Anticipating unilateralism*

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Abstract

Understanding unilateralism may require examining the conditions that precede and motivate the president's action. But if members of Congress can anticipate unilateral action, their failure to legislate cannot be explained by "gridlock intervals" in a standard spatial model. I argue instead that they may willingly surrender authority to the president to head off potential attacks from voters or interest groups. This helps to explain the president's accumulation of authority over time. More broadly, I argue that just as a large literature has examined outside pressure on Congress in isolation, we should examine its influence in the presence of the president's unilateral powers.

Keywords: Congress; presidency; executive order; unilateral action; formal model

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This paper explores Congress's anticipation of presidential unilateral action. There are numerous instances in which the president expressed an intention to act unilaterally if Congress failed to legislate. And in many of those cases, Congress indeed failed to do so, with unilateral action following as anticipated.

For example, in 1942, President Franklin D. Roosevelt gained unilateral power to impose price controls through the Emergency Price Control Act, but this excepted agricultural products. Believing that such authority was essential to checking inflation, Roosevelt threatened to act unilaterally. Congress acceded to the president's demands and passed legislation (Mayer 2002, 52-3). In 1997, "just days after the Senate abandoned major tobacco legislation, [President] Clinton imposed smoking limits on buildings owned or leased by the executive branch and ordered agencies to monitor the smoking habits of teenagers" (Howell 2003, 5).

More recently, after President Obama's proposed American Jobs Act stalled, Obama unveiled his "We Can't Wait" initiative (Calmes 2011). As White House Communications Director Dan Pfeiffer explained, "the President is kicking off a new effort to urge Congress to pass the American Jobs Act, piece by piece, to put folks back to work and strengthen the economy. Using the mantra 'we can't wait,' the President will highlight executive actions that his Administration will take. He'll continue to pressure Congressional Republicans to put country before party and pass the American Jobs Act, but he believes we cannot wait, so he will act where they won't" (Pfeiffer 2011). (The legislation ultimately failed to advance).

Even more cases fit this pattern: one may examine President Obama's DACA order after the failure of immigration reform, Clean Power Plant plan after the failure of Cap and Trade, and executive order on gun control following the 2015 San Bernardino mass shooting, and President Trump's 2019 national emergency declaration following repeated refusals by Congress to provide significant money for a wall along the southern border.[1]

1. Some studies find fewer executive orders under divided government (see the literature review in Bolton and Thrower 2016). This can comport with the present story. First, we cannot observe orders that were

However, upon careful consideration, legislation's failure proves puzzling. A pivotal member of Congress who is opposed to policy change has two choices: support legislation, so policy change occurs legislatively, or oppose legislation, so policy change occurs unilaterally. Importantly, policy change happens either way. The puzzle persists even if unilateral action is less effective than legislation. This would imply that the prospect of the president's action is less threatening. But it also means that, in equal measure, the president should be willing to accept a compromise more favorable to the member of Congress.[2]

A natural question to ask next is whether dynamic considerations may explain the member's refusal to permit legislation. Perhaps it would lock in the undesirable policy, while forcing the president to rely on unilateral action would allow policy to be reversed more easily later. Even allowing legislation to be harder to reverse, I demonstrate that this intuition is wrong whether the member is relatively centrist or extreme. Indeed, if the member is relatively centrist, then she strictly prefers legislation precisely *because* it is harder to reverse. Centrists benefit from legislation fixing policy at a moderate compromise between other actors sitting at opposite extremes. In contrast, easily reversed unilateral action exposes centrists to extreme policy on one side now and the possibility of extreme policy on the other side later under a different president. These results are robust to unilateral action

implicitly threatened but legislatively averted. Second, if more orders are issued under unified government, there must exist some purpose for them other than circumvention, perhaps complementary to legislation. (While even unified governments may disagree, this itself once again implies circumvention). In particular, some orders may implement legislation, which plausibly is more likely under unified government; indeed, legislative success or potential thereof predicts an increase in orders (Krause and Cohen 1997; Shull 2006; Young 2013). Third, case evidence strongly implies circumvention on important policies.

2. Although not presently a key mechanism, one might imagine that members should strictly prefer legislation, as it allows them to wield proposal power. This may hold under quadratic utility (see Appendix B) or if the president faces costs of issuing an order (Rudalevige 2015; Christenson and Kriner 2015, 2017a, 2017b; Lowande and Gray 2017; Reeves and Rogowski 2016, 2018) (see Appendix A).

being probabilistic or subject to a "discretion" bound. Given this, I conclude that gridlock intervals alone cannot explain the failure of Congress to legislate when the president stands ready to issue an executive order.

Although this is a contribution in itself, it sets up the question for the second part of the paper. Namely, if gridlock intervals cannot explain failure to legislate, then what does? I show how a member can use their rejection or acceptance of legislation to signal the position of their ideal point to an "outside actor" that can influence their probability of reelection, which one may interpret as a voter, donor, social group, or activist (Patty 2016).[3] Informative signaling is possible because only centrist members of Congress benefit from legislation (as demonstrated in the first part of the paper), with the presence of a right-leaning outside actor inducing even centrist members to reject legislation when the actor is sufficiently strong.[4]

In this context, rejecting legislation does not only send a signal to the outside actor but

3. This is compatible with a story of collective action problems. For example, Anzia and Moe (2016) explore how misalignment of individual incentives with long-term partisan collective good can explain seemingly paradoxical votes. Relatedly, I examine how individuals' policy incentives seemingly imply legislation, but signaling considerations make it individually costly for a veto player. Endogenous variation in this cost will explain the conditions under which such collective action problems prove prohibitive. Alternatively, the problem may be the individual investment of time drafting legislation and constructing a coalition. This often does not satisfactorily explain legislative failure. Congress abandoned tobacco legislation in 1998 only after significant time drafting and debating (Rosenbaum 1998). And quite famously, immigration reform efforts saw large investments of time and effort during the Bush II and Obama presidencies (Nakamura and O'Keefe 2014; MacGillis 2016). Furthermore, the predominant model of unilateral action itself predicts Congressional action if the aggregation of individual policy preferences admits it, once the president has taken action or declined to do so (Howell 2003). For further discussion, see Appendix A.

4. While signaling impulses may explain the failure of legislation more generally, there are two reasons why they are specifically relevant to unilateral action. First, as just claimed, rejecting legislation when unilateral action is anticipated imposes differential costs on members as a function of their policy preferences, with centrists suffering the most. Second, the fact that a policy shift is guaranteed to occur even without members' cooperation makes their failure to do so particularly striking.

also eliminates the underlying reason for the actor to intervene in the member's election: the member's influence over policy. This complements the results of Howell and Wolton (2018), who argue that the president may accumulate authority to motivate voters to turn out and avoid an opponent's reversal. Rounding out their story, I thus argue that members of Congress may willingly surrender that authority to avoid electoral intervention.

To summarize, the broader contribution of this paper is twofold. First, I show that understanding unilateral action may require examining the conditions that precede and motivate the president's action. While other literature has focused more on the president as the first mover, a unique contribution of this paper is to imagine the president as the second mover, with "advantage" stemming from other players' anticipation of unilateral action should they fail to legislate first. Unilateral action can thus partly be understood as a response to legislative failure, which itself demands explanation.

Second, demonstrating that "gridlock intervals" alone cannot explain Congress's failure to anticipate unilateral action, I argue that the prospect of group or public pressure may lead Congress simply to relinquish policy-making to the president, shifting the target of outside actors' attention. This may help explain the president's accumulation of authority over time. In looking beyond formal constitutional elements to explain why the president may issue orders, the present work relates to a nascent empirical literature examining the public opinion influences on the president's use of unilateralism (Rudalevige 2015; Christenson and Kriner 2015, 2017a, 2017b; Reeves and Rogowski 2016, 2018; Judd 2017). In complement, I argue that scholars should apply to the study of unilateralism the same insights that have emerged from a large literature examining interest group influence on Congress (Schlozman and Tierney 1986; Hall and Wayman 1990; Walker 1991; Hall and Deardorff 2006).

Prior literature

Prior literature has explored a tradeoff between achieving preferred policy and exposure to variance. Buisseret and Bernhardt (2017) present a model of policymaking in which the policy passed in the first stage becomes the status quo in the second stage. They show that a proposer may decline to fully exploit policy opportunities today in order to foreclose opponents from reaping even greater policy opportunities in the future. Relatedly, Judd and Rothenberg (2020) show that supermajoritarian institutions may be welfare-improving because of policy stability's positive effect on private investment. The present theory exhibits three important differences. First, policy is not only inherited from the first stage; how policy can be moved in the second stage is a function of which of two different policy-making means was used to enact it in the first stage. Second, the first part of the paper demonstrates the expansive conditions under which there is no such tradeoff and players should always prefer to reduce variance, i.e. pass legislation. Third, I argue for a tradeoff arising from signaling incentives, with single crossing arising endogenously from features specific to unilateral action.

A novel implication specific to unilateral action is that members of Congress may decline to pass legislation because it transfers authority to the president, thus heading off potential attacks from policy-motivated voters or interest groups. This relates to a growing literature on executives' accumulation of authority over time (Howell and Wolton 2018; Howell, Shepsle, and Wolton 2020). Most relatedly, Howell and Wolton argue that presidents may accumulate authority precisely because it frees potential successors to undo the policy more easily, thus motivating voters to turn out for the incumbent. Similarly, I show how members of Congress may give up authority to the president to avoid punishment. Key theoretical differences in this paper are the presence of imperfect information and an explicitly modeled legislature.

This paper also relates to literature on position-taking and signaling by members of Congress. Groseclose and McCarty (2001) show how Congress may send legislation to the president to reveal the president's extremism to a voter. Similarly, I study the relationship between seemingly paradoxical Congressional behavior given what the president will do and signaling to an outside audience, but I focus on legislation's ability to signal information about the preferences of members of Congress. Whereas Groseclose and McCarty explain why Congress might send a bill to the president that it knows will be vetoed, I explain why Congress may fail to send a bill whose policy consequences will be realized anyway and with greater variance. Patty (2016) studies how, even when a policy outcome is assured, members of Congress who are recalcitrant can signal this quality to constituents through imposing costly and inefficient delay. The present model also hinges on members' heterogeneous costs of obstruction to imply the ability to signal to constituents. In contrast with Patty, though, heterogeneity in costs is derived endogenously from heterogeneity in ideal points, as obstruction has direct consequence for the utility of centrist members. And obstruction does not exactly delay what is going to happen anyway, but rather leads to the implementation of an alternative that is utility-equivalent for only some of the players.

Literature on policy drift has also explored some similar ideas. Callander and Martin (2017) examine the ability of external policy shifts to motivate legislative action and break gridlock. They explore exogenous valence policy decay, i.e. policy drift "downward" that equally hurts all players arrayed on a left-right dimension. This provides the player with proposal power the opportunity to "upend the classic notion of gridlock" and extract surplus from other players. Consequently, they predict constant legislation. The present model also demonstrates that gridlock should break when policy change is imposed externally. In contrast with Callander and Martin, though, the "external" policy change is strategically imposed by the president on members of Congress, occurs within what would normally be considered the "gridlock interval," and can be averted in advance.

I proceed as follows. First, I present a baseline model without an outside actor. This makes clear the absence of gridlock. Next, to resolve this puzzle, I modify the game to allow signaling to an outside actor. Finally, I provide empirical implications and conclude.

Baseline model

The baseline model shows that when Congress can anticipate unilateral action, standard gridlock results break down. This is because members of Congress realize that policy is going to move with or without their action. In fact, centrist members of Congress will strictly prefer legislation. This is due to 1. unilateral action's inability to reverse legislation and 2. the probability that the president's ideal point will shift to the opposite extreme. A centrist member therefore prefers that legislation be enacted as protection against policy volatility. Strikingly, though, these elements also do nothing to stop extremists from agreeing on some legislative compromise, a puzzle that the second part of the paper will resolve.[5]

Formal Definition

Players consist of an incumbent president P^L, a challenger P^R, and two members of Congress M (the "median") and V (the "veto player"). Policy will be a point in the policy space $\mathbb{R}$. The status quo is a parameter x_0. Policy at the end of Stage $i \in \{1, 2\}$ shall be denoted x_i.

Sequence of Moves

Stage 1

1. M decides whether to propose legislation $\ell_1 \in \mathbb{R}$ moving x_0, with V deciding whether to approve it if proposed.
2. If legislation passes, P^L decides whether to sign it.
3. If no legislation passes or P^L vetoes it, P^L decides whether to move x_0 with an executive action $e_1 \in \mathbb{R}$.

5. This continues to hold even if unilateral action is additionally constrained or probabilistically implemented. See Appendices A and C for details.

Stage 1A

4. A presidential election occurs. With probability θ, P^R wins; otherwise, P^L wins.

Stage 2

5. Stage 1 repeats, with legislation denoted ℓ_2, executive action denoted e_2, and the status quo inherited from the result of play in Stage 1 (x_1). If x_1 yielded from legislation, the president may not move it with an executive order.
6. The game ends and payoffs are realized.

Utility functions

Let $\delta \in (0, 1)$ discount Stage 2 utility. Utility to player I with ideal point i shall be

$$U^I(x_1, x_2) = -|i - x_1| + \delta(-|i - x_2|).$$

Summary

The exogenous parameters are x_0, p^L, p^R, m, and θ. The endogenous choices are ℓ_1 and ℓ_2, V's decisions in each Stage to approve legislation, P^L or P^R's decisions in each Stage to sign legislation, and e_1 and e_2. The random variable is the outcome of the presidential election. The game has exogenous uncertainty only. Therefore, the natural equilibrium concept is subgame perfect Nash equilibrium (SPNE). I focus exclusively on pure strategy SPNE.

Discussion

This order of moves resembles the basic setup present in Howell (2003), with two key changes. First, consistent with my interest in examining unilateral action as the consequence of other individuals' failure to act, I allow the median and veto player the chance to offer legislation *before* P decides whether to move policy unilaterally. This will allow us to examine the circumstances under which members of Congress will offer legislation preempting the unilateral action that they must otherwise anticipate. Second, I introduce a dynamic element. As Buisseret and Bernhardt (2017) argue, the fact that today's policy may become tomorrow's status quo can have important implications for how actors weigh the benefit of policy opportunities today against the risk of unfavorable shifts in the future.

Yet unlike Buisseret and Bernhardt—and specific to a setting with unilateral action—I do not merely assume that the status quo is inherited. I also suppose that the way in which it was enacted in Stage 1 has implications for how it can be changed in Stage 2. Importantly, if policy was enacted unilaterally in Stage 1, it can be changed either unilaterally or legislatively in Stage 2. But if policy was enacted legislatively in Stage 1, it can only be changed legislatively in Stage 2. This will allow us to dissect the commonly held belief that members of Congress may prefer an executive order because it is more transitory.

The assumption is also well-supported in the literature. Scholars of presidential politics have clearly documented the relative ease with which presidents may reverse prior executive orders. As discussed by Thrower (2017), Warber (2006) details the numerous ways in which a president can modify or nullify previous executive orders with a new order. Thrower thus argues that executive orders are "transitory" instruments that "future regimes can easily change..., particularly presidents who can act independently from other political actors through unilateral action." Of course, in reality this assumption need not hold in its most extreme form. Indeed, the rulemaking process mandated by the Administrative Procedure Act imposes some constraint on the president's ability to revoke some executive orders, as do the courts. And unilateral action can tinker with some legislative laws at times. However, the important empirical feature captured by this assumption is that it is *easier* to modify legislative laws with additional legislation. For example, the courts may be more skeptical of an attempt to move policy when it lacks legislative approval, holding fixed the nature of the underlying policy shift.[6]

Assumptions

First, I suppose that the president and veto player advance legislation when indifferent:

Assumption 1 (Breaking indifference)**.** *If ever indifferent, P and V advance legislation.*

Next, the main focus of the paper is policy that should be gridlocked in the absence of unilateral action. I therefore make the following assumption:

Assumption 2 (Ideal point and status quo locations)**.** $p^L \leq v \leq m$ *with at least one inequality strict, and* $p^L < x_0 < m = p^R$*.*

The first part of this assumption only loses trivial generality. Given equilibrium play in the game, we will see that $v < p^L$ and $v > m$ are not functionally different from $v = p_L$ and $v = m$, respectively, and the fact that $p^L < m$ can equally represent its mirror image. In the next part, the fact that the status quo x_0 is gridlocked allows us to examine the case of interest. The assumption that $m = p^R$ also corresponds to the case of interest, that in which M faces potential future exposure to an opposed president.

Results

Stage 2

Proceeding backward, suppose first that P^L has won reelection. If x_1 yielded from legislation, no further policy shift will occur: unilateral action is precluded and legislation cannot be

6. This discussion equally applies to the implicit assumption that within any given Stage, the president is preempted from issuing an executive order if legislation has already been signed. Indeed, some legislation has explicitly limited future executive authority (Dodds 2013, 212). See Appendix A for further discussion.

agreed upon by both P^L and M (due to the fact that players in Stage 1 will never move policy extreme to both P^L and M). If x_1 yielded from unilateral action, P^L declares $e_2 = p^L$.

If instead P^R has won, then x_1 yielding legislatively implies that Stage 2 legislation is

$$\ell_2^*(x_1; v) = \begin{cases} m & x_1 \leq v - (m - v) \\ v + (v - x_1) & v - (m - v) \leq x_1 \leq v \\ x_1 & v \leq x_1 \end{cases} \cdot$$

If x_1 yielded from unilateral action, P^R declares $e_2 = p^R$.

Stage 1

First, it is necessary to determine what P^L will do should no acceptable legislation be offered. Remembering that $m = p^R$, expected utility from unilateral action is

$$\mathbb{E}U_1^{P^L}(e_1) = -|e_1 - p^L| + \delta\theta\big(-(m - p^L)\big). \tag{1}$$

Clearly P^L's optimum is $e_1^* = p^L$ (which dominates taking no action), yielding a payoff of $\delta\theta\big(-(m - p^L)\big)$.

To know if P^L and M can agree on any legislation, we must now determine if legislation exists that gives P^L utility equal to $\mathbb{E}U_1^{P^L}(e_1^*)$. Because policy in both Stages will be confined to $[p^L, m]$ in equilibrium, the game is effectively constant-sum between P^L and M. This implies that if P^L receives utility equal to that from unilateral action, so must M.

P^L's expected utility from legislation ℓ_1 is as follows:

$$\mathbb{E}U_1^{P^L}(\ell_1) = -(\ell_1 - p^L) + \delta\Big(\theta\big(-(\ell_2^*(\ell_1) - p^L)\big) + (1 - \theta)\big(-(\ell_1 - p^L)\big)\Big).$$

Then equating this to $\mathbb{E}U_1^{P^L}(e_1^*)$ and solving for ℓ_1, we reach the following result:

Lemma 1 (Existence of a unique certainty equivalent)**.** *There always exists a unique policy ℓ_1^* such that P^L and M are both indifferent between enacting ℓ_1^* legislatively and failing to do so (such that P^L issues an executive order $e_1 = e_1^*$). Specifically,*

$$\ell_1^*(v) = \begin{cases} p^L + \frac{\delta}{1+\delta}\theta(m - p^L) & v \leq p^L + \frac{\delta}{1+\delta}\theta(m - p^L) \text{ (``}v\text{ left-leaning'')} \\ p^L + \frac{\delta\theta(m-v-(v-p^L))}{1+\delta(1-2\theta)} & p^L + \frac{\delta}{1+\delta}\theta(m - p^L) \leq v \leq \frac{p^L+m}{2} \text{ (``}v\text{ centrist'')} \\ p^L & \frac{p^L+m}{2} \leq v \text{ (``}v\text{ right-leaning'')} \end{cases}.$$

Proof. All proofs are in Appendix F. □

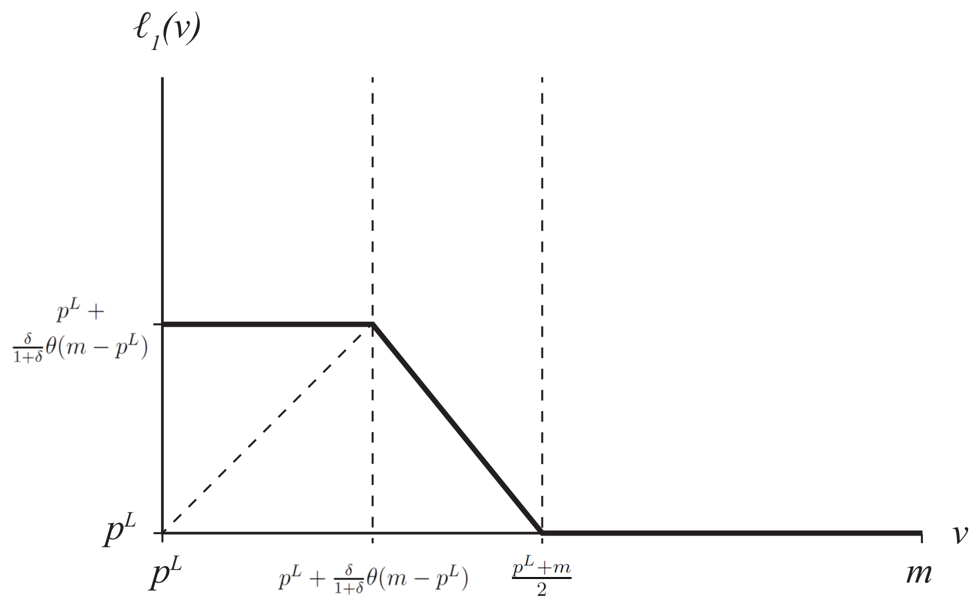

Figure 1: Equilibrium legislation as a function of v. The farther right v is, the farther left legislation must be for P^L to accept it.

The intuition behind this result is as follows. P^L wields an implicit threat of unilateral action against M. Should this threat be carried out, then given equilibrium play in Stage 2, it implies a specific expected division of the two policy pies up for grabs, i.e. those in Stages 1 and 2, respectively. In particular, expected policy across both Stages (weighting Stage 2 by

δ as always) must equal $p^L + \frac{\delta}{1+\delta}\theta(m - p^L)$. Depending on the position of v, this division can be replicated with appropriately chosen legislation. Unilateral action's reversibility merely moves the legislative compromise farther right, toward m and away from p_L.

A more mathematical intuition behind existence is as follows. It should be clear that in Stage 1, P^L will prefer legislation implementing p^L over unilateral action implementing p^L, because legislation will be more difficult to reverse. And P^L will prefer unilateral action implementing p^L over legislation implementing m. Because P^L's expected utility from legislation is continuous in x_1, then by the intermediate value theorem, there must exist legislation providing P^L with utility equal to that from unilateral action. And because conflict between P^L and M is constant-sum, the same legislation will also provide M with utility equal to that from P^L taking unilateral action.[7]

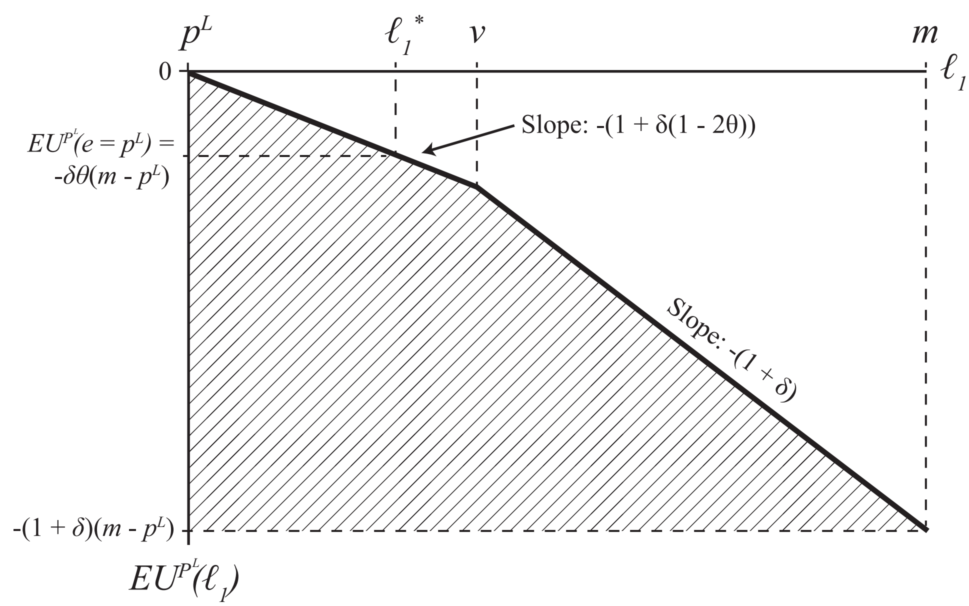

Figure 2: P^L's expected utility as a function of ℓ_1 in an example in which v is centrist. The figure's height corresponds to the amount of surplus to be divided, with P^L receiving the shaded portion and M receiving the unshaded portion. For any division, there always exists corresponding legislation implementing it.

7. Uniqueness follows from $\delta < 1$: in Stage 1, P^L will always prefer more proximate legislation over strategic moderation to prevent the legislation's reflection over v in Stage 2.

So far then, we see that P^L and M always have the ability to enact a legislative compromise that leaves both indifferent. But what about V? We of course assumed that v is interior to p^L and m, but if it were not, we would merely have replicated the preferences of a player already empowered to stop legislation. With a relatively centrist V, though, we reach the following surprising conclusion:

Lemma 2 (V's preference for legislation)**.** *If v is left-leaning or centrist (as defined in Lemma 1), V strictly prefers to approve ℓ_1^*. Otherwise, V is indifferent to approving ℓ_1^*.*

Not only does V not want to block legislation, it strictly prefers it whenever its ideal point is closer to p^L than m. This arises from V's desire to reduce the variability of policy. For P^L and M, there need not be a difference between policy being relatively fixed at a moderate point and movable between two extreme points. If policy is very far away now, there may be an opportunity to move it very close later, and the other way around. Then policy being somewhat close and relatively fixed can be equally good as it being distant and movable. Yet V's preference should be clear: a fixed moderate policy will always beat the possibility of extreme policy now followed by extreme policy on either the left or the right.

Combining the insights so far, the following result summarizes equilibrium outcomes:

Proposition 1 (Equilibrium outcomes)**.** *There are two possible equilibrium outcomes in Stage 1. First, M fails to offer legislation (or offers legislation that P^L will veto) and P^L issues $e_1 = p^L$. Second, M proposes $\ell_1 = \ell_1^*$, V approves it, and P^L signs it.*

Then I have demonstrated that an equilibrium with legislative compromise always exists. And we have reason to prefer this equilibrium: the fact that V benefits from legislation means that it Pareto-dominates the equilibrium in which unilateral action is issued.[8]

8. Under quadratic utility, legislation may generate surplus for M to extract. Then only the legislative equilibrium may exist. Importantly, an analogue to Lemma 2 would hold. V's preference for legislation

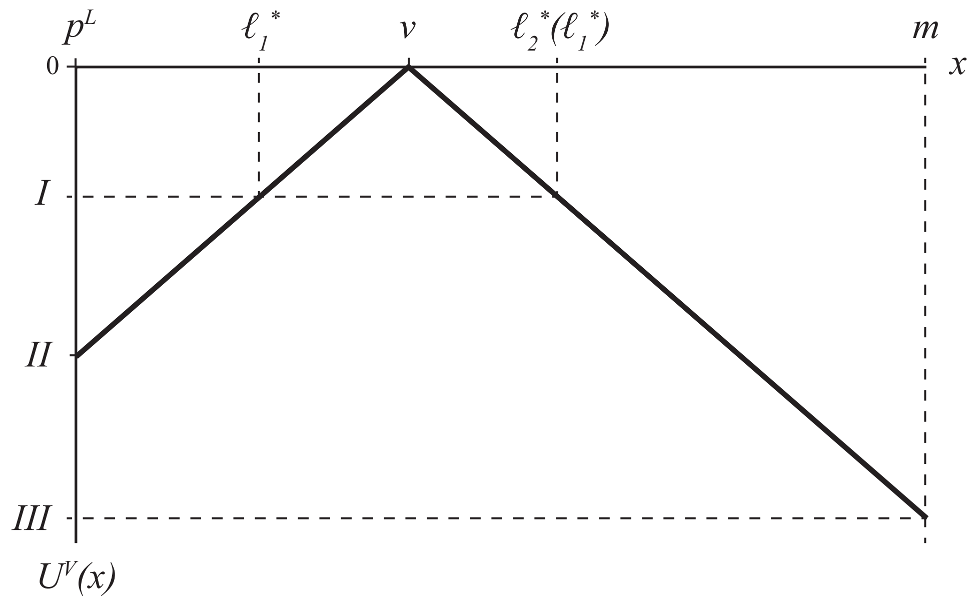

Figure 3: Graphical derivation of centrist V's expected utility. While P^L and M may be indifferent between ℓ_1^* and a mix of p^L and m, V does strictly worse under the latter. Rather than receiving the utility level at I, V receives a mix of the utility levels at II and III.

Summary

Far from finding an explanation for the failure of legislative compromise, I have not only demonstrated that Stage 1 legislation could always be part of an equilibrium but also noted in some cases a reason to prefer such an equilibrium: its Pareto dominance over that in which unilateral action occurs. Even if P^L and M are indifferent between unilateral action and an appropriately chosen legislative proposal, policy volatility stemming from unilateral action can hurt V, who would prefer a relatively fixed moderate policy over extreme policy on either side of v. Simply put, if the president is sure to move policy, everyone else should at a minimum be indifferent to moving it themselves first—and taking action may strictly improve their utility. As has been demonstrated, this observation is robust to a number of potential differences between unilateral action and legislation. Even if unilateral action can

being a function of v plays a crucial role in the second half of the paper. See Appendix B for details.

be reversed more easily, for example, a new compromise can be found that takes this into account. And the ability to reverse unilateral action more easily is why legislation can make a centrist strictly better off.

Given these benefits of legislation and the fact that a compromise always exists, why then do we not observe much more legislation in practice? Notably, in only one of the motivating anecdotes at the beginning of this paper did Congress preempt unilateral action with equivalent legislation. Why has compromise proved so elusive?[9] In the above analysis, we have indeed found a key to unlocking this puzzle. In particular, notice that when V is right-leaning, it stands to gain nothing from legislation. But when V is left-leaning or centrist, it strictly prefers legislation. Correspondingly, I will next explore how this fact is relevant when V faces incentives to signal to an actor such as a voter, donor, or interest group. We will see that because V gains from legislation only when it is left-leaning or centrist, rejecting legislation can signal that it is right-leaning. Approving legislation may not only signal that V is not right-leaning; it also maintains V's relevance to future policy. This can make V a target of policy-motivated actors with influence over election outcomes. If this threat is large, all types of V may instead prefer to surrender authority to the president.

Signaling model

A key result I reached is that centrists stand to gain the most from legislation, because legislation yields more moderate policy now while protecting against an extreme policy shift in the future. To resolve the puzzle of legislation's seeming rarity, I now explore the role that signaling to an outside actor plays. I shall now suppose that there are two types of V:

9. A naïve answer might be that unsophisticated voters simply punish behavior that appears to support an unaligned president. This argument would not apply to sophisticated actors such as donors and activists. And the signaling model to be introduced next will rationalize such behavior.

centrist (denoted V^C and with ideal point v^C) and right-leaning (denoted V^R and with ideal point $v^R = m$). In each stage, one of these two types yields probabilistically.[10] An "actor" A has utility over policy outcomes and can exert costly effort to influence V's probability of staying in office, but A is unsure which type has yielded. As already demonstrated, only a centrist type of V incurs an inherent cost from failing to approve legislation. Because of this, when A is also centrist, both types may offer legislation. In contrast, when A is right-leaning, types may separate when A is weak or pool on no legislation when A is strong. In the latter case, rejecting legislation allows V to surrender policy authority to the president and avoid electoral intervention.

Formal Definition

Players now additionally consist of an Actor A.

Sequence of Moves

Stage 1

1. V's type is drawn: with probability γ, $v = v^R (= m)$, and with probability $1 - \gamma$, $v = v^C$. V's type is revealed to all players except A.
2. V publicly commits to approve or reject legislation (irrespective of its location).
3. If V commits to approve legislation, then
   (a) Simultaneously, P^L and M each report what legislation would be acceptable, with the set acceptable to both denoted $\mathbb{L}_1$, and A selects a sanction $s \geq 0$ to impose on V.
   (b) If $\mathbb{L}_1 \neq \varnothing$, some $\ell_1 \in \mathbb{L}_1$ becomes law. Otherwise, P^L decides whether to issue an executive action $e_1 \in \mathbb{R}$.
4. If V commits to reject legislation, then
   (a) A selects a sanction $s \geq 0$ to impose on V.
   (b) P^L decides whether to issue executive action $e_1 \in \mathbb{R}$.

10. In Appendix D, I show that the baseline model's results continue to hold with these two types.

Stage 1A

5. Elections are held for both the president and veto player. With probability θ, P^R wins; otherwise, P^L wins. If V_R (V_C) is the incumbent, it wins with probability $\gamma - s$ ($(1-\gamma) - s$), with V_C (V_R) winning otherwise.

Stage 2

6. The baseline model's Stage 2 moves are played.

Utility functions

First, I define utility for A nearly analogously to that of players in the baseline model:

$$U^A(s) = -|a - x_1| + \delta(-|a - x_2|) - \frac{\kappa}{2}s^2.$$

Here, a is A's ideal point and κ is the cost coefficient on the sanction selected. It will be convenient to denote A's utility experienced in Stage 2, $-|a-x_2|$, as $U_2^A(x_2)$. Going forward, A will have two possible policy preferences, namely it agrees with V^C (i.e. $a = v^C$, denoted by labeling it A^C) or it agrees with V^R (i.e. $a = m$, denoted by labeling it A^R).

Next, I modify V's utility to include a Stage 2 office-holding benefit $\beta \geq 0$ given reelection.

Equilibrium

The equilibrium concept that I use is perfect Bayesian equilibrium (PBE). I apply the D1 refinement. To break indifferences specific to this game, I apply an additional refinement. In particular, when multiple equilibria satisfy D1, I rule out any that would not survive should V receive an arbitrarily small benefit from convincing A that V shares A's ideal point.

Summary

The new player is A. New exogenous parameters are v^C, γ, a, and κ. Previously an exogenous parameter, v is now a random variable. As this is a sequential games of imperfect information, I apply PBE, which is a standard equilibrium concept. I restrict attention to pure-strategy PBE and apply the refinements described above.

Discussion

I first discuss the order of moves. Most importantly, it is modified in a way that would leave all outcomes from the baseline model unchanged (removing A and reverting to a single type of V, of course). The purpose is to avoid technical complications specific to signaling.

First, sequencing the moves of A, P_L, and M would introduce one of two possible problems. If A were to move first, P_L and M would then adjust the compromise legislation to exactly negate the sanction's policy effects; because the sanction is costly to impose, A would therefore never do so. But if P_L and M were to move first, the content of legislation itself would reveal to A which type had yielded, somewhat artificially precluding the possibility of V^C and V^R pooling on approving legislation. Eliminating A, it should be clear that having P_L and M simultaneously report what legislation is acceptable does not change the outcome, namely the unique legislation that makes both weakly better off.

Second, while the ability of players to intercept the sender's signal before it reaches the receiver may be theoretically interesting (and is explored in Groseclose and McCarty 2001), it would be a needless distraction here. Having V move before P_L and M in Stage 1 avoids this problem. Because V will only ever anticipate the unique legislation to which P_L and M can agree, general commitment in advance is no different from approval after the fact except as it pertains to the technical signaling considerations discussed.[11] In Stage 2, P^R might

11. Allowing V to make the commitment specific to the location of legislation would also leave analysis of the baseline's Stage 1 unchanged, but it significantly complicates analysis of the signaling game.

have won election, so V committing in advance (whether generally or specific to legislation's location) may change the baseline's outcome. But no further election will occur and signaling considerations are moot, enabling us simply to revert to the baseline's form of Stage 2.

Next, I justify the assumption that $s \geq 0$. Restricting A from imposing a negative sanction only eliminates uninteresting cases. If A would grant assistance following legislation, all types would have approved legislation anyway, since it is weakly welfare-improving for V. And A would never intervene (positively or negatively) following rejection of legislation, since V is then no longer relevant to policy. Assuming $s \geq 0$ allows clear analysis of the trade-off between a benefit of legislation (variance reduction) and a cost (A's punishment).

Finally, I discuss V's utility function. The only change is the introduction of β. We will see that should $\beta = 0$, the prospect of A's sanction would never induce V^C to reject legislation. Doing so would effectively guarantee the policy outcome that the sanction threatens to make more likely. Office-holding benefit makes pooling on rejecting legislation possible.

In summary, the focus is on how V's decision of whether to approve legislation communicates its type. Calculating its tradeoff between a reduction in policy variance and a sanction from A, V decides whether to allow legislation. Observing V's choice, A decides whether to exert effort to reduce V's probability of reelection.

Assumptions

The assumptions of the baseline model are maintained, except I modify Assumption 1:

Assumption 3 (Breaking indifference)**.** *If ever indifferent, P and M enable legislation.*

It was already established in the baseline model that there exists an equilibrium in which M fails to offer legislation because of its indifference. I now focus instead on V's choice.

Next, I make the following assumption regarding V^C's ideal point:

Assumption 4 (V^C's ideal point). *v^C satisfies* $\frac{p^L+\delta\left(\theta(1-\gamma)m+(1-\theta)p^L\right)}{1+\delta(1-\theta\gamma)} < v^C < \frac{p^L+m}{2}$.

With our two types of V, this is the analogue to Lemma 1's sense of v being centrist. If v^C were farther right, then even if (equilibrium) legislation had passed previously, P^R could achieve its ideal point. The sense of V^C being centrist is that it provides some protection against P^R and M pushing through right-leaning legislation in Stage 2. If v^C were farther left, the equilibrium compromise legislation would sit to its right. This creates a subtle problem. Suppose that A is right-leaning and believes that $V = V^C$. Then A will want to sanction V. But for P^L and M to be able to agree on legislation, they must anticipate the sanction and move the legislation leftward to compensate—i.e. toward v^C. It turns out that on balance, V^C would be *better* off for having been sanctioned. This assumption therefore ensures instead that V^C never wants to lose its own election. I argue that the assumption is substantively plausible not only in its effects but also on its face. In a conservative party, for example, it may be reasonable to suspect a member of being either centrist or right-leaning but not left-leaning.

Finally, we require that A not have too high a capacity to impose a sanction:

Assumption 5 (Lower-bound on A's cost). *A's cost coefficient κ is sufficiently large such that the equilibrium sanction s^* is interior, and v^C remains in the "centrist" range.*

That is, A must not be too powerful. We need A not to want to zero out V's probability of victory, and we require Assumption 4 to continue to hold when accounting for s^*. (A formal statement is in Appendix E).

Results

I first analyze Stage 2, showing where policy goes as a function of the veto player's identity, the location of Stage 1 policy, and the means by which it was enacted. I then find the Stage

1 sanction by A and legislation by P^L and M that are consistent given that V approved legislation. Finally, I present equilibrium results on V's decision to approve legislation.

Stage 2

Analysis of Stage 2 is straightforward. As this is the final stage and no further election occurs, players consider only immediate policy implications. Suppose first that no legislation was enacted in Stage 1. Then absent legislation in Stage 2, the election winner, denoted P^W, would want to declare $e_2 = p^W$. This is therefore the legislation that M would propose. V would approve, and P^W would sign (unless perhaps we already had $x_1 = p^W$).

Suppose instead that legislation was enacted in Stage 1. P^W may no longer move policy unilaterally. Then whenever P^L has won, no further policy shift will occur and $x_2 = x_1$. Suppose instead that P^R has won. If $v \leq x_1$, no further policy shift can occur. If $v > x_1$, M will propose $\ell_2 = \min\{2v - x_1, m\}$, v will approve the legislation, and P^R will sign.

The best response of P^L and M in Stage 1

It was just demonstrated that the Stage 2 identity of V would be irrelevant to policy outcomes if V rejected legislation. Because A's utility is over policy outcomes, this implies that the equilibrium value of s would equal zero. As a shorthand going forward, let s therefore represent the sanction that is imposed conditional on legislation.

Suppose that V has committed to approve legislation. Given A's choice of s, we must find the legislation that would make each of P^L and M indifferent between legislation and unilateral action—no other legislation would be mutually agreeable. Relative to $s = 0$, let $\Delta_\gamma(s)$ represent the change in V^R's probability of winning. (Then $\Delta_\gamma = s$ when $v = v^C$, and $\Delta_\gamma = -s$ when $v = m$). The following lemma summarizes this legislation, denoted ℓ_1°:

Lemma 3. *The best response of P^L and M, denoted $\ell_1^\circ(\Delta_\gamma)$, is* $\frac{p^L+\delta\left(\theta(1-(\gamma+\Delta_\gamma))(m-2v^C)+(1-\theta)p^L\right)}{1+\delta\left(1-\theta\left(1+(1-(\gamma+\Delta_\gamma))\right)\right)}$.

Importantly, notice that ℓ_1° is decreasing in Δ_γ. That is to say, when V^R's election becomes more (less) likely, legislation must move leftward (rightward) to compensate.

A's best response in Stage 1

The problem for A is that it does not know if its sanction increases or decreases the probability of its preferred type. Let μ denote A's belief that $v = m$, and let $\tilde{s}$ represent the value of s that A believes that P^L and M will expect A to have selected. Given A's anticipation of $\tilde{s}$, let $s^\circ(\tilde{s})$ denote A's optimum. We reach the following result:

Lemma 4. *A's best response, denoted $s^\circ(\tilde{s})$, is*

$$\max\left\{\frac{\delta\theta}{\kappa}\Big(\mu\Big(U_2^A\big(2v^C - \ell_1^\circ(-\tilde{s})\big) - U_2^A(m)\Big) + (1-\mu)\Big(U_2^A(m) - U_2^A\big(2v^C - \ell_1^\circ(\tilde{s})\big)\Big)\Big), 0\right\}.$$

Intuitively, this expression implies that A^C wants to sanction when it believes that $V = V^R$, and A^R wants to sanction when it believes that $V = V^C$ (as guaranteed by Assumption 5).

Mutual best response

In any equilibrium, A must prefer to carry out the sanction that is anticipated. Lemma 4 then implies that

(2)
$$s = \max\left\{\frac{\delta\theta}{\kappa}\Big(\mu\Big(U_2^A\big(2v^C - \ell_1^\circ(-s)\big) - U_2^A(m)\Big) + (1-\mu)\Big(U_2^A(m) - U_2^A\big(2v^C - \ell_1^\circ(s)\big)\Big)\Big), 0\right\}.$$

Letting $s^*(\mu)$ denote the value of s that solves (2), the following holds:[12]

12. One may solve explicitly and find a unique real solution, though the expression is unenlightening.

Lemma 5 (Optimal sanction)**.** *s^* exists and is unique. Whenever $a = v^C$ and $\mu \leq 1/2$, or $a = m$ and $\mu \geq 1/2$, then $s^* = 0$. Elsewhere, $s^{*\prime}(\mu) > 0$ if $a = v^C$, and $s^{*\prime}(\mu) < 0$ if $a = m$.*

The intuition behind this is clear. If A believes that the type that it likes is at least equally as probable, A does not sanction, and P^L and M make no strategic adjustment. Otherwise, A's sanction increases the more that it believes that V is the type that it dislikes.

V's preference over s^*

Before characterizing the equilibrium, we must establish V's preferences over s^* along with the corresponding ℓ_1^* (which I define as $\ell_1^\circ(s^*)$ when $v = v^C$ and $\ell_1^\circ(-s^*)$ otherwise). This is important in determining whether being sanctioned reduces V's benefit from legislation. If ℓ_1^* were not a function of s^*, this would obviously hold, but we must take into account the strategic adjustment of P^L and M. The following lemma summarizes the result:

Lemma 6 (V's preference over s^*)**.** *When $s^* = 0$, V^C strictly benefits from legislation, while V^R is indifferent. Starting from any value of s^*, any strict increase (thus also affecting ℓ_1^*) strictly decreases V^C's expected policy utility and office-holding benefits, while for V^R the decrease is limited to the latter and in equal measure.*

The important takeaway from this lemma is that when s^* is small, V^C benefits more from legislation compared to V^R. Once again, this is because approving legislation can hold policy fixed close to a moderate compromise that may be near V^C's ideal point, while unilateral action may lead to highly variable policy. But if V^C knows that approving legislation means that a large sanction is forthcoming, this undermines the very rationale behind approving legislation. Should legislation imply that V^R is likely to win the election, then legislation itself is likely to be able to be reversed as well. If the sanction becomes sufficiently strong, V^C may conclude that any supposed benefit from legislation is rendered moot and that it may as well try to preserve office-holding benefits. By effectively giving up its authority over policy to the president, it can guarantee that A no longer wishes to impose a sanction.

Equilibrium

We are now ready to characterize the equilibria. First, consider the case in which $a = a^C$, i.e. A is the centrist type. Suppressing a description of Stage 2 behavior and the actions of P^L and V^R, the following proposition summarizes the PBE:

Proposition 2 (PBE with A^C)**.** *Suppose that $a = a^C$ and $\beta > 0$. If $\gamma < 1/2$, then in the unique PBE, types pool on approving legislation, A never sanctions in any circumstance, and the off-path belief is $\mu = 1$. If $\gamma > 1/2$, then in the unique PBE, V^C approves legislation, V^R rejects it, and A^C never sanctions in any circumstance.*

When A is centrist and the prior belief is that V is more likely to be centrist, both types are willing to offer legislation. In particular, V^C benefits from it, and V^R is willing to break its indifference in favor of offering it. Of course, an interesting feature here is that the "bad" signal—rejecting legislation—neutralizes A's rationale for intervening in the election. Hence, when the prior belief is instead $\gamma > 1/2$, i.e. the "bad" type is more likely, pooling on approving cannot be an equilibrium because A would want to sanction everyone.[13]

The main case of interest is the one in which A is right-leaning, leading to this result:

13. Relative to these outcomes, A^C could never improve its utility by paying to learn V's type. In those cases in which legislation would be approved, A^C's utility no longer varies in V's identity, as depicted in Figure 3. In the case in which legislation would not be approved, then upon A^C learning that $v = v^R$, V would still prefer to reject legislation.

Proposition 3 (PBE with A^R). *Suppose that $a = m$. There exists a $\tilde{\beta} > 0$ such that: 1. If $\beta < \tilde{\beta}$, then in the unique PBE, V^C approves legislation, V^R rejects it, and A sanctions precisely if legislation occurs. 2. If $\beta > \tilde{\beta}$, then in the unique PBE, types pool on rejecting legislation, A sanctions precisely if legislation occurs, and the off-path belief is $\mu = 0$.*

When pressure on V comes from a right-leaning type of A, the right-leaning V never faces any trade-off and always rejects legislation. In contrast, whether the centrist type of V rejects legislation depends on its relative trade-off between reducing policy variance and staying in office. Then when V^C's office-holding benefit increases, it becomes more willing to reject legislation. As observed above, the way that sanctions operate is by undermining V^C's very justification for approving legislation in the first place. If V^C expects a strong sanction following approval of legislation, this means that V^R is very likely to be the veto player in Stage 2. And should P^R win, this implies that they will most likely be able to undo the legislation, just as undoing unilateral action depends primarily on P^R winning. In this case, V^C may conclude that it would rather simply protect office-holding benefits than chase ever-diminishing benefits from legislation. And in failing to approve legislation, it not only sends a favorable signal. It also relinquishes its authority over policy to the president. In so doing, it eliminates A's underlying interest in V's election.[14]

The following comparative statics on $\tilde{\beta}$ help us to understand the factors that determine whether legislation occurs (an explicit expression for $\tilde{\beta}$ is in the proof):

14. As with A^C, A^R would not pay to learn V's type. If $\beta < \tilde{\beta}$, then A^R already learns V's type (and if A^R already knew V's type, it would not change V's behavior in a way that affected A^R's utility). If $\beta > \tilde{\beta}$, then should A^R learn V's type in advance, V^C would then prefer to approve legislation, knowing that it would be sanctioned either way. But legislation would take into account A^R's sanction given its knowledge of V's type. A^R's policy gains would be exactly negated, but it would additionally incur a cost of sanctioning.

Proposition 4 (Comparative statics)**.** *The threshold $\tilde{\beta}$, below which V^C approves legislation, increases in the cost of sanctioning (κ) and decreases in M's ideal point (m), the probability that P^R wins (θ), the discount factor (δ), and the initial probability that V^R wins (γ).*

All of these forces except γ operate through A's willingness to impose sanctions. Remember that m is the ideal point of A^R and V^R, so the farther m is from v^C, the more that A^R benefits from sanctioning. Next, increasing P^R's probability of winning increases sanctioning because V^R's presence only benefits A^R if P^R has also won. Next, A^R's actions are an investment in future policy, so naturally it exerts greater negative influence over legislation when δ is larger. Finally, the more likely V^R is to win, the less likely that legislation is to stick in the first place, which undermines V^C's underlying rationale for wanting to approve legislation. If γ becomes too large, V^C may decide to give up on policy and try to preserve office-holding benefit instead.

The next section explores empirical implications.

Empirical implications

In thinking about empirical implications, it helps to imagine that the type of A itself has a distribution. Suppose then that before the start of the game, A^R appears with probability ρ, with A^C appearing otherwise, and A's type is revealed to all players. The following implication is immediate:

Implication 1 (Actor polarization)**.** *An increase in the prevalence of the right-leaning type of A (ρ) leads to a weakly lower probability of legislation.*

This follows straightforwardly from the fact that Proposition 3 will be increasingly likely to apply. This result relates to the question of whether donors contract or simply give favorable treatment to friends (Fox and Rothenberg 2011). As is well-known in signaling games, a "low" type's ability to pool with a "high" type can make it more difficult for the receiver to determine type but less necessary to do so in the first place (Fearon 1999, 83). Then even if A cannot contract with V, it may potentially carry out A's wishes so as to signal favorably and avoid A's punishment. While not necessarily denying the existence of contracting, this may outwardly resemble an exchange of policy for favorable treatment and bear a superficial resemblance to contracting. This also reinforces the notion that off-path threats may explain the "missing money" puzzle, in which aggregate donations appear low given the enormous implications of public policy, and empirically demonstrating money's influence on politics is therefore difficult (Chamon and Kaplan 2013).

An increase in A's capacity may also lead to less legislation:

Implication 2 (A's capacity)**.** *An increase in A's capacity (a decrease in κ) leads to a weakly lower probability of legislation.*

Letting Actor cost (κ) go to infinity recovers the results from the baseline model. But when A participates more actively, V^C becomes increasingly concerned about the signaling costs of allowing legislation. Corresponding this to empirical applications of interest, when A is thought of as a contributor of campaign funds, one might imagine that these contributors have become more relevant in a changing campaign environment that increasingly permits and requires expending large sums (Gilens, Vavreck, and Cohen 2007; Biersack 2018). If one instead imagines A as an activist or member of the public, these actors have become only become more influential during the twentieth century, especially following the McGovern-Fraser reforms (see e.g. Layman and Carsey 2002; Miller and Schofield 2003; Layman et al. 2010; Abramowitz 2011). In either application, an increase in κ arguably occurred.

However, A must find a susceptible target for legislation to fail:

Implication 3 (Donor and legislator polarization). *Polarization of the outside actor (i.e., A^R's prevalence, ρ) and polarization of the veto player (i.e., V^R's prior probability, γ) are weak complements for legislative failure.*

For legislation to fail, it is not sufficient to have an extreme outside actor. We also need a veto player who is vulnerable to A^R's influence. Clearly this includes V^R, the right-leaning veto player. Note though that when office-holding benefits are sufficiently large, this may also include V^C.

Finally, the probability that V^R appears has a negative effect on legislation:

Implication 4 (Likelihood of extremists). *The probability of legislation is weakly decreasing in γ, the prior probability of the right-leaning type of V.*

This is because if V^C and V^R separate, the probability of legislation equals $1 - \gamma$, while if they pool, the probability of legislation is not a function of γ. When A is right-leaning, a sufficient increase in γ may move us from separation to pooling on rejecting legislation.

Policy variance

We can additionally look at factors affecting policy variance, which is both inherently interesting and relevant to the behavior of different types of V. "Variance" will be understood in the usual sense, with policy in Stage 2 weighted by δ. I reach the following result:

Proposition 5 (Policy variance). *Policy variance is (weakly) increasing in the prevalence of the right-leaning Actor (ρ) and the prior probability of the right-leaning veto player (γ) and is decreasing in the cost of sanctioning (κ).*

The probability of legislation is a key link between these parameters and policy variance. Intuitively, legislation reduces policy variance, which is precisely why V^C prefers it. For a voter, say, whose ideal point lies close to v^C but who does not share V^C's concern for holding office, those factors leading to less legislation will consequently decrease welfare.

Conclusion

This paper has argued that unilateral action cannot be understood without asking why the president is in a position to take unilateral action in the first place. And as was demonstrated in the baseline model, why members of Congress would fail to act when they should anticipate that the president will act without them—thus imposing costs on centrist members—cannot be explained by "gridlock intervals" in a standard spatial model.

Given this, I argue that just as a large literature has examined the influence of outside pressure on legislative production alone, we should examine its influence when policy-making includes the possibility that the president will issue an executive order. The signaling model demonstrated that legislation may fail to be approved even though it would otherwise Pareto-dominate no legislation. The centrist type's fear of pressure from A can preclude it from approving a legislative compromise, even though extremists should be indifferent to compromise on policy merits. The signaling model straightforwardly resolves the initial puzzle and generates intuitive comparative statics.

These results have clear implications. Particularly, they help explain the president's accumulation of authority over time. Prior work has argued that the president may seek additional authority precisely because unilateral policy can be easily reversed by a successor, enabling the president to motivate the electorate (Howell and Wolton 2018). Complementing this picture, I have argued that members of Congress may voluntarily surrender authority to the president to avoid pressure from interest groups or the public. Consequently, the results point in the direction of looking to the role of public opinion and interest group politics in explaining the production of executive orders. Scholars should continue exploring the role of public opinion in constraining unilateral action. Additionally, future work should examine how interest groups and activists condition it, with shifts in power potentially playing an interesting role (Powell 2006).

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Supporting information for “Anticipating unilateralism”

David Foster

September 12, 2020

A Outline of extensions to the baseline model

I sketch the implications of various possible extensions and variations.

The president may influence legislative laws unilaterally

It might be possible that the president has some room to shape laws once they have passed legislatively, despite Congress's efforts to the contrary. Suppose that immediately following the passage of legislation, the president may additionally shift policy by some distance d (with d sufficiently small so that the boundedness of the policy space does not come into play) and that this additional shift would inherit legislation's persistence. Then M would be willing to propose and V willing to approve legislation enacting $\ell_1^* + d$. They would anticipate the actions of P^L, who would sign the legislation and use unilateral action to shift legislation's location to ℓ_1^*, the point that gives P^L and M utility equal to that under pure unilateral action. If however a future president could unilaterally undo the tinkering within these bounds (but not the entirety of the legislation), there would nevertheless exist a compromise, though the exact expression for ℓ_1^* would need to be adjusted. The magnitude of d would trace a continuum from legislation requiring additional legislation for reversal (as is modeled) to legislation being no different from unilateral action. Should the latter hold, it is even clearer that players should be indifferent to approving it.

Players have quadratic utility

A legislative compromise always exists. Under some cases, players' risk aversion leads legislation to generate surplus, eliminating the equilibrium in which legislation does not occur. As before, left-leaning and centrist types of V benefit from legislation, while the right-leaning type is indifferent. See Appendix B for full details.

Legislation and unilateral action are exogenously costly

If legislation is exogenously costly for M to offer, this need not imply that legislation will fail to be offered if unilateral action is exogenously costly for P^L to enact. There are reasons to believe the latter. First, experimental literature examines the public opinion cost that the president may incur by pursuing unilateral action (Christenson and Kriner 2017a, 2017b; Lowande and Gray 2017; Reeves and Rogowski 2016, 2018). Second, as Rudalevige (2015) argues, "the issuance of executive orders is a process rife with transaction costs." Allocating executive branch staff to learn about policy and write regulations, navigating the lengthy rule-making process, tangling with the courts, and so on can be a costly process. In many cases, then, Congress may want to take advantage of these costs, using its proposal power to extract ideological surplus. Then in the game, M would strictly prefer legislative compromise and P^L would be indifferent (though would strictly prefer it if M were to move the compromise leftward by any $\epsilon > 0$). As before, V benefits from fixing policy in some central location as opposed to having policy sit at either extreme in each stage. Thus, unless P^L's exogenous costs are so large such as to move a potential compromise almost entirely to M's ideal point m, the benefits of more certain policy still compel V to approve legislation.

These benefits may continue to exceed costs for V even when V itself also incurs the cost of offering legislation, leaving us once again with the puzzle presented in the baseline model. It is possible, though, that they could be sufficiently large to preclude legislation, even when exceeding the cost of unilateral action that would be incurred by P^L. It is worth asking from where these costs for V would originate in the first place, though. Two likely candidates are administrative expense and a public opinion cost. As for administrative expense, this is possible, but given that M now strictly benefits from legislation, it may plausibly want to incur more of the burden of preparing legislation and building a coalition so as to reduce V's cost and win approval. As for a public opinion cost, the signaling model explicitly derives an endogenous source of such a cost and explicates the consequences.

P^L's capacity to issue executive orders is further limited

These results continue to hold (with different specific values for ℓ_1^*) even if P^L's unilateral action is further limited beyond its vulnerability to reversal, given two specific forms of limitation. First, following Howell (2003), we might assume that P^L cannot move policy all the way to p^L but rather can only move it to $x_0 - d$ for some $d : 0 < d < x_0 - p^L$. If $p_l < v \leq x_0 - d$, V's preferences are aligned with those of P^L over the relevant part of the policy space such that V is indifferent between legislation and unilateral action. If instead $v > x_0 - d$, all above results would continue to hold if each instance of "p^L" were to be replaced with "$x_0 - d$."

Second, unilateral action might face uncertain prospects for implementation before the Supreme Court or bureaucracy. Allowing that an executive order by P^L might fail with some exogenous probability, thus leaving the status quo in place, all substantive results continue to hold; see Appendix C for full details.

Two types of V

Explicitly to build a bridge to the signaling model, I suppose that there are two types of V as later introduced in the signaling model. This is equivalent to analyzing the signaling model in the absence of A. I find that Lemma 2 continues to hold, of course with a different exact expression for the equilibrium legislation. The analogue to Lemma 2 that holds is that V^C (the centrist type) always strictly prefers legislation, whereas V^R (the right-leaning type) is indifferent. Finally, Proposition 1 continues to hold. See Appendix D for full details.

B Baseline model with quadratic utility

I now let utility to player I with ideal point i be

$$U^I(x_1, x_2) = -(i - x_1)^2 + \delta\big(-(i - x_2)^2\big).$$

For simplicity, I fix $p^L = 0$ and $m = 1$. I reach the following result:

Lemma B1. *The rightmost legislation that M can propose to induce P^L to accept is*

$$\ell_1^*(v) = \begin{cases} \sqrt{\frac{\delta}{1+\delta}\theta} & v \leq \sqrt{\frac{\delta}{1+\delta}\theta} \text{ (``}v\text{ left-leaning'')} \\ \frac{2v\delta\theta + \sqrt{\delta\left(1+\delta-4v^2\left(1+\delta(1-\theta)\right)\right)\theta}}{1+\delta} & \sqrt{\frac{\delta}{1+\delta}\theta} \leq v \leq \frac{1}{2} \text{ (``}v\text{ centrist'')} \\ 0 & \frac{1}{2} \leq v \text{ (``}v\text{ right-leaning'')} \end{cases}.$$

When v is left-leaning or centrist, this legislation makes M strictly better off compared to unilateral action. When v is right-leaning, M is indifferent.

Proof. Proceeding backward through the game, analysis of Stage 2 is as before. In Stage 1, P^L's optimal unilateral action is $e_1^* = 0$, earning expected utility of $-\delta\theta$.

First conjecture that $\ell_1^* \leq v - (m - v)$. Then expected utility to P^L from legislation is

$$\mathbb{E}U_1^{P^L}(\ell_1) = -{\ell_1}^2 + \delta\big(\theta(-1) + (1-\theta)(-{\ell_1}^2)\big). \tag{3}$$

Equating $-\delta\theta$ and the right-hand side of (3), we find that the rightmost policy that M could propose is $\ell_1^* = 0$. To be consistent with the initial conjecture, we would then require $\frac{1}{2} \leq v$.

Now conjecture that $v - (m - v) \leq \ell_1^* \leq v$. Expected utility to P^L from legislation is

$$\mathbb{E}U_1^{P^L}(\ell_1) = -{\ell_1}^2 + \delta\Big(\theta\big(-(2v - l)^2\big) + (1-\theta)(-{\ell_1}^2)\Big). \tag{4}$$

Equating $-\delta\theta$ and the right-hand side of (4), we find that the rightmost policy that M could propose is $\ell_1^* = \frac{2v\delta\theta + \sqrt{\delta\Big(1+\delta-4v^2\big(1+\delta(1-\theta)\big)\Big)\theta}}{1+\delta}$. To be consistent with the initial conjecture, we would then require $\sqrt{\frac{\delta}{1+\delta}\theta} \leq v \leq \frac{1}{2}$.

Finally conjecture that $v \leq \ell_1^*$. Then expected utility to P^L from legislation is

$$\mathbb{E}U_1^{P^L}(\ell_1) = (1+\delta)(-{\ell_1}^2). \tag{5}$$

Equating $-\delta\theta$ and the right-hand side of (5), we find that the rightmost policy that M could propose is $\ell_1^* = \sqrt{\frac{\delta}{1+\delta}\theta}$. To be consistent with the initial conjecture, we would then require $v \leq \sqrt{\frac{\delta}{1+\delta}\theta}$.

Then given any value of v, we have found the rightmost legislation that P^L will accept (which corresponds to the best possible proposal for M). We must now verify that this proposal would make M weakly better off. M's expected utility from unilateral action is $-1+\delta\big(-(1-\theta)\big)$.

Suppose first that $\frac{1}{2} \leq v$. M's expected utility from ${\ell_1}^* = 0$ is $-1+\delta\big(-(1-\theta)\big)$. This equals expected utility from unilateral action.

Suppose next that $\sqrt{\frac{\delta}{1+\delta}\theta} \leq v \leq \frac{1}{2}$. M's expected utility from ${\ell_1}^* = \frac{2v\delta\theta + \sqrt{\delta\Big(1+\delta-4v^2\big(1+\delta(1-\theta)\big)\Big)\theta}}{1+\delta}$ is $-{\ell_1}^* + \delta\Bigg(\theta\Big(-\big(1-(2v-{\ell_1}^*)\big)^2\Big) + (1-\theta)\big(-(1-{\ell_1}^*)^2\big)\Bigg)$. This is strictly greater than $-1+\delta\big(-(1-\theta)\big)$.

Finally, suppose that $v \leq \sqrt{\frac{\delta}{1+\delta}\theta}$. M's expected utility from ${\ell_1}^* = \sqrt{\frac{\delta}{1+\delta}\theta}$ is $(1+\delta)\Bigg(-\Big(1-\sqrt{\frac{\delta}{1+\delta}\theta}\Big)^2\Bigg)$. This is strictly greater than $-1+\delta\big(-(1-\theta)\big)$. □

Next, I present a result on V's preference:

Lemma B2. If v is left-leaning or centrist (as defined in Lemma B1), V strictly prefers to approve ℓ_1^*. Otherwise, V is indifferent to approving ℓ_1^*.

Proof. V's expected utility from e_1^* is as follows:

$$\mathbb{E}U_1^V(e_1 = e_1^*) = (1+\delta)(-v^2) + \delta\theta\big(-(1-2v)\big). \tag{6}$$

Meanwhile, its expected utility from ℓ_1^* is as follows:

$$\mathbb{E}U_1^V(\ell_1 = \ell_1^*) = \begin{cases} (1+\delta)\left(-\left(v - \sqrt{\frac{\delta}{1+\delta}\theta}\right)^2\right) & v \text{ left-leaning} \\ -\frac{\left(\sqrt{\delta\theta\left(1+\delta-4v^2\left(1+\delta(1-\theta)\right)\right)}-v\left(1+\delta(1-2\theta)\right)\right)^2}{1+\delta} & v \text{ centrist} \\ (1+\delta)(-v^2) + \delta\theta\big(-(1-2v)\big) & v \text{ right-leaning} \end{cases}. \tag{7}$$

Observe that V's excess utility from legislation compared to unilateral action (i.e. [7] − [6]) is strictly positive when v is left-leaning or centrist and zero when v is right-leaning. □

These two lemmas immediately imply the following proposition:

Proposition B1. When v is left-leaning or centrist, then in the sole equilibrium outcome, M proposes $\ell_1 = \ell_1^*$, V approves it, and P^L signs it. When v is high, this may be an equilibrium outcome, as may the following: M fails to offer legislation (or offers legislation that P^L will veto), and P^L issues $e_1 = p^L$.

The fact that M strictly benefits from legislation when v is left-leaning or centrist eliminates the possibility that legislation does not occur. When v is right-leaning, M is indifferent, and either legislation or no legislation may be the outcome.

C Baseline model with probabilistic unilateral action

In this extension, I allow for the possibility that in Stage 1, unilateral action by P^L might fail with some exogenous probability, call it t. I assume that if P_L attempts unilateral action in Stage 1 and fails, it is not available to P_L to attempt in Stage 2 (or would fail with certainty). To focus on impairments to P^L's Stage 1 unilateral powers that may alter other actors' impetus to offer compromise legislation, and for simplicity of analysis, no such complication is assumed for P^R.

Proceed backward through the game. The analysis of Stage 2 remains the same except in the event that P_L previously attempted unilateral action and it failed, the policy x_1 remains in place.

Now consider Stage 1. P^L's expected utility from unilateral action (or taking no action, should the argument equal x_0) is

$$\mathbb{E}U_1^{P^L}(e_1) = t\big(- |e_1 - p^L| + \delta(\theta(-(m - p^L)) + (1-\theta)(-|e_1 - p^L|))\big) \\ + (1-t)\big(- |e_1 - x_0| + \delta(\theta(-(m - p^L)) + (1-\theta)(-|e_1 - x_0|))\big).$$

Observing that $e_1 < p^L$ and $e_1 > x_0$ can never be optimal, we find that $\frac{d\mathbb{E}U_1^{P^L}}{de_1} = -t(1 + \delta(1-\theta)) < 0$. Then P^L's optimum given unilateral action is $e_1^* = p^L$, with corresponding expected utility as follows:

$$\mathbb{E}U_1^{P^L}(e_1 = p^L) = r\delta\theta(-(m - p^L)) \\ + (1-t)\big(- (p^L - x_0) + \delta(\theta(-(m - p^L)) + (1-\theta)(-(x_0 - e_1)))\big).$$

This exceeds utility from taking no action.

P^L's expected utility from legislation ℓ_1 is as before. Then equating this to expected utility from unilateral action and solving for ℓ_1, we reach the following result:

Lemma C1. *There always exists a unique policy* ℓ_1^* *such that* P^L *and* M *are both indifferent between enacting* ℓ_1^* *legislatively and failing to do so (such that* P^L *issues an executive order* $e_1 = e_1^*$*). Specifically,*

$$\ell_1^* = \begin{cases} tp^L + (1-t)x_0 + \frac{\delta\theta(m-(tp^L+(1-t)x_0))}{1+\delta} & v \leq tp^L + (1-t)x_0 + \frac{\delta\theta(m-(tp^L+(1-t)x_0))}{1+\delta} \\ \frac{(1+\delta)(tp^L+(1-t)x_0)-\delta\theta(2v-m+tp^L+(1-t)x_0)}{1-\delta(2\theta-1)} & tp^L + (1-t)x_0 + \frac{\delta\theta(m-(tp^L+(1-t)x_0))}{1+\delta} \leq v \leq \frac{tp^L+(1-t)x_0+m}{2} \\ tp^L + (1-t)x_0 & \frac{tp^L+(1-t)x_0+m}{2} \leq v \end{cases}.$$

Proof. Analogous to that of Lemma 2. □

Next, Lemma 2 and Proposition 1 continue to hold as before, with their proofs analogous.

D Baseline model with two types of V

To build a bridge from the baseline model to the signaling model, I analyze a variant of the baseline model with two types of V. Specifically, I suppose those types of V assumed in the signaling model. Namely, there is a centrist veto player V^C with an ideal point v^C such that $\frac{p^L+\delta\left(\theta(1-\gamma)m+(1-\theta)p^L\right)}{1+\delta(1-\theta\gamma)} < v^C < \frac{p^L+m}{2}$ and a right-leaning veto player V^R with an ideal point $v^R = m$. Unlike in the signaling model, whether V's type is drawn probabilistically before Stage 1 is moot, and both cases will be analyzed. But V will be subject to election between Stages 1 and 2. In Stage 2, then, we will have $v = m$ with probability γ and $v = v^C$ with probability $1-\gamma$, just as in the signaling model (fixing $s = 0$).

The analogue to Lemma 2 is now as follows:

Lemma D2. *There always exists a unique policy ℓ_1^* such that P^L and M are both indifferent between enacting ℓ_1^* legislatively and failing to do so (such that P^L issues an executive order $e_1 = e_1^*$). Specifically, $\ell_1^* = \frac{p^L+\delta\left(\theta(1-\gamma)(m-2v^C)+(1-\theta)p^L\right)}{1+\delta\left(1-\theta\left(1+(1-\gamma)\right)\right)}$.*

Proof. Analogous to that of Lemma 2 in the case in which v is centrist, irrespective of whether v^R or v^C has yielded in Stage 1 herein. This follows from the fact that the future location of v is now not a function of its current location. □

Next, Lemma 2 continues to hold, with v^C being centrist and v^R being right-leaning and the proof presented in that to Lemma 6. Proposition 1 continues to hold as before, with its proof analogous.

E Formal statement of Assumption 5

The assumption is stated formally as follows:

Assumption 5 (Lower-bound on A's cost)**.** The cost coefficient κ satisfies the following:

$$\kappa > \max\left\{\frac{\delta\theta}{1-\gamma}\big(m - v^C - (v^C - p^L)\big),\right.$$
$$\left.\frac{\delta^2\theta^2\big(1+\delta(1-\theta)\big)\left(m-v^C\right)^2\left(m - v^C - (v^C - p^L)\right)}{\big((1+\delta)(v^C - p^L) - \delta\theta((1-\gamma)m + \gamma v^C - p^L)\big)\big((1+\delta)(m-p^L) + \delta\theta((2\gamma-3)m + p^L + 2(1-\gamma)v^C)\big)}\right\}.$$

Specifically, we will see that the equilibrium sanction s^* will be guaranteed to be interior (i.e. the probabilities upon which it may act will remain interior) as long as $\kappa > \frac{\delta\theta}{1-\gamma}\big(m - v^C - (v^C - p^L)\big)$. Next, v^C remaining in the centrist range means that κ is sufficiently large such that $\frac{p^L + \delta\left((\theta - s^*)(1-\gamma)m + (1-(\theta-s^*))p^L\right)}{1+\delta(1-(\theta-s^*)\gamma)} < v^C$. That is, the equilibrium sanction, should it be imposed upon v^R, must leave Assumption 4 preserved given the adjusted probability that v^R wins election (imposing it upon v^L only slackens the constraint). This corresponds to $\kappa > \frac{\delta^2\theta^2\left(1+\delta(1-\theta)\right)\left(m-v^C\right)^2\left(m-v^C-(v^C-p^L)\right)}{\left((1+\delta)(v^C-p^L)-\delta\theta((1-\gamma)m+\gamma v^C-p^L)\right)\left((1+\delta)(m-p^L)+\delta\theta((2\gamma-3)m+p^L+2(1-\gamma)v^C)\right)}$. Because the constraint pertains to v^C's optimum behavior given its anticipation of A's behavior rather than A's behavior itself, and A's expected utility exhibits no kinks with respect to s as long as s is interior, we need not worry that an additional candidate to solve A's optimization problem exists.

F Formal proofs

Proof of Lemma 1. First conjecture that $\ell_1^* \leq v-(m-v)$. Then expected utility to P^L from legislation is

$$\mathbb{E}U_1^{P^L}(\ell_1) = -(\ell_1 - p^L) + \delta\big(\theta\big(-(m-p^L)\big) + (1-\theta)\big(-(\ell_1 - p^L)\big)\big). \tag{8}$$

Equating the right-hand sides of (1) and (8), we find that $\ell_1^* = p^L$. To be consistent with the initial conjecture, we would then require $\frac{m+p^L}{2} \leq v$.

Now conjecture that $v-(m-v) \leq \ell_1^* \leq v$. Then expected utility to P^L from legislation is

$$\mathbb{E}U_1^{P^L}(\ell_1) = -(\ell_1 - p^L) + \delta\big(\theta\big(-((v+(v-\ell_1)) - p^L)\big) + (1-\theta)\big(-(\ell_1 - p^L)\big)\big). \tag{9}$$

Equating the right-hand sides of (1) and (9), we find that $\ell_1^* = p^L + \frac{\delta\theta(m-v-(v-p^L))}{1+\delta(1-2\theta)}$. To be consistent with the initial conjecture, we would then require $p^L + \frac{\delta}{1+\delta}\theta(m-p^L) \leq v \leq \frac{m+p^L}{2}$.

Finally conjecture that $v \leq \ell_1^*$. Then expected utility to P^L from legislation is

$$\mathbb{E}U_1^{P^L}(\ell_1) = -(\ell_1 - p^L) + \delta\big(\theta\big(-(\ell_1-p^L)\big) + (1-\theta)\big(-(\ell_1 - p^L)\big)\big). \tag{10}$$

Equating the right-hand sides of (1) and (10), we find that $\ell_1^* = p^L + \frac{\delta}{1+\delta}\theta(m-p^L)$ (which is clearly less than m). To be consistent with the initial conjecture, we would then require $v \leq p^L + \frac{\delta}{1+\delta}\theta(m-p^L)$.

Then given any value of v, we have found exactly one value of ℓ_1 that makes P^L (and therefore M as well, as explained in text) indifferent between legislation and P^L's optimal unilateral action. □

Proof of Lemma 2. V's expected utility from e_1^* is as follows:

$$\mathbb{E}U_1^V(e_1 = e_1^*) = -(v - p^L) + \delta\big(\theta(-(m - v)) + (1 - \theta)(-(v - p^L))\big). \tag{11}$$

Meanwhile, its expected utility from ℓ_1^* is as follows:

$$\mathbb{E}U_1^V(\ell_1 = \ell_1^*) = \begin{cases} (1 + \delta)(-(\ell_1^* - v)) & v \text{ left-leaning} \\ (1 + \delta)(-(v - \ell_1^*)) & v \text{ centrist} \\ -(v - \ell_1^*) + \delta\big(\theta(-(l_2^*(l_1^*) - v)) + (1 - \theta)(-(v - \ell_1^*))\big) & v \text{ right-leaning} \end{cases}.$$

(In the centrist case, this holds because either P^L wins, in which case policy remains in place, or P^R wins, in which case policy is reflected over v and provides equal utility). Then we have

$$\mathbb{E}U_1^V(\ell_1 = \ell_1^*) = \begin{cases} (1 + \delta)(-((p^L + \frac{\delta}{1+\delta}\theta(m - p^L)) - v)) & v \text{ left-leaning} \\ (1 + \delta)(-(v - (p^L + \frac{\delta\theta(m-v-(v-p^L))}{1+\delta(1-2\theta)}))) & v \text{ centrist} \\ -(v - p^L) + \delta\big(\theta(-(m - v)) + (1 - \theta)(-(v - p^L))\big) & v \text{ right-leaning} \end{cases}. \tag{12}$$

Then V's excess utility from legislation compared to unilateral action (i.e. [12] − [11]) is

$$\mathbb{E}U_1^V(\ell_1 = \ell_1^*) - \mathbb{E}U_1^V(e_1 = e_1^*) = \begin{cases} 2(v - p^L)\big(1 + \delta(1 - \theta)\big) & v \text{ left-leaning} \\ \frac{2\delta\theta(p^L+m-2v)\big(1+\delta(1-\theta)\big)}{1+\delta(1-2\theta)} & v \text{ centrist} \\ 0 & v \text{ right-leaning} \end{cases}. \tag{13}$$

Based on conditions of each case and initial assumptions on parameters, it is thus clear that for v left-leaning or centrist, we have the right-hand side of (13) greater than zero, while for v right-leaning, it equals zero. $\square$

Proof of Proposition 1. Follows immediately from Lemmas 1 and 2. $\square$

Proof of Lemma 3. As before, P^L's expected utility from unilateral action is given by (1). Now conjecture that $\ell_1^\circ < v^C < \frac{p^L+m}{2}$. Recalling that Δ_γ represents the change in V^R's probability of winning, such that $\Delta_\gamma = s$ if the veto player is centrist and $\Delta_\gamma = -s$ if it is right-leaning, expected utility to P^L from legislation is

$$(14) \quad \mathbb{E}U_1^{P^L}(\ell_1) = -(\ell_1 - p^L)+$$
$$\delta\Big(\theta\cdot\Big((\gamma+\Delta_\gamma)\big(-(m-p^L)\big)+\big(1-(\gamma+\Delta_\gamma)\big)\big(-((2v^C-\ell_1)-p^L)\big)\Big)+(1-\theta)\Big(-(\ell_1-p^L)\Big)\Big).$$

Equating the right-hand sides of (1) and (14), we find that $\ell_1^\circ = \frac{p^L+\delta\left(\theta(1-(\gamma+\Delta_\gamma))(m-2v^C)+(1-\theta)p^L\right)}{1+\delta\left(1-\theta\left(1+(1-(\gamma+\Delta_\gamma))\right)\right)}$. Consistency with the initial conjecture is then guaranteed by Assumptions 4 and 5. $\square$

Proof of Lemma 4. Omitting A's Stage 1 utility already realized, A's expected utility is

$$\mathbb{E}U_2^A(s) = \delta\cdot\Bigg(\mu\cdot\Bigg(\theta\cdot\big((\gamma-s)\cdot U_2^A(m)+(1-(\gamma-s))\cdot U_2^A(2v^C-\ell_1^\circ(-\tilde{s}))\big)+(1-\theta)U_2^A(\ell_1^\circ(-\tilde{s}))\Bigg)$$
$$+(1-\mu)\Bigg(\theta\cdot\big((\gamma+s)\cdot U_2^A(m)+(1-(\gamma+s))\cdot U_2^A(2v^C-\ell_1^\circ(\tilde{s}))\big)+(1-\theta)U_2^A(\ell_1^\circ(\tilde{s}))\Bigg)\Bigg)-\frac{\kappa}{2}s^2.$$

Remembering that we restrict $s \geq 0$, the FOC implies

$$s^\circ(\tilde{s}) = \max\left\{\frac{\delta\theta}{\kappa}\Big(\mu\Big(U_2^A\big(2v^C-\ell_1^\circ(-\tilde{s})\big)-U_2^A(m)\Big)+(1-\mu)\Big(U_2^A(m)-U_2^A\big(2v^C-\ell_1^\circ(\tilde{s})\big)\Big)\Big),0\right\}$$

with the SOC satisfied. $\square$

Proof of Lemma 5. For the moment, consider a modification of the condition that excludes the maximum operator, i.e.

$$s = \frac{\delta\theta}{\kappa}\left(\mu\Big(U_2^A\big(2v^C - \ell_1^\circ(-s)\big) - U_2^A(m)\Big) + (1-\mu)\Big(U_2^A(m) - U_2^A\big(2v^C - \ell_1^\circ(s)\big)\Big)\right).$$

Denote the right-hand side of this expression as $\zeta(s)$, with $\zeta^C(s) \equiv \zeta(s)$ when $v = v^C$ and $\zeta^R(s) \equiv \zeta(s)$ when $v = m$.

To show existence and uniqueness, there are two cases to consider. First, $a = v^C$, and second, $a = m$. Suppose first that $a = v^C$. We find that $\zeta^{C\prime}(s) > 0$. Then existence and uniqueness are demonstrated by solving explicitly, which yields one real solution (whose expression is too lengthy to present). Suppose instead that $a = m$. We find that $\zeta^{R\prime}(s) < 0$. Then because the left-hand side (s) is increasing and unbounded, existence and uniqueness are guaranteed.

Next, it is clear that $s = 0$ solves (2) when $\mu = 1/2$ (implying that $\zeta = 0$) and that if ever the intersection of s and $\zeta(s)$ would occur at a negative value, the original equilibrium condition (2) would be satisfied at $s = 0$.

Next, I note that as ζ is a linear combination parameterized by μ, it is strictly monotonic in μ, with strictness arising from the fact (following from Assumption 5) that we must have $U_2^A(2v^C - \ell_1^\circ(-s))$ strictly greater than or less than $U_2^A(m)$ but not equal, corresponding to $a = v^C$ and $a = m$, respectively. Specifically, when $v = v^C$, ζ^C is increasing in μ, and when $v = m$, ζ^R is decreasing in μ.

In the case in which $v = m$, the fact that $\frac{\partial}{\partial\mu}\zeta^R(s) < 0$ is sufficient to demonstrate that $\frac{\partial}{\partial\mu}s^* < 0$ when $\mu < 1/2$ with $s^* = 0$ otherwise. For the case in which $v = v^C$, in order to show that $\frac{\partial}{\partial\mu}s^* > 0$ when $\mu > 1/2$ with $s^* = 0$ otherwise, we must additionally demonstrate that $\zeta^C(s)$ crosses s from above. This follows from the fact that $\lim_{s\to\infty}\big(s - \zeta^C(s)\big) = \infty$ (equivalently for our purposes, $\lim_{s\to-\infty}\big(s - \zeta^C(s)\big) = -\infty$). $\square$

Proof of Lemma 6. First let us demonstrate results for V^R. It is immediate that when $s^* = 0$, V^R is indifferent. ℓ_1^* is constructed specifically to make M indifferent; because V^R shares M's preferences over policy, V^R must also be indifferent. For $s^* > 0$, the same logic implies that V^R is indifferent as it pertains to policy. Obviously, for some change in s^* of Δ_{s^*}, V^R's expected office-holding benefit changes by $-\delta\Delta_{s^*}\beta$.

Now consider V^C. Its expected utility from e_1^* is

(15)
$$\mathbb{E}U_1^V(e_1 = e_1^*) = -(v^C - p^L) + \delta\Big(\theta\big(-(m-v)\big) + (1-\theta)\big(-(v^C - p^L)\big)\Big) + \delta(1-\gamma)\beta.$$

Meanwhile, its expected utility from ℓ_1^* is

$$\text{(16)} \quad \mathbb{E}U_1^{V^C}\big(\ell_1 = \ell_1^*(s^*)\big) = \Big(1 + \delta\cdot\big(1 - \theta\cdot(\gamma + s^*)\big)\Big)\Big(-\big(v^C - \ell_1^*(s^*)\big)\Big) + \delta\theta(\gamma + s^*)\cdot\big(-(m - v^C)\big) + \delta\big(1 - (\gamma + s^*)\big)\beta.$$

This holds because as long as P^R and V^R do not both win, in Stage 2 policy will either stay in place or reflect over v^C and remain an equal distance from it. Finally, office-holding benefits are earned now and if winning reelection, in the future.

First, let us establish V^C's strict preference for legislation when $s^* = 0$. The difference $\mathbb{E}U_1^{V^C}\big(\ell_1 = \ell_1^*(0)\big) - \mathbb{E}U_1^V(e_1 = e_1^*)$ equals $\frac{2\delta\theta\left(m - v^C - (v^C - p^L)\right)(1+\gamma)(1+\delta(1-\theta))}{1+\delta\left(1-(2-\gamma)\theta\right)}$, which Assumption 4 implies is strictly positive.

Next, to establish that V^C's utility from legislation strictly decreases in s^*, observe that

$$\text{(17)} \qquad \frac{d}{ds^*}\mathbb{E}U_1^{V^C}\big(s^*, \ell_1^*(s^*)\big) = \overbrace{\frac{\partial \mathbb{E}U_1^{V^C}}{\partial s^*}}^{<0} + \overbrace{\underbrace{\frac{\partial \mathbb{E}U_1^{V^C}}{\partial \ell_1^*}}_{>0} \cdot \underbrace{\frac{\partial \ell_1^*}{\partial s^*}}_{<0}}^{<0} < 0.$$

As with V^R, for some change in s^* of Δ_{s^*}, V^C's expected office-holding benefit changes by $-\delta\Delta_{s^*}\beta$. But (17) continues to hold even when $\beta = 0$, implying that unlike V^R, V^C additionally experiences a reduction in policy utility. $\square$

Proof of Proposition 2. Suppose first that $\gamma < 1/2$. First hold fixed A's behavior and consider the calculation of V^C and V^R. V^C does not receive a sanction under either circumstance, so it strictly prefers to approve legislation, which by Lemma 6 provides it with a benefit. V^R is indifferent and is therefore willing to approve legislation.

Next, holding fixed the behavior of V^C and V^R, A's behavior is optimal by Lemma 5 and the fact that s^* must equal zero if legislation was not approved. Finally, because V^C loses the most from rejecting legislation, the D1 refinement rules out any off-path belief other than $\mu = 1$.

Finally, I rule out other candidate equilibria. Pooling on rejecting legislation cannot be an equilibrium, because the D1 refinement would require the off path belief be $\mu = 0$, which would induce V^C to deviate. Separation with V^C approving legislation and V^R rejecting it is ruled out by the additional refinement. Finally, separation with V^C rejecting legislation and V^R approving it would lead V^R to want to deviate since $\beta > 0$.

Suppose next that $\gamma > 1/2$. First hold fixed A's behavior and consider the calculation of V^C and V^R. V^C does not receive a sanction under either circumstance, so it strictly prefers to approve legislation, which by Lemma 6 provides it with a benefit. V^R is indifferent and is therefore willing to reject legislation.

Next, holding fixed the behavior of V^C and V^R, A's behavior is optimal by Lemma 5 and the fact that s^* must equal zero if legislation was not approved.

Finally, I rule out other candidate equilibria. Pooling on rejecting legislation cannot be an equilibrium, because the D1 refinement would require the off path belief be $\mu = 0$, which would induce V^C to deviate. Pooling on approving legislation cannot be an equilibrium, since A's prior belief implies that it would impose a positive sanction; this would induce V^R to deviate. Finally, separation with V^C rejecting legislation and V^R approving it would lead V^R to want to deviate since $\beta > 0$. □

Proof of Proposition 3. Notice first that if $\beta = 0$, V^C would always approve legislation regardless of the magnitude of the sanction. This follows because while a sanction reduces the relative benefit of legislation compared to unilateral action by increasing policy variance under legislation, rejecting legislation guarantees maximum policy variance. This implies the existence of a continuum of strictly positive values of β such that for any possible change in A's willingness to sanction (with the maximum being the difference between that when A believes $\mu = 0$, and that when either A believes $\mu = 1$ or legislation has been rejected), V^C would at least weakly prefer to approve legislation; let $\tilde{\beta}$ denote the maximum such value of β. (An explicit expression for $\tilde{\beta}$ is derived in the proof of Proposition 4).

Suppose that $\beta < \tilde{\beta}$. First hold fixed A's behavior and consider the calculation of V^C and V^R. As just argued, V^C prefers to approve legislation, as its benefit exceeds the cost imposed by the sanction. V^R enjoys no inherent benefit from legislation and weakly prefers to reject it.

Next, holding fixed the behavior of V^C and V^R, A's behavior is optimal by Lemma 5.

Finally, I rule out other candidate equilibria. Pooling on rejecting legislation is not an equilibrium, because we have already assumed β sufficiently small such that even if V^C reveals its type, its benefit from legislation exceeds the cost from being sanctioned. Pooling on approving legislation cannot be an equilibrium, because the D1 refinement would require that the off-path belief be $\mu = 1$. When $\beta > 0$ and $\gamma < 1/2$, this would induce V^R to deviate; otherwise, the additional refinement would rule out this equilibrium. Finally, separation with V^C rejecting legislation and V^R approving it would lead V^C to want to deviate, since it could enjoy the benefits of legislation without receiving any sanction at all.

Suppose next that $\beta > \tilde{\beta}$. First hold fixed A's behavior and consider the calculation of V^C and V^R. V^C must decide between rejecting legislation and receiving no sanction or approving legislation and receiving the sanction commensurate with $\mu = 0$. By the definition of $\tilde{\beta}$, V^C prefers to reject legislation. V^R is indifferent to legislation inherently and at least weakly prefers not to receive a sanction, such that it is willing to reject legislation.

Next, holding fixed the behavior of V^C and V^R, A's behavior is optimal by Lemma 5 and the fact that s^* must equal zero if legislation was not approved. Finally, because V^C gains the most from approving legislation, the D1 refinement rules out any off-path belief other than $\mu = 0$.

Finally, I rule out other candidate equilibria. Pooling on approving legislation cannot be an equilibrium, because the D1 refinement would require that the off-path belief be $\mu = 1$. When $\gamma < 1/2$, this would induce V^R to deviate; otherwise, the additional refinement would rule out this equilibrium. Separation with V^C approving legislation and V^R rejecting it cannot be an equilibrium, as V^C would want to deviate given the definition of $\tilde{\beta}$ and our assumption that $\beta > \tilde{\beta}$. Finally, separation with V^C rejecting legislation and V^R approving it would lead V^C to want to deviate, since it could enjoy the benefits of legislation without receiving any sanction at all. □

Proof of Proposition 4. Given the results of Proposition 3, V^C may choose either to reject legislation and receive no sanction or approve legislation and receive a sanction commensurate with $\mu = 0$. First we write an explicit expression for $s^*(0; v = m)$. Letting $a = m$ and $\mu = 0$, the solution to (2) is

$$s^*(0; a = m) = \frac{\sqrt{R} - \kappa\Big(1 + \delta\big(1 - \theta(2 - \gamma)\big)\Big)}{2\delta\theta\kappa} \tag{18}$$

with

$$R \equiv \kappa\bigg(\kappa\Big(1+\delta\big(1-\theta(2-\gamma)\big)\Big)^2 + 4(\delta\theta)^2\big(1+\delta(1-\theta)\big)\big(m - v^C - (v^C - p^L)\big)\bigg).$$

This is interior (i.e. $s^*(0; a = m) < 1-\gamma$) when $\kappa > \frac{\delta\theta}{1-\gamma}\big(m - v^C - (v^C - p^L)\big)$, as discussed in Appendix E. Substituting $s^*(0; a = m)$ into the right-hand side of (16) and equating to the right-hand side of (15) implies that

$$\tilde{\beta} = \frac{\big(1+\delta(1-\gamma\theta)\big)\kappa - \sqrt{\kappa\bigg(2^3\Big(\frac{p^L+m}{2} - v^C\Big)(\delta\theta)^2\big(1+\delta(1-\theta)\big) + \kappa\Big(1+\delta\big(1-\theta(2-\gamma)\big)\Big)^2\bigg)}}{\delta^2\theta}.$$

Given Assumptions 4 and 5, this is strictly positive. Furthermore, $\frac{\partial\tilde{\beta}}{\partial\kappa} > 0$, $\frac{\partial\tilde{\beta}}{\partial m} < 0$, $\frac{\partial\tilde{\beta}}{\partial\theta} < 0$, $\frac{\partial\tilde{\beta}}{\partial\gamma} < 0$, and $\frac{\partial\tilde{\beta}}{\partial\delta} < 0$. □

Proof of Proposition 5. Recognize first that in any equilibrium, average policy (weighing Stage 2 policy by δ) must equal that given that P^L issues an executive order $e_1 = p^L$ in Stage 1. Denoting this $\overline{x}$, we must have

$$\overline{x} = \frac{p^L + \delta\big(\theta m + (1-\theta)p^L\big)}{1+\delta}.$$

Inspecting this expression, it is clear that $\overline{x} < \frac{p^L+m}{2}$. Additionally, because there is always a positive probability that legislative policy shifts rightward and zero probability that it shifts leftward in Stage 2, we must have $\ell_1^* < \overline{x}$. And recall that $\ell_1^* < v^C$.

Now we compare variance under unilateral action to that under legislation. Variance under unilateral action (denoted $\mathbb{V}^e$) is

$$\mathbb{V}^e = \frac{\big(1+\delta(1-\theta)\big)(\overline{x} - p^L)^2 + \delta\theta(m - \overline{x})^2}{1+\delta}. \tag{19}$$

while (noticing that in equilibrium sanctions are only ever imposed on V^C and allowing $\Delta_\gamma^* = s^*$) variance under legislation (denoted $\mathbb{V}^\ell$) is

(20)

$$\mathbb{V}^\ell = \frac{\big(1+\delta(1-\theta)\big)(\overline{x}-\ell_1^*)^2 + \delta\theta\Big((\gamma+s^*)(m-\overline{x})^2 + \big(1-(\gamma+s^*)\big)\big((2v^C-\ell_1^*)-\overline{x}\big)^2\Big)}{1+\delta}.$$

Because $|\overline{x}-\ell_1^*| < |\overline{x}-p^L|$ and $|(2v^C-\ell_1^*)-\overline{x}| < |m-\overline{x}|$, we must conclude that $\mathbb{V}^\ell < \mathbb{V}^e$.

Having demonstrated that policy variance under unilateral action exceeds that under legislation, we now turn our attention to unconditional policy variance. Because this is constant with respect to the parameters of interest in an equilibrium in which both types reject legislation, suppose that this is not the case. For some parameter η, to show that policy variance increases (decreases) in η, it is sufficient to show both of the following:

1. The probability of legislation is weakly decreasing (increasing) in η

2. Policy variance conditional on legislation is weakly increasing (decreasing) in η

First consider ρ. As Propositions 2 and 3 demonstrate, there is never a circumstance in which V^R would approve legislation but V^C would not. Yet the reverse may hold. Increasing ρ increases the probability of legislation while leaving policy variance conditional on legislation unaffected, thus increasing unconditional policy variance, i.e. $\frac{\partial \mathbb{V}^\ell}{\partial \rho} > 0$.

Next consider κ. For an instantaneous change, the probability of legislation is constant. Then inspecting (18), notice that we have $\frac{\partial s^*}{\partial \kappa} < 0$. Because $\frac{\partial \ell_1^*}{\partial s^*} < 0$, we have $\frac{d\ell_1^*}{d\kappa} > 0$. There are two cases to consider. First, suppose that $2v^C - \ell_1^* \geq \overline{x}$. Allow some instantaneous increase in κ. Then $|\overline{x}-\ell_1^*|$ and $\big|(2v^C-\ell_1^*)-\overline{x}\big|$ decrease, with the weight on $(m-\overline{x})^2$ relative to $\big((2v^C-\ell_1^*)-\overline{x}\big)^2$ also decreasing (i.e. $\gamma+s^*$ compared to $1-(\gamma+s^*)$). Because $|(2v^C-\ell_1^*)-\overline{x}| < |m-\overline{x}|$, we must conclude that $\frac{\partial \mathbb{V}^\ell}{\partial \kappa} < 0$.

Next suppose that $2v^C - \ell_1^* < \overline{x}$. Allow some instantaneous increase in κ. While $|\overline{x}-\ell_1^*|$

decreases as before, $\left|(2v^C - \ell_1^*) - \overline{x}\right|$ increases. But recalling that $\ell_1^* < v^C$, we can conclude that $|\overline{x} - \ell_1^*| > |(2v^C - \ell_1^*) - \overline{x}|$. Noticing also that the instantaneous decrease in $|\overline{x} - \ell_1^*|$ equals the instantaneous increase in $|(2v^C - \ell_1^*) - \overline{x}|$, we conclude by convexity that the instantaneous decrease in $(\overline{x} - \ell_1^*)^2$ must exceed the instantaneous increase in $\left((2v^C - \ell_1^*) - \overline{x}\right)^2$. And the weight on the former exceeds the weight on the latter. Finally, the argument pertaining to the weight on $(m - \overline{x})^2$ relative to $\left((2v^C - \ell_1^*) - \overline{x}\right)^2$ continues to hold, such that we conclude that $\frac{\partial \mathbb{V}^\ell}{\partial \kappa} < 0$.

Finally consider γ. For an instantaneous change, the probability of legislation is constant in the equilibrium in which types pool on legislation and decreasing in every other equilibrium with which we are presently concerned. Next, notice that the quantity of interest in determining ℓ_1^* is $\gamma + s^*$ rather than s^*; denote this γ^*. Referring to (18), notice that $\frac{\partial \gamma^*}{\partial \gamma} > 0$. Then because $\frac{\partial \ell_1^*}{\partial \gamma^*} < 0$, we conclude that $\frac{d\ell_1^*}{d\gamma} < 0$. Taking into account the reversed sign, the same arguments as those that applied to a shift in κ apply equally to a shift in γ, and we conclude that $\frac{\partial \mathbb{V}^\ell}{\partial \gamma} > 0$. $\square$