As the set of policies the veto player prefers to the the status quo, $\omega_l(accept)$ in Figure 4, does not overlap the set of policies the president is willing to sign into law (those between $\kappa_2$ and $\kappa_3$), the proposer has no incentive to propose a bill in that region. However, a proposal can be made that will induce policy change, despite this constraint. The proposer can propose a bill that will replace the the status quo, in anticipation.
of a signing statement. When proposing a bill that will receive a signing statement, the proposer seeks to propose the policy closest to $\hat{\beta}_{ss}$ that lies both within the president’s signing statement region of the policy space and within $\omega_l(ss)$. For the particular configuration displayed in Figure 4, $\hat{\beta}_{ss}$ lies within the former but not the latter; as such, the best constrained proposal the proposer can make that will lead to a signing statement is at the lower boundary of $\omega_l(ss)$. Again, because of the veto player’s proximity to the status quo, there is only a limited set of policies she is willing to accept. If the proposer proposes this bill, the veto player will accept the offer and the president will shift the policy outcome to the midpoint between his ideal point and the the lower boundary of $\omega_l(ss)$, denoted as $\ast_2$ in Figure 4.

The proposer has an incentive to propose both these policies in equilibrium. When her position-taking incentive (the $\alpha$ parameter) is sufficiently high, she will prefer to propose her ideal point and maintain the status quo. In this case, the proposer cares more about how close the policy proposal is to her ideal point than how close the policy outcome is, so she will be willing to sacrifice some possible policy gains for the position-taking boon. When position-taking incentives are sufficiently low, however, the converse is true—the proposer wants the outcome to be as close as possible to her ideal point, even if it means a proposal that is further away. In Figure 4, it is clear that the outcome denoted by $\ast_2$ is closer to $L$ than is the status quo (marked as $\ast_1$); thus, when the proposer cares more about policy, she will prefer this proposal, even though she will lose on the position-taking dimension. Depending on how much the legislators care about position-taking exercises, legislative gridlock and policy change in the form of a signing statement are both possible in this configuration.

This example demonstrates several important points about the inclusion of signing statement into the veto bargaining context. First, while other veto bargaining models predict that the pivotal actors will always be able to agree to alter the status quo under an extreme status quo, this case shows that, even in those situations in which extant models see policy change as a given, gridlock can actually occur. Also, the policy change that is possible is the result of a signing statement, not the product of true policy agreement relative to the status quo location. In addition, this case demonstrates why observers of politics may sometimes see perverse or unlikely coalitions or compromises being forged from the legislature. When position-taking incentives are low, the veto player is actually willing to accept a proposal that results in a policy outcome that is farther from her ideal point than is the status quo. That is, she willingly accepts a policy that will hurt her...
relative to the status quo on the policy dimension. The reason she is willing to accept this offer is because she gains on the position-taking dimension, with a proposal that is closer to $l$ than is the reversion policy. These unlikely bargains are not predicted by extant policy bargaining models, nor are these dynamics unique to the configuration chosen.

**Equilibrium Proposals**

The proposer’s strategy is contingent upon the configuration of preferences and actors within the policy space. This gives rise to a large number of cases to consider. To limit the number of cases and to provide some analytic traction, I have made further assumptions to facilitate model solution. Without loss of generality, I have assumed that the proposer is always more conservative than (to the right of) the president in the policy space; further, I assume that the proposer’s ideal point has a value of 1 and the president’s of $-1$. As a consequence, there are three major cases for which to solve the model: a moderate president, a moderate veto player, and a moderate proposer. To further limit the number of cases and to provide some analytic traction, I solve the model for varying values of the legislative veto player’s ideal point and for various values of the status quo, rather than parameterizing those values. For the case of the moderate president, I assume $l = -2$ and choose four values of the status quo for which to solve the model; these include an extreme liberal status quo, two different moderate status quo values, and an extreme conservative status quo. For the case of a moderate legislative veto player, I assume that $l = 0$ and again assume distinct values for the status quo. Finally, I assume $l = 2$ for the case of the moderate proposer, again with varying values of the status quo. The fixed cost to issuing a signing statement, $c$, and the weight that legislators place on their position-taking utility, $\alpha$, remain parameterized in the model. While these assumptions are quite strong and restrictive, making them allows for greater tractability in solving the model. Also, the values of the parameters assumed allow for plenty of variation in the configuration of preferences, the extremity of the actors, and in the relative location of status quo policies.

In light of these assumptions, all policy outcomes are possible in equilibrium. The proposer will propose policies that will be signed, those that will receive signing statements, and those that will result in gridlock under different conditions. Her proposal choices are contingent on the array of
preferences and the parameter values.\textsuperscript{14}

**Proposition 1** There exists a subgame perfect Nash equilibrium in which signed bills, signing statements, vetoes and legislative gridlock can occur. The status quo prevails when it is moderate relative to the actors, as a result of both vetoes and legislative gridlock. The latter is particularly prominent when the position-taking parameter takes on high values. Signed bills and signing statements only occur in the face of relatively extreme statuses quo and are more likely when position-taking incentives are relatively low. Gridlock is also possible in the face of an extreme status quo, generally when position-taking incentives are high.

**Predictions**

I have derived several testable implications from the equilibrium behavior that results from the model. The most intuitive of the predictions is that as the fixed cost to a signing statement, the \( c \) parameter, increases, signing statements should be less likely. As discussed previously, when costs are sufficiently high, the signing statement falls out of the equilibrium strategy of the president. However, even below this threshold, signing statements become less likely as the cost increases. As this cost rises towards the threshold, the president will increasingly have an incentive to either sign or veto bills to avoid the cost; the portions of the policy space for which the president will issue signing statements shrink as the cost grows. In addition, signing statements are less likely when the president is moderate relative to the pivotal legislators. In this situation, it is particularly difficult for the legislators to come to agreements with one another in anticipation of a presidential shift in the policy outcome. Because the president will always shift the policy towards his own ideal point with a signing statement, when a moderate president issues one, it necessarily means he is shifting the policy towards one of the legislators at the expense of the other. Depending on the location/proximity of the status quo relative to the legislators, bargains destined for signing statements can still occur, but the moderate president does complicate the dynamic.

As the tension of interest for this project lies in the effect of presidential action on legislative bargaining, however, I focus on a testable implication that addresses congressional dynamics, specifically. The model yields a prediction about the nature of the configuration of preferences that makes signing statements possible; that is, the model holds that, in equilibrium, signing statements are only possible in the face of an extreme status quo. When the status quo is extreme relative to the actors, the legislators will agree on the direction of the policy change and the location of

\textsuperscript{14}Tables 1 and 2 in the appendix provide a statement of the equilibrium proposals and outcomes.
the proposal, at least relative to the status quo. Legislators can only be induced into the perverse bargains that result from a signing statement—those that legislators enter into willingly, despite knowing they will result in either position-taking or policy losses relative to the position of the status quo—when legislative interests are similar and when inducing gridlock cannot be used as a credible threat. When the status quo is moderate, all three actors will not agree on the direction of the policy change relative to the status quo. Additionally, the legislator closest to the status quo holds all the bargaining leverage because of the credible threat to reject any alternatives in favor of the status quo. Because of this proximity of one actors to the status quo and the incentive to take positions for constituents, signing statement bargains are difficult to strike and impossible to maintain in the face of a moderate status quo. An extreme status quo, however, provides the incentive that the legislators need to induce policy change, as both can be made better off relative to the status quo. In many situations, neither can credibly threaten to maintain the status quo in the face of other viable policy alternatives. Depending on the values of the relevant parameters, the legislators will often prefer policy change as a result of a signing statement over that resulting from a bill signed into law.

While reliable measures of status quo policies do not exist, it is the case that it is more likely for a status quo to be extreme relative to the pivotal actors when those actors are closer to one another in the policy space. The proximity of the actors in policy space, unlike the location of the status quo, is a measurable quantity.

**Result 2** *Signing statements should be more likely when congressional polarization is low.*

As this prediction speaks directly to dynamics and preferences in the legislature and is one that can be empirically evaluated, it will serve as the means of evaluation for the proposed model.

### 4 Empirical Analysis

In order to evaluate the main hypothesis of the model, I use data on presidential signing statements provided from Ostrander and Sievert (2013). I updated the data through the Obama administration. As my theory only speaks to signing statements that have policy implications, I conduct the following analyses on what Ostrander and Sievert have termed “constitutional signing statements,” those that contain constitutional objections to or interpretations of one or more sections of a piece
of legislation. Rhetorical signing statements are left out of the analysis as there is no theoretical reason to believe that the president’s position-taking or credit-claiming exercises should affect intra-congressional bargaining.

To operationalize the main independent variable, congressional polarization, I utilize a measure of legislative ideology constructed from campaign finance data provided by Bonica (2013). While DW-NOMINATE scores are the most common measure of legislative ideology, the assumption used to generate those scores cuts against those which I make in the proposed model. NOMINATE scores, which derive from recorded floor votes, are estimated under the assumption that legislators vote sincerely on every vote they cast. The utility functions specified in the model herein discussed assume that legislators consider both policy and position-taking concerns when casting votes, and the model induces strategic voting among the legislators. As such, NOMINATE data is inappropriate for testing the predictions of the model. Bonica’s measure of ideology is calculated using campaign finance data that each legislator receives in an election cycle and thus has the benefit of being independent from legislative action.\footnote{Of course, it could be the case that legislative behavior is what attracts campaign finance in the first place, and, thus, finance is not truly independent of legislative behavior, namely strategic behavior. However, given the difficulty in measuring legislative ideology, this was the best measure available.} To operationalize the level of polarization for a given congress, I calculate the absolute difference in the mean ideology between the two parties in Congress.\footnote{There are several factors to note about using Bonica’s data. First, since he measures Senators and House members on the same scale, I group together members of the same party from both chambers together to calculate the mean party ideology. Second, for each Congress, I use the ideal points estimated from the previous election cycle. If a legislator is missing an ideal point for a specific election cycle, I use the legislator’s career ideal point as a proxy for the election-specific measure. Finally, I also tried various ways to measure partisan polarization, including the median of party ideology, etc, but the results do not change.} As Bonica’s data ranged from 1980 until 2012, I limit my analyses to these years, even though I have signing statement data dating back to the Carter administration. Figure 5 displays the number of signing statements per congress, as well as the the level of partisan polarization calculated from Bonica’s data for each congress between 1981 and 2012. The plot shows that there is a general, if noisy, negative correlation between the variables, as anticipated. For instance, when polarization was at its lowest, between the 100th and 101st congresses, signing statements were at the peak of their usage.

In the sections that follow, I use these data to analyze the primary hypothesis at the congress level—that is, I evaluate the effect of the level of partisan polarization on the number of signing statements the president issued per congress. In addition, I further evaluate the prediction at the
Congressional Polarization Against Signing Statements
Per Congress

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<th>Congress (Years)</th>
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Figure 5: Polarization and Signing Statements Over Time. This plot shows the number of signing statements and the level of partisan polarization for each congress between the 97th and the 112th, using Bonica’s measure of legislative ideology. When polarization is at its height in the 112th Congress, the signing statement trend is at its lowest. When polarization is lowest, between the 100th and 102nd congresses, signing statements are at their height. These variables will be the variables of interest in the following analyses.

4.1 Congress-Level Analysis

As partisan polarization only varies by congress, I first evaluate the hypothesis that signing statements are more likely when polarization is low at the congressional level using data on the aggregate number of signing statements issued during each congress from the 97th (1981-1982) through the 112th (2011-2012). The variable ranges from 7 signing statements in the 112th Congress to 62 in the 102nd Congress. To conduct this analysis, I estimate a count model in which the number of statements issued for each congress is the dependent variable; I chose negative binomial analysis, due to over-dispersion in the dependent variable. The main explanatory variable is the level of partisan polarization in Congress. I also control for whether there is unified or divided government per
congress, in case that could confound the results. Because of the small sample size (there are only 16 congresses in this analysis), I estimate the model in a Bayesian framework, as Bayesian analysis produces more reliable estimates of uncertainty in small samples. Specifically, the functional form I estimate is given by:

\[
\text{Signing Statements}_{t|\lambda, \alpha} \sim \text{NB}(\lambda_t, \alpha_t) \\
\lambda_t = \exp(\beta_0 + \beta_1 \text{polarization} + \beta_2 \text{unified}) \\
\alpha_t > 0,
\]

where the dependent variable, the number of signing statements per congress, indexed by \( t \), is distributed according to the negative binomial distribution. \( \lambda \) is the mean of the distribution and is a function of the variables of interest and their coefficients, the \( \beta \) parameters. \( \alpha \) is the dispersion parameter, which distinguishes the negative binomial distribution from that of the Poisson. I assign improper uniform (uninformative) priors to estimate these model parameters.

I program and implement the model in \textit{R} (R Development Core Team 2008) via \texttt{MCMCpack} (Martin, Quinn and Park 2011). Table 1 shows the results from the negative binomial analysis between signing statements and polarization, as well as those from the model which controls for unified government. The results are based on 100,000 iteration simulations with 5,000 iteration burn-in periods. Trace plots for the parameters suggests the models converge quickly.

The polarization variable has a strong negative effect on the number of signing statements in both models; this means that as polarization increases, the number of signing statements per congress decreases. In Model 1, the bivariate analysis, the coefficient on polarization is -2.11 with a 95% credible interval of [-4.18, -0.03]. In Model 2, upon controlling for unified government, the polarization variable has a stronger effect on signing statements, with a coefficient of -2.75. The 95% credible interval around this estimate is [-4.89, -0.52]. In both cases, at least 95% of the posterior density is below zero, indicating a negative correlation between polarization and signing statements. In addition, Model 2 shows that unified government has as a positive but insubstantial

\[17\] I also controlled for whether there was divided party control of Congress and for the amount of major legislation passed per congress; neither had a significant impact on the outcome nor did they change the results of interest.
Table 1: Distance between Party Means and the Number of Signing Statements

<table>
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<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
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<td>Intercept</td>
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<td>6.71</td>
</tr>
<tr>
<td></td>
<td>(1.37)</td>
<td>(1.38)</td>
</tr>
<tr>
<td>Polarization</td>
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<td>-2.75</td>
</tr>
<tr>
<td></td>
<td>(1.05)</td>
<td>(1.10)</td>
</tr>
<tr>
<td>Unified Gov’t</td>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td></td>
</tr>
</tbody>
</table>

Posterior standard deviation in parentheses

N=16; $\hat{\alpha} = 3.48$ in Model 1, $\hat{\alpha} = 4.02$ in Model 2

Results from Bayesian negative binomial regression, based on 100,000 iteration simulations with 5,000 iteration burn-ins. All parameters were given improper uniform prior distributions for estimation.

effect on the number of signing statements.\(^{18}\)

Figure 6 displays the substantive results from Model 2. This plot shows the predicted number of signing statements across the actual range of polarization during the time period of interest, assuming that government is divided.\(^{19}\) The strong negative relationship is apparent. When polarization was at its highest, during the 112th Congress, the model predicts approximately 9 signing statements, while Obama actually issued 7 during that period. When polarization was at its lowest, during the 101st congress, the model predicts approximately 43 signing statements compared to the actual 61. At average levels of polarization, the model predicts 23 signing statements per congress compared to the actual average of 28 signing statements.

While these results show promising support for the hypothesis of interest, there are limitations to the empirical analysis as such. First, as there are only 16 congresses in the sample, data limitation is a threat to inference. Second, there is the risk of an ecological fallacy in evaluating the formal model at such an aggregated level. As the formal model speaks to policy bargaining on a single bill at a time, to evaluate the model thoroughly, a bill-level analysis is necessary. Inferring that bill-level bargaining effects will transfer to the congress-level may bias the results; correlations at the group level do not necessarily hold at the individual level, often leading to aggregation bias, as well as leading to greater potential for confounding (King 2013). However, the congress-level support for the hypothesis serves as a good plausibility check on the prediction.

\(^{18}\)The 95% credible interval on the unified government is $[-0.25, 1.26]$.

\(^{19}\)I held the value of the unified government at zero to generate the plot.
Figure 6: Congress-Level Results. This plot displays the results of the negative binomial model regressing the number of signing statements per congress on the level of polarization and an indicator of whether or not there was unified government. For the purposes of displaying the results, government is assumed to be divided. The plot shows the number of predicted signing statements across the actual range of partisan polarization in Congress. The negative relationship is apparent.

### 4.2 Bill-Level Analysis

To conduct the bill-level analysis, I use data made available by the the Congressional Bills Project; this database provides information on all public and private bills introduced in Congress since 1947.\(^{20}\) Using this data, I identify all public laws passed between the 97th and 112th congresses, as signing statements are only issued on bills that pass into law. In this time period, 4,895 pieces of legislation became public law. Using the Ostrander and Sievert data, I identify those laws that also received a signing statement; of the 4,895 laws, 410 (8.4%) received a signing statement from the president upon being signed into law. I created a dichotomous indicator for whether a particular piece of legislation received a signing statement; this variable is the dependent variable for the analysis.

The main independent variable is, again, the level of partisan polarization in Congress; however, since this variable can only be effectively measured at the congress level, I evaluate a multi-level model, in order to leverage both individual and group level predictors. At the congress (or group)
level, the predictors are partisan polarization, again measured as the absolute distance between party means per congress, and unified government. At the individual level, I control for features of the bill that may affect the propensity for a particular pierce of legislation to receive a signing statement. First, consistent with past literature on signing statements, I control for whether a public law is considered a major piece of legislation. Evidence has shown that the president is more likely to issue statements on legislation deemed important (Kelley and Marshall 2008; 2009). To operationalize the importance of legislation, I use Mayhew’s Sweep 1 measure. To create this measure, Mayhew relied on contemporary judgments about the importance of legislation. In particular, he relied on the laws identified by journalists of the New York Times and The Washington Post in wrapup session stories; he assumed that laws mentioned in these articles were salient. As such, I use this as an indication for major legislation and expect it to be positively associated with a bill receiving a signing statement.

In addition, I control for whether a bill was defense-related, involved international affairs, or dealt specifically with government operations. I utilize data from The Policy Agendas Project to code the major policy area of each law in the data set. This resource provides information on the major topic addressed in each public law, which provided the necessary information for these control variables. The Policy Agendas Project codes as defense bills those that primarily address funding or operations of the Department of Defense or the armed forces. Those bills that are coded as focusing on international affairs tend to be those that address the Department of State, that address foreign policy or diplomatic relations with other nations, or that regard trade policy. The Project considers a bill as relating to government operations primarily if it involves budget or appropriations requests for agencies. As these are all policy areas that directly implicate the constitutional powers of the president, it is likely that they are those most likely to receive attention and additional consideration from the president. As such, these bills should be more likely to receive signing statements than other bills. Figure 7 displays some of the data that will be used in the analysis; as the trend lines show, there does seem to be a negative relationship between polarization and the likelihood of legislation receiving signing statements, especially when

---

21I also controlled for importance using CQ’s key vote measure. The results held when I swapped out the measures. Of all the public laws, 153 were coded as major by Mayhew and 238 by CQ. Thirty-five of those bills in the Mayhew data set received a signing statement and 70 of those designated important by CQ

22http://www.policyagendas.org
considering major legislation.

Figure 7: Polarization and Signing Statements at the Bill Level. This plot displays the raw data of bills that received signing statements (those coded as 1 on the y-axis) and those that did not (zero on the y-axis), plotted against the range of observed polarization in Congress from the 97th to 112th congresses. The left panel plots all 4,985 public laws in the data set. A loess smoother of the data shows that there seems to be a negative trend between polarization and bills that receive signing statements. This finding is even stronger when looking at the loess smoother of the subset of the data that Mayhew designated as important, as seen in the right panel. It is apparent that significant legislation is more likely to receive a signing statement and the negative trend between bills receiving signing statements and polarization is more stark.

As I have data at the individual and group level, I estimate a model that is flexible enough to consider effects at both levels. I specify a multilevel logistic regression as follows:

\[
Pr(Y_i = 1) = \logit^{-1} (\alpha_{j[i]} + \beta_1 \text{major}_i + \beta_2 \text{defense}_i + \beta_3 \text{internat}_i + \beta_4 \text{gvtops}_i) \quad (4)
\]

\[
\alpha_j \sim N(\gamma_0 + \gamma_1 \text{polarization}_j + \gamma_2 \text{unified}_j, \sigma_\alpha) \quad (5)
\]

where \( i \) indexes the individual bill and \( j \) indexes one of the 16 congresses from which each bill was passed. Here, \( \alpha_j \) represents a congress-specific intercept shift, which is a function of the level of polarization and whether there was unified government for a particular congress, and \( \sigma_\alpha \) is an estimated standard deviation. The \( \beta \) parameters represent the effects of the individual-level predictors and \( \gamma \), the group-level predictors. I program and implement the model in R (R Development Core Team 2008) via \texttt{lme4} (Bates et al. 2014). The results of the model are shown
in Table 2.

Table 2: Distance between Party Medians and the Number of Signing Statements

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.31</td>
<td>(1.32)</td>
</tr>
<tr>
<td>Polarization</td>
<td>-2.23</td>
<td>(1.03)</td>
</tr>
<tr>
<td>Unified Government</td>
<td>0.48</td>
<td>(0.42)</td>
</tr>
<tr>
<td>Major</td>
<td>1.53</td>
<td>(0.22)</td>
</tr>
<tr>
<td>Defense Bill</td>
<td>1.39</td>
<td>(0.15)</td>
</tr>
<tr>
<td>International Affairs</td>
<td>1.37</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Government Operations</td>
<td>0.64</td>
<td>(0.15)</td>
</tr>
</tbody>
</table>

Standard errors in parentheses

N=4895, \( \sigma_n^2 = 0.6 \)

AIC=2650, BIC=2702, deviance=2634

These estimates are the result of a multilevel logistic regression with varying intercepts at the congress-level. The intercept presented in the table is the mean intercept across the 16 congresses. The independent variable of interest, polarization, which is measured at the congress-level, has the expected negative coefficient and is statistically and substantively significant.

All the variables, with the exception of unified government, are significant predictors of signing statements at the bill level. Unified government, once again, has a positive effect on whether a signing statement will get attached to a bill, but the effect does not achieve statistical significance. Of the policy controls, the indicator for whether a bill pertains to defense policy is the biggest predictor of whether a signing statement will be issued on a public law. Considering a hypothetical piece of major legislation during a congress with average levels of partisan polarization (holding all other variables at zero), the probability of a bill receiving a signing statement decreases from 43 percent to 16 percent moving from whether or not a law was defense-oriented. This is obviously a large substantive effect, given that only 8 percent of laws in the data set received signing statements. Whether a piece of legislation is considered major is also an important predictor of signing statements. Again, holding polarization at its mean and all other variables at zero, the probability of a bill receiving a signing statement moves from four percent to sixteen once it is considered
Figure 8: Bill-Level Results. This plot shows the predictions from the bill-level analysis across the observed range of partisan polarization, assuming unified government and that all other independent variables are held at zero, unless otherwise noted. Based on the prediction lines, it is clear that the main hypothesis holds at the bill-level: when congressional polarization is low, any particular piece of legislation is more likely to receive a signing statement. In addition, defense bills and major legislation, as coded by Mahyew, are more likely than other laws to receive signing statements.

The variable of interest, partisan polarization, consistent with expectations, has a significant and negative coefficient. This means that it is more likely for bills to receive signing statements when they are passed in a congress marked by low polarization. The probability that an important piece of legislation (holding all other predictors at the value of zero) receives a signing statement decreases from 24 percent to 8 percent when moving from the minimum to the maximum levels of polarization observed in the data. A 16 percent difference is a marked disparity in the probability of a signing statement being issued on a bill, considering, again, the low likelihood of any public law receiving one. The difference is even more stark when examining a major defense bill, holding all other variables at zero; at low levels of polarization, a major defense bill has a 63 percent probability of receiving a signing statement compared to a 25 percent chance when polarization is at its peak. Figure 8 further demonstrates these results. The plot displays the impact of polarization on the probability of the president issuing a signing statement on a particular law across the variable's
range; it assumes unified government and that all other variables are held at zero, unless otherwise noted. The results show strong support for the hypothesis.

4.3 Robustness Checks

In addition to both the bill- and congress-level analyses, I also conduct several robustness checks to demonstrate that the results hold for a variety of model specifications. Table 3 shows the results from these models. First, I relax the hierarchical structure of the multi-level model and instead estimate the bill-level analysis using the measure of polarization as an individual-level predictor. Doing so does not significantly change the effect of the variable of interest. Polarization has a negative and significant effect on the probability of legislation receiving signing statements. All other independent variables have positive and significant coefficients.

Table 3: Robustness Checks

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pooled Sample</th>
<th>Presidential FEs</th>
<th>Mayhew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.82</td>
<td>-0.07</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>(0.45)</td>
<td>(1.44)</td>
<td>(1.6)</td>
</tr>
<tr>
<td>Polarization</td>
<td>-1.65</td>
<td>-2.38</td>
<td>-2.01</td>
</tr>
<tr>
<td></td>
<td>(0.37)</td>
<td>(1.11)</td>
<td>(1.25)</td>
</tr>
<tr>
<td>Unified Gov’t</td>
<td>0.35</td>
<td>0.34</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.40)</td>
<td>(0.45)</td>
</tr>
<tr>
<td>Major</td>
<td>1.4</td>
<td>1.53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.21)</td>
<td>(0.22)</td>
<td></td>
</tr>
<tr>
<td>Defense</td>
<td>1.35</td>
<td>1.39</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.15)</td>
<td>(0.62)</td>
</tr>
<tr>
<td>International Affairs</td>
<td>1.41</td>
<td>1.37</td>
<td>1.31</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.19)</td>
<td>(1.44)</td>
</tr>
<tr>
<td>Government Operations</td>
<td>0.58</td>
<td>0.64</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>(0.15)</td>
<td>(0.15)</td>
<td>(0.64)</td>
</tr>
</tbody>
</table>

For Models 1 & 2, N=4985
For Model 3, N=16

Results from robustness checks. Model 1 represents a pooled logit model that relaxes the hierarchical structure of the model. Model 2 adds presidential fixed effects to the hierarchical model of interest. Model 3 shows the results from the hierarchical model applied to Mayhew’s Sweep 1 legislation as the universe of laws. The polarization variable has a strong negative effect on the probability of a law receiving a signing statement in all three models. The effect is statistically significant at conventional levels in Models 1 & 2.

In addition, the results of the multi-level model are robust to the inclusion of presidential fixed-effects. The results of the independent variables do not change much upon the inclusion of the fixed effects. As would be expected, George H. W. Bush and George W. Bush have strong positive
intercept shifts upon the inclusion of fixed effects, as both presidents were avid users of the signing statement. Finally, I estimate the model using Mayhew’s Sweep 1 legislation as the universe of laws, rather than all public laws. The coefficient on the polarization variable was large and negative, as expected, but the coefficient slightly misses conventional levels of statistical significance. Given that this analysis is conducted on 170 laws, only 35 of which received signing statements, this result is not surprising. The polarization effect, however, is still in the predicted direction.

5 Discussions and Conclusions

The results of this project have wider implications about policy change, policy implementation, and representation. The results show some evidence that legislators strongly consider presidential action, beyond the veto, when crafting legislation and that signing statements do affect the inter- and intra-branch bargaining environment in systematic ways. The evidence shows that the president has an important hand in the shape and fate of legislation and in the operation of the bargaining process itself. However, more importantly, the results herein discussed have implications about the actions in which members of Congress engage.

The result that signing statements are more likely when congressional polarization is low is perhaps counter-intuitive. Much of the literature focuses on the president’s intentions in using signing statements, rather than the upstream effects his action can have on the legislative calculus. Signing statements, on their surface, could be a means for the president to address policies passed by a hostile Congress. As divided government was the norm in the period examined, it could be the case that presidents have had the incentive to exercise their prerogative powers to gain on policy grounds in the face of such hostile congresses; in this case, the incentive would be especially high as the distance between the parties increased. However, I find that the converse is true—that signing statements are more likely when congressional polarization is low. By thinking carefully about the factors that legislators consider when crafting legislation and the variety of options the president has in responding to said bills, I was able to deduce that legislators anticipate signing statements when crafting laws in the first instance. This means that when a president faces a hostile Congress, he will only be able to issue signing statements when legislators come to agreements in expectation of his action; he cannot use the tools to combat any policy he dislikes. Because legislators can
anticipate presidential action, the ability of the president to issue signing statements can exacerbate bargaining problems in the legislature under some conditions, especially in highly polarized periods. Under polarized conditions, legislators will often opt for gridlock over policy change with a signing statement; in this way, the statements come at a high legislative price. When polarization is low, legislators have more of an incentive to cooperate and are more likely to enter into the perverse bargains that signing statements often induce. Signing statements are not a tool the president can generally use to take advantage of highly polarized political environments; instead, they are a power that the president can only exercise when legislators benefit from their issuance.

While signing statements can facilitate the creation of unlikely bargains, this is not to say that they are welfare-enhancing. In fact, the signing statement has the tendency to increase gridlock, at least relative to the predictions of extant models of policy change. In the model advanced, the signing statement makes legislative gridlock, in particular, more likely, as legislators will prioritize their position-taking incentives if they cannot get policies to be implemented as close as possible to their ideal points. Indeed, the model predicts that signed bills, signing statements, and gridlock can all occur when status quo policies are extreme, the conditions under which most models predict policy agreement. This tendency towards greater gridlock may be exacerbated given the highly polarized current political environment; it may be the case that greater gridlock will result in the stead of signing statements as polarization increases. If this is so, presidential prerogative power may come at the cost of legislative productivity. This has important consequences for the functioning and efficiency of the separation of powers system of government.

In addition to having implications for policy, the results in this model have important implications for democracy and legislative representation. The legislators in the model are concerned not only with policy outcomes but with their likelihood of getting re-elected. As such, they have an incentive to consider their constituents’ preferences when casting their votes or proposing legislation. On its surface, this sounds like effective representation; however, in practice, in an environment with signing statements, accountability can actually be quite low, despite the legislative concerns with position-taking. That is, legislative motivation to publicly represent constituents does not translate into substantive representation. For instance, the position-taking incentives in the model often induce greater legislative gridlock than there would be otherwise. Especially when their position-taking incentives are high, such as right before an election, legislators have an incentive to
vote for bills that look good to their constituents rather than bills that can actually induce policy change. Because the legislators in the model know that their constituents are watching their public stances and evaluate them for their actions and not for outcomes, legislators will often propose bills near their ideal points, rather than joining a coalition to pass legislation that would improve upon the status quo. As such, the representation being provided is superficial. A similar dynamic occurs when legislators join bargains in anticipation of signing statements. Legislators can vote for a policy that their constituents like, knowing that the president will shift the policy away from their preferences with a signing statement; if the legislator cares enough about pandering to constituents, she will vote yes despite the adverse policy effects. This sets up a dynamic where legislators can vote for policies and then blame the president when the legislation does not translate into tangible policy benefits on the ground. These dynamics are similar to those found in blame-game veto bargaining models (Groseclose and McCarty 2001), in that the incentives to send signals to constituents can lead to the breakdown of negotiations and Pareto inefficient outcomes. Rather than misrepresenting the president as in blame-game models, the legislators in the proposed model have an incentive to signal their true preferences, but, in doing so, they often misrepresent the actual policy that will be implemented because of presidential action. This dynamic of using the president as a potential scapegoat for their decisions may help legislators stay in office, as voters are not often sophisticated enough to hold legislators accountable for strategic decision-making. However, it also leads to less democratic representation on the larger scale. The prerogative powers of the president, thus, have wider normative implications for the policy process and political outcomes, as well as for democratic representation.
References


Cooper, P.J. 2002. *By order of the president: The use and abuse of executive direct action.* University Press of Kansas Lawrence, KS.


**URL**: http://www.jstatsoft.org/v42/i09/


**URL**: http://www.R-project.org


Table 1: Summary of Equilibrium Proposals and Policy Outcomes

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<th>Configuration</th>
<th>Equilibrium Proposal Conditions</th>
<th>Equilibrium Outcome</th>
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</thead>
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<td></td>
</tr>
<tr>
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<td>$\bar{V}_{l(accept)}$</td>
<td>$\bar{V}_{l(accept)}$</td>
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<td>$q$</td>
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<td>$q$</td>
</tr>
<tr>
<td>$l &lt; P &lt; q &lt; L$</td>
<td>(always)</td>
<td>$q$</td>
</tr>
<tr>
<td>$l &lt; P &lt; L &lt; q$</td>
<td>$\beta_{ss}$</td>
<td>$\frac{\beta_{ss} + P}{2}$</td>
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<tr>
<td></td>
<td>$\kappa_4$</td>
<td>$\frac{\kappa_4 + P}{2}$</td>
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</tr>
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<td>$\frac{\omega_{(ss)} + P}{2}$</td>
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<td>Moderate Veto Player</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$q &lt; P &lt; l &lt; L$</td>
<td>Same conditions/outcomes as $q &lt; P &lt; L &lt; l$</td>
<td>Same as $q &lt; P &lt; L &lt; l$</td>
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<td>$\omega_{(ss)} + \epsilon$</td>
<td>$q$</td>
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<tr>
<td></td>
<td>$L$</td>
<td>$q$</td>
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<td>Same as $l &lt; P &lt; L &lt; q$</td>
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<td>Short Hand</td>
<td>Actual Value</td>
<td>Notes/Conditions</td>
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<td><em>Varies by case</em></td>
<td>Veto player’s ideal point</td>
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<tr>
<td>$P$</td>
<td>$-1$</td>
<td>President’s ideal point</td>
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<td>$\alpha_1$</td>
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<td></td>
</tr>
<tr>
<td>$\alpha_2$</td>
<td>$\frac{-16\sqrt{2c+8\sqrt{18-2c}-18+10c}}{16\sqrt{2c-16\sqrt{18-2c}+72-16c}+9+4\sqrt{-2c+2+c}}$</td>
<td></td>
</tr>
<tr>
<td>$\alpha_3$</td>
<td>$\frac{12-8\sqrt{2c+2-4c}}{-4\sqrt{2c+2+8\sqrt{2c-5c+1}}}$</td>
<td></td>
</tr>
<tr>
<td>$\alpha_4$</td>
<td>$\frac{8\sqrt{2c+2-8\sqrt{2c+8c-4}}}{5+4\sqrt{2c-2c}}$</td>
<td></td>
</tr>
<tr>
<td>$\alpha_5$</td>
<td>$\frac{4-4\sqrt{2c+2c}}{-7.5+4\sqrt{1.5-2c-2c}}$</td>
<td></td>
</tr>
<tr>
<td>$\alpha_6$</td>
<td>$\frac{-1+\sqrt{2c}}{21-8\sqrt{1.5-2c-8c}}$</td>
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</tr>
<tr>
<td>$\kappa_3$</td>
<td>$\frac{-1+\sqrt{18-2c}}{-1+\sqrt{-2c+2}}$</td>
<td>for $l &lt; P &lt; L &lt; q$</td>
</tr>
<tr>
<td>$\kappa_4$</td>
<td>$\frac{-1+\sqrt{18-2c}}{-1+\sqrt{-2c+2}}$</td>
<td>for $q &lt; P &lt; L &lt; l$</td>
</tr>
<tr>
<td>$\tilde{\beta}_{ss}$</td>
<td>$\frac{4\alpha+3}{4\alpha+1}$</td>
<td></td>
</tr>
<tr>
<td>$\tilde{\omega}_{(ss)}$</td>
<td>$\frac{4a+2l-P+2(4a^2+5a+1)q^2-(8a^2+10a+2)lq+(4a^2+4a+1)l^2+2alP-\alpha P^2}{4a+1}$</td>
<td></td>
</tr>
<tr>
<td>$\omega_{(ss)}$</td>
<td>$\frac{4a+2l-P-2(4a^2+5a+1)q^2-(8a^2+10a+2)lq+(4a^2+4a+1)l^2+2alP-\alpha P^2}{4a+1}$</td>
<td></td>
</tr>
</tbody>
</table>
A President’s Subgame

Proof of President’s Optimal Signing Statement.

As the signing statement allows the president to re-set the location of a policy proposal in the policy space, the president will optimize over his utility to issuing a signing statement, \( U_P(ss) = -(P - B)^2 - (B - \beta)^2 - c \), when doing so. The optimal signing statement can be expressed as \( \frac{\beta + P}{2} \), or the midpoint between the president’s ideal point and the proposal from Congress, \( \beta \):

\[
\begin{align*}
U_P(ss) & = -(P - B)^2 - (B - \beta)^2 - c \\
\frac{\partial B}{\partial \beta} & = 2P - 4B + 2\beta \\
0 & = 2P - 4B + 2\beta \\
4B & = 2P + 2\beta \\
B^* & = \frac{\beta + P}{2}
\end{align*}
\]

Proof of Lemma 1—President’s Strategy. \(^{23}\)

In comparing the president’s utility of vetoing legislation to signing legislation, the president prefers to sign bills that are closer to him than is the status quo \( [2P - q < \beta < q] \) and veto all others.

\[
\begin{align*}
U_P(sign) & > U_P(veto) \\
-(P - \beta)^2 & > -(P - q)^2 \\
-P^2 + 2\beta P - \beta^2 & > -P^2 + 2Pq - q^2 \\
0 & > \beta^2 - 2\beta P + 2Pq - q^2 \\
& = \frac{2P \pm \sqrt{4P^2 - 4(2Pq - q^2)}}{2}
\end{align*}
\]

sign when : \( 2P - q < \beta < q \)

\(^{23}\)Decision rules assume the status quo is positive; the same ranges apply if the status quo is negative, but the ordering is different—that is, in the comparison between signing and vetoing legislation, when the status quo is positive, the president signs bills that \( 2P - q < b < q \). If it is negative, he accepts bills in the range: \( q < b < 2P - q \)
When comparing the president’s utility of signing legislation to that of issuing signing statements, the president prefers to sign bills that are between \( P - \sqrt{2c} \) and \( P + \sqrt{2c} \).

\[
U_p(ss) > U_p(sign) \\
\frac{-P^2 + 2P\beta - \beta^2 - 2c}{2} > -(P - \beta)^2 \\
\frac{-P^2 + 2P\beta - \beta^2 - 2c}{2} > -2P^2 + 4P\beta - 2\beta^2 \\
0 > -P^2 + 2P\beta - \beta^2 + 2c \\
\frac{-2P \pm \sqrt{4P^2 - 4(-1)(-P^2 + 2c)}}{2} \\
\frac{2P \pm 2\sqrt{2c}}{2}
\]

Sign when: \( P - \sqrt{2c} < \beta < P + \sqrt{2c} \)

When comparing the president’s utility of vetoing legislation to that of issuing signing statements, the president prefers to issue signing statements on bills that are between \( P - \sqrt{2c} \) and \( P + \sqrt{2c} \).

\[
U_p(ss) = U_p(veto) \\
\frac{-P^2 + 2P\beta - \beta^2 - 2c}{2} > -(P - q)^2 \\
\frac{-P^2 + 2P\beta - \beta^2 - 2c}{2} > -2P^2 + 4Pq - 2q^2 \\
0 > \beta^2 - 2\beta P - P^2 + 4Pq - 2q^2 + 2c \\
\frac{2P \pm \sqrt{4P^2 - 4(2c - 2q^2 + 4Pq - P^2)}}{2} \\
\frac{2P \pm 2\sqrt{2P^2 - 4Pq + 2q^2 - 2c}}{2}
\]

Signing statement when: \( P - \sqrt{2P^2 - 4Pq + 2q^2 - 2c} < \beta < P + \sqrt{2P^2 - 4Pq + 2q^2 - 2c} \)
Proof of Result 1—President’s Strategy, continued. In order to assess which and when of the above decision rules is binding, I compare the cutpoints. The results show that signing statements can only happened when the fixed cost parameter, $c$, is sufficiently low.

The SQ ($q$) is larger than the upper sign/signing statement cutpoint $(P + \sqrt{2c})$ when $c < \frac{q^2 - 2Pq + P^2}{2}$.

\[
q > P + \sqrt{2c} \\
q - P > \sqrt{2c} \\
q^2 - 2Pq + P^2 > 2c \\
c < \frac{q^2 - 2Pq + P^2}{2}
\]

The SQ is smaller than the upper signing statement/veto cutpoint $(P + \sqrt{2P^2 - 4Pq + 2q^2 - 2c})$ when $c < \frac{q^2 - 2Pq + P^2}{2}$.

\[
P + \sqrt{2P^2 - 4Pq + 2q^2 - 2c} > q \\
\sqrt{2P^2 - 4Pq + 2q^2 - 2c} > q - P \\
2P^2 - 4Pq + 2q^2 - 2c > q^2 - 2Pq + P^2 \\
q^2 - 2Pq + P^2 > 2c \\
c < \frac{q^2 - 2Pq + P^2}{2}
\]
The upper signing statement/veto cutpoint is larger than the upper sign/signing statement cutpoint when $c < \frac{q^2 - 2Pq + P^2}{2}$.

\[
P + \sqrt{2P^2 - 4Pq + 2q^2 - 2c} > P + \sqrt{2c} \\
\sqrt{2P^2 - 4Pq + 2q^2 - 2c} > \sqrt{2c} \\
2P^2 - 4Pq + 2q^2 - 2c > 2c \\
2P^2 - 4Pq + 2q^2 - 2c > 4c \\
c < \frac{q^2 - 2Pq + P^2}{2}
\]

The same cost condition ($c < \frac{q^2 - 2Pq + P^2}{2}$) holds for the comparison of the lower cutpoints as well. This means that when the cost is sufficiently low, signing statements are in the equilibrium strategy of the president. When the cost is higher than this threshold, they are not. ■

B Legislative Veto Player’s Subgame

**Proof of Lemma 2—Veto Player’s Strategy.**

The veto player will accept any policies between the status quo and its reflection point about her ideal point, provided that the president is going to sign the bill into law.

\[
U_i(\text{accept}|\text{sign}) > U_i(\text{reject}) \\
-\alpha(l - \beta)^2 - (l - \beta^2) > -\alpha(l - q)^2 - (l - q)^2 \\
-(\alpha + 1)(l - \beta)^2 > -(\alpha + 1)(l - q)^2 \\
(l - \beta)^2 < (l - q)^2 \\
0 < -\beta^2 + 2l\beta - 2lq + q^2 \\
0 < \frac{-2l \pm \sqrt{(2l)^2 - 4(-1)(-2lq + q^2)}}{-2} \\
0 < \frac{2l \pm \sqrt{l^2 - 2lq + q^2}}{2}
\]

Accept when $\beta$ is in the range : $[2l - q, q]$
The veto player will accept any policies between the status quo and its reflection point about her ideal point, provided that the president is going to veto the bill.

\[ U_i(\text{accept}|\text{veto}) > U_i(\text{reject}) \]
\[-\alpha(l - \beta)^2 - (l - q)^2 > -\alpha(l - q)^2\]
\[-\alpha(l - \beta)^2 > -\alpha(l - q)^2\]
\[(l - \beta)^2 < (l - q)^2\]
\[0 < -\beta^2 + 2l\beta - 2lq + q^2\]
\[-\frac{2l \pm \sqrt{(2l)^2 - 4(-1)(-2lq + q^2)}}{2}\]

Accept when \(\beta\) is in the range \([2l - q, q]\).

In the face of a signing statement, the veto player will accept any policies between in the range:
\[
\frac{4\alpha l + 2l - p \pm 2\sqrt{(4\alpha^2 + 5\alpha + 1)q^2 - (8\alpha^2 + 10\alpha + 2)lq + (4\alpha^2 + 4\alpha + 1)l^2 - \alpha p^2 + 2\alpha lp}}{4\alpha + 1}
\]

\[
\frac{8\alpha l + 4l - 2p \pm \sqrt{(-8\alpha - 4l + 2p)^2 - 4(4\alpha + 1)(-4\alpha q^2 - 4q^2 + 8\alpha lq + 8lq + p^2 - 4lp)}}{2(4\alpha + 1)}
\]

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C Proposer Subgame

Proof of Proposer’s Optimal Proposal in anticipation of a signing statement.

In anticipation of a signing statement, the best proposal the proposer can make is \[ \frac{L(4\alpha + 2) - P}{(4\alpha + 1)} \].

\[
U_L(ss) = -(L - \beta)^2 - \left( L - \frac{P + \beta}{2} \right)
\]
\[
\frac{\partial}{\partial \beta} = 2\alpha L - 2\alpha \beta + L - \frac{1}{2}P - \frac{1}{2}\beta
\]
\[0 = 2\alpha L - 2\alpha \beta + L - \frac{1}{2}P - \frac{1}{2}\beta\]
\[
\beta(4\alpha + 1) = L(4\alpha + 2) - P
\]
\[
\hat{\beta}_{ss} = \frac{L(4\alpha + 2) - P}{(4\alpha + 1)}
\]

The Case of the Moderate Proposer

Below, I provide the proofs for the utility comparisons for one of the three major cases of the game. For the sake of parsimony, I have excluded all the ancillary math that was necessary to identify the viable proposals for each sub-configuration of preferences. This math, as well as the math for the other two major cases, is available upon request.

For the case at hand, I assume the proposer’s ideal point, L, is 1. The president’s, P, is -1. The veto player’s, l, is 2. I solve for varying values of the status quo.
Proof of Proposition 1 & Result 2.

C.1 Configuration 1: \( q < P < L < l \)

Here’s the status quo is assumed to be -2.

**Utility Comparisons**

L prefers gridlock at her ideal point over a bill signed at the upper bound of the sign region when \( \alpha \) high enough:

\[
\begin{align*}
\text{Utility to gridlock} & > \text{Utility to signed bill} \\
-\alpha(1 - 1)^2 - (1 - 2)^2 & > -\alpha(1 - (-1 + \sqrt{2c}))^2 - (1 - (-1 + \sqrt{2c}))^2 \\
-9 & > -\alpha(2 - \sqrt{2c})^2 - (2 - \sqrt{2c})^2 \\
\alpha(2 - \sqrt{2c})^2 & > 9 - (2 - \sqrt{2c})^2 \\
\alpha(4 - 4\sqrt{2c} + 2c) & > 5 + 4\sqrt{2c} - 2c
\end{align*}
\]

positive because squared term always positive

\[
\alpha > \frac{5 + 4\sqrt{2c} - 2c}{4 - 4\sqrt{2c} + 2c}
\]

L will prefer gridlock at her ideal point over a signing statement at the upper veto/ss cutpoint when \( \alpha \) high enough

\[
\begin{align*}
\text{Utility to gridlock} & > \text{Utility to signing statement} \\
-\alpha(1 - 1)^2 - (1 - 2)^2 & > -\alpha(1 - (-1 + \sqrt{-2c + 2} + 2c) - \left(1 - \frac{-1 + \sqrt{-2c + 2} - 1}{2}\right)^2 \\
-9 & > -\alpha(2 - \sqrt{-2c + 2})^2 - \left(\frac{4 - \sqrt{-2c + 2}}{2}\right)^2 \\
\alpha(2 - \sqrt{-2c + 2})^2 & > 9 + \left(\frac{4 - \sqrt{-2c + 2}}{2}\right)^2 \\
\alpha(6 - 4\sqrt{-2c + 2} - 2c) & > \frac{9 + 4\sqrt{-2c + 2} + 2}{2} \\
\alpha & > \frac{9 + 4\sqrt{-2c + 2} + 2 + c}{12 - 8\sqrt{-2c + 2} - 4c}
\end{align*}
\]
When \( c < 0.2 \), L always prefers the signing statement to the signed bill. When \( c > 0.2 \), L prefers the signing statement when \( \alpha \) high enough:

\[
-\alpha(1 - (-1 + \sqrt{-2c + 2}))^2 - \left(1 - \left(-1 + \frac{-1 + \sqrt{-2c + 2} - 1}{2}\right)\right)^2 > -\alpha(1 - (-1 + \sqrt{2c}))^2 - (1 - (-1 + \sqrt{2c}))^2 \\
-\alpha(2 - \sqrt{-2c + 2})^2 - \left(\frac{4 - \sqrt{-2c + 2}}{2}\right)^2 > -\alpha(2 - \sqrt{2c})^2 - (2 - \sqrt{2c})^2 \\
-\alpha(2 - \sqrt{-2c + 2})^2 + \alpha(2 - \sqrt{2c})^2 > \left(\frac{4 - \sqrt{-2c + 2}}{2}\right)^2 - (2 - \sqrt{2c})^2 \\
\alpha(4\sqrt{-2c + 2} - 4\sqrt{2c} + 4c - 2) > -\frac{8\sqrt{-2c + 2} + 16\sqrt{2c} - 10c + 2}{4}
\]

The left side is always positive for the relevant range of \( c \). The right side is positive when \( c > 0.2 \). Therefore, when \( c < 0.2 \), the inequality is always true and the proposer always prefers the signing statement. When \( c < 0.2 \), \( L \) prefers the signing statement when \( \alpha \) is high enough:

\[
\alpha(4\sqrt{-2c + 2} - 4\sqrt{2c} + 4c - 2) > -\frac{8\sqrt{-2c + 2} + 16\sqrt{2c} - 10c + 2}{4} \\
\alpha > -\frac{4\sqrt{-2c + 2} + 8\sqrt{2c} - 5c + 1}{8\sqrt{-2c + 2} - 8\sqrt{2c} + 8c - 4}
\]
C.2 Configuration 2: \( P < q < L < l \)

Here, the status quo is assumed to be 0.

**Utility Comparisons**

L prefers gridlock at her ideal point over a signing statement proposed at the upper veto/ss cutpoint:

\[
\begin{align*}
\text{Utility to gridlock} & > \text{Utility to signing statement} \\
-\alpha(1 - 1)^2 - (1 - 0)^2 & > -\alpha(1 - (-1 + \sqrt{-2c + 2}))^2 - \left(1 - \left(\frac{-1 + \sqrt{-2c + 2} - 1}{2}\right)^2\right) \\
-1 & > -\alpha(2 - \sqrt{-2c + 2})^2 - \left(\frac{4 - \sqrt{-2c + 2}}{2}\right)^2 \\
\alpha(2 - \sqrt{-2c + 2})^2 & > 1 - \left(\frac{4 - \sqrt{-2c + 2}}{2}\right)^2 \\
\alpha(6 - 4\sqrt{-2c + 2} - 2c) & > \frac{-14 + 8\sqrt{-2c + 2} + 2c}{4}
\end{align*}
\]

*The right side of this inequality is always negative:*

\[
\begin{align*}
-14 + 8\sqrt{-2c + 2} + 2c & > 0 \\
4\sqrt{-2c + 2} & > 7 - c \\
-32c + 32 & > c^2 - 14c + 49 \\
0 & > c^2 + 18c + 17
\end{align*}
\]

*Back to the utility comparison:*

\[
\begin{align*}
\alpha(6 - 4\sqrt{-2c + 2} - 2c) & > \frac{-14 + 8\sqrt{-2c + 2} + 2c}{4} \\
\alpha & > \frac{-7 + 4\sqrt{-2c + 2} + c}{12 - 8\sqrt{-2c + 2} - 4c}
\end{align*}
\]

*Always true*
C.2.1 Configuration 3: $P < L < l < q$

The status quo takes on the value of 3 here.

Utility Comparisons

The proposer never prefers gridlock and proposing her ideal point over the signing statement proposal at the upper bound of the signing statement winset

Utility to gridlock $> \text{Utility to signing statement}$

$$-\alpha(1 - 1)^2 - (1 - 3)^2 > -\alpha \left( 1 - \frac{8\alpha + 5 - 2\sqrt{4\alpha^2 - 4\alpha + 1}}{4\alpha + 1} \right)^2 - \left( 1 - \frac{8\alpha + 5 - 2\sqrt{4\alpha^2 - 4\alpha + 1}}{4\alpha + 1} - 1 \right)^2$$

$$-4 > -\alpha \left( \frac{-4\alpha - 4 + 2\sqrt{4\alpha^2 - 4\alpha + 1}}{4\alpha + 1} \right)^2 - \left( \frac{2\alpha - 1 + \sqrt{4\alpha^2 - 4\alpha + 1}}{4\alpha + 1} \right)^2$$

$$0 > -\alpha \left( \frac{-4\alpha - 4 + 2\sqrt{4\alpha^2 - 4\alpha + 1}}{4\alpha + 1} \right)^2 - \left( \frac{2\alpha - 1 + \sqrt{4\alpha^2 - 4\alpha + 1}}{4\alpha + 1} \right)^2 + 4$$