Energy Versus Safety

Unilateral Action, Voter Welfare, and Executive Accountability

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Abstract

Americans have always been skeptical of executive power, but many now see a role for the president in overcoming Congressional gridlock. Will increasing executive power necessarily decrease accountability? To answer this question, I develop a two-period signaling model comparing voter welfare in two separation-of-powers settings. In one, the executive must work with a unitary legislature to change policy; in the other, the executive can choose between legislation or unilateral action. Both politicians may have preferences that diverge from the voter's, yet I find that increasing executive power may increase accountability and welfare, even in some cases where the legislature is more likely to be congruent than the executive. Unilateral power allows a congruent executive to overcome gridlock, implement the voter's preferred policy, and reveal information about the politicians' types—which outweighs the risks of a divergent executive using his power for partisan and personal gain.

Keywords: presidency, unilateral action, signaling, separation of powers, electoral accountability, political agency

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1 Introduction

> "The ingredients which constitute energy in the executive, are, unity; duration; an adequate provision for its support; competent powers. The ingredients which constitute safety in the republican sense, are, a due dependence on the people; a due responsibility."
>
> —Alexander Hamilton, *The Federalist, No. 70*

At a 2016 town hall in South Carolina, then-Candidate Trump attacked President Obama for his reliance on unilateral action, arguing, "The country wasn't based on executive orders. Right now, Obama goes around signing executive orders. He can't even get along with the Democrats, and he goes around signing all these executive orders. It's a basic disaster. You can't do it."[1] In office, however, President Trump saw things differently. Not only did he sign more than 30 executive orders in his first 100 days, he did so publicly as part of a deliberate strategy to highlight the administration's commitment to action.[2]

President Trump's see-sawing views on presidential power are not unique. American concerns about executive power date back before the nation's founding but are captured succinctly in Schlesinger's depiction of an imperial president "accountable only through impeachment," who, "would govern, as much as he could, by decree" (1986, 377). Even in the modern, presidency-driven era, the public remains skeptical of executive policymaking (Reeves and Rogowski 2016). A Pew Research survey conducted in July 2019 found that 66% of Americans agreed with the statement that it was "too risky" to give U.S. presidents more power to deal with the nation's problems.[3] Yet, Americans increasingly see a role for the president in tackling the nation's challenges (Howell 2015; Neustadt 1991).

[1] Jonathan Lemire and Jill Colvin, "Trump Touts Executive Orders He Once Lambasted," AP News, April 25, 2017. https://apnews.com/e9f75e03bb7a41c1a44e9512d4990832 (accessed April 26, 2019).

[2] Gregory Korte, "Trump's Executive Actions Come Faster and in Different Forms Than Before," USA Today, January 30, 2017. http://www.usatoday.com/story/news/politics/2017/01/30/trumps-executive-actions-come-faster-and-different-forms-than-before/97255592/ (accessed July 11, 2019).

[3] "Republicans Now Are More Open to the Idea of Expanding Presidential Power", Pew Research Center, August 7, 2019. https://www.people-press.org/2019/08/07/republicans-now-are-more-open-to-the-idea-of-expanding-presidential-power/ (accessed August 9, 2019).

Congressional approval hovers below 30%,[4] and 53% of Americans believe members of Congress do an inadequate job of advocating for good public policy.[5] One recent proposal goes so far as to suggest that the president be given permanent "fast-track" authority to overcome Congressional polarization and gridlock (Howell and Moe 2016). Given these competing perspectives, it is unclear whether the public would fare better, in the aggregate, with a stronger president who could bypass Congressional gridlock or with one who is constrained by a robust system of legislative checks and balances. And further—does the potential for a partisan or self-interested, rather than universal, president alter those conclusions?

To investigate this question, I develop a two-period agency model of policymaking under two different separation of powers regimes. In the first system, which mirrors that established in the U.S. Constitution (hereafter, the *Constitutional Regime*), both the executive and a unitary legislature must mutually agree on a new policy before changing the status quo. In the other regime (hereafter, the *Unilateral Regime*), the executive may either work with the legislature or enact new policy unilaterally. After observing the policy outcome, a representative voter chooses to independently reelect or replace the politicians who face a similar policymaking decision in the second period. If both agents always shared the voter's preference over policy, the choice over regime types would be trivial. However, each politician has a private type—either congruent with the voter's policy preferences or divergent from them. Choices over both policies and policymaking vehicles (i.e. legislation, unilateral action) allow the voter to make inferences about her agents types, which she can leverage to improve second-period outcomes.

Regardless of regime-type, when both politicians are congruent, the policymaking decision is straightforward. By enacting the voter's favorite policy, the politicians not only

[4] "Congress and the Public", Gallup Inc, https://news.gallup.com/poll/1600/congress-public.aspx (accessed January 17, 2020).

[5] "Where public confidence stands about eight groups that have positions of power and responsibility", Pew Research Center, September 19, 2019. https://www.people-press.org/2019/09/19/where-public-confidence-stands-about-eight-groups-that-have-positions-of-power-and-responsibility/ (accessed January 17, 2020).

maximize their own policy-specific payoffs, they also increase their reputations for congruence and win reelection. If one politician is divergent in the Constitutional Regime, the congruent agent can thwart movement of the status quo, which I call gridlock. While this action prevents the voter's least favorite policy from taking effect, it results in a lower payoff and a more shallow information environment. In the Unilateral Regime, if the executive is congruent and the legislature is divergent, the executive can bypass the legislature and unilaterally enact the voter's favorite policy. As unilateral action is costly, not only does this action signal the executive's congruence, it also alerts the voter to the legislature's divergence. Of course, when the executive is divergent, he is able to overrule a congruent legislator and enact the voters' least favorite policy. However, in doing so, the executive reveals his unfavorable type, as only divergent agents unilaterally enact divergent policy. This type of executive must trade off between policy and reelection, which attenuates the potential for bad outcomes when the executive is motivated by holding office.

Turning to welfare, one reasonable hypothesis is to simply assume that the voter prefers the regime that favors the agent who is *ex-ante* more likely to be congruent. That is, the voter would prefer the Constitutional Regime were the legislator more likely to be congruent and the Unilateral Regime when the executive were more likely to be congruent. And indeed, this hypothesis is proven true when there are large differences between the politicians' prior probabilities of congruence. However, when differences between the two are more modest, I show that voter welfare is higher under the Unilateral Regime—even in some cases where the executive is more likely to be divergent.

Although the Unilateral Regime is not strictly welfare-increasing, it is the *ex-ante* preferable regime as it provides higher expected welfare across the full range of parameter values. Importantly, this result does not rely on assumptions of public-mindedness (see e.g. Hamilton, Jay and Madison 2001; Kagan 2001), universalism, (Howell and Moe 2016) or "executive self-binding" (Posner and Vermeule 2007), which often motivate arguments

in favor of expanding executive power. Rather, these results hold despite the fact that the executive may act on partisan preferences at odds with public opinion. This finding is primarily driven by the cost of gridlock. In the Constitutional Regime, when a divergent politician values policy gains over winning reelection, he causes gridlock to prevent the voter's favorite policy from taking effect. However, the nature of the information environment leads the voter to draw unfavorable inferences about, and replace, *both* politicians—even though gridlock only occurs in equilibrium when one politician is congruent. In short, to throw the bums out, the voter must also dismiss her ideological allies. In contrast, gridlock never occurs in equilibrium in the Unilateral Regime. As such, a divergent executive must decide whether to unilaterally enact his favorite policy—which reveals his type and leads to certain electoral loss—or enact the voter's favorite policy to win reelection. Thus, career-concerned executives are constrained by the same forces that put them in office in the first place—electoral politics.

2 A More Powerful Presidency?

Tensions between executive power and democratic accountability lie at the heart of the Declaration of Independence and the U.S. Constitution. When the Framers met in Philadelphia in 1787, they hoped to create a different kind of executive—one powerful enough to execute the law, but not so powerful as to be totally unaccountable. Finding the right balance was difficult. Alexander Hamilton advocated for a more powerful presidency, one whose "energy" would be tempered by his dependence on the people, while James Madison favored a stronger legislative branch. Ultimately, the Founders left Article II, which enumerates the powers of the executive branch, intentionally vague. Presidents have since exploited this ambiguity to gradually augment their powers with an arsenal of unilateral tools (Moe and Howell 1999).[6] Although Congress retains the statutory au-

[6]For a thorough examination of these tools see Cooper (2014).

thority to overrule these directives, collective action problems often prevent members from doing so (Howell 2003; Moe and Howell 1999).

If presidents are exceeding their Constitutional mandate, what is to be done? Some scholars say—"nothing." They argue the president ought to be given more power. To support these assertions, they rely on the assumption of "universalism," the idea that a president elected by a national constituency will pursue the public (rather than partisan or personal) good. For example, Kagan (2001) writes, "the President has a national constituency, he is likely to consider, in setting the direction of administrative policy on an ongoing basis, the preferences of the general public, rather than merely parochial interests" (2335). Armed with this assumption, she argues that the unitary nature of the president makes him both a more effective and accountable bureaucratic overseer than Congress. Similarly, Howell and Moe (2016) argues that the U.S. Constitution, designed for a small, rural nation, cannot produce solutions to the nation's increasingly complex challenges. Their idea to overcome Congressional gridlock and parochialism is in permanently delegating "fast track" authority to the president. By expanding an existing power in 1974 Trade Act, the president would be able to put legislation on the Congressional agenda for an up-or-down vote, which would allow for checks-and-balances without pork-barreling and filibustering.

But there is reason to question whether presidents are truly the public-minded actors they claim to be. Recent research suggests that presidents are elected by, and govern as, partisans (Kriner and Reeves 2015; Wood 2009). While presidential power may benefit the president's partisans, the opposition is denied symbolic and substantive representation (Pitkin 1967). Even Kagan (2001) acknowledges that "The desirability of such leadership depends on its content; energy is beneficial when placed in the service of meritorious policies, threatening when associated with the opposite" (2001, 2341). Ultimately, any proposal to reform the separation of powers ought to consider the possibility of a president motivated by factors beyond the public interest.

3 Separation of Powers and Signaling

Formal work on presidential power tends to focus on either institutional constraints or electoral signaling, but rarely marries these two important factors into a single model. The institutional framework extends the pivotal politics (Krehbiel 1998) setup by situating the president as a first mover in a spatial bargaining game (Howell 2003; Chiou and Rothenberg 2017). The president is given an exogenous amount of discretion which he uses to unilaterally propose a policy on the real line. This choice is then subject to change by a unitary legislature, or it may be struck down by the courts if the president exceeds his discretionary allocation. In these one-shot games, the president rationally anticipates moves of the other branches and does not overreach in equilibrium. However, he is still able to enact more personally preferable policy than were he simply a veto player. While these models characterize the institutional effects on policy outcomes, they do not include voters who may play a role in constraining the president's policy choices via electoral sanction (Reeves and Rogowski 2016). One model that tries to bridge this gap is Judd and Rothenberg (2019). They compare voter welfare between two versions of the pivotal politics setup—one where the president is given fast-track authority (per Howell and Moe (2016)) and one where policy is subject to supermajoritarian coalition building as in traditional pivotal politics models. The authors find that stronger separation of powers benefits the voter when he prefers investment returns (which are increasing in policy stability) over policy congruence (which is increasing in presidential power). In the model, however, the executive's probability of reelection is exogenous; the voter does not play an active role in disciplining or selecting her political agents.

A second class of unilateral action models simplifies the policymaking process to focus on the signaling dimension of presidential power. The motivating problem in these models is that when inter-branch bargaining breaks down, especially under divided government, voters may not know who is to blame (Levinson and Pildes 2006). However, if the president acts unilaterally, voters can use the decision and/or policy outcome to

learn something about his type by virtue of the fact that he was the sole decision-maker. For example, they may draw inferences about his policymaking skill (Judd 2017) or his commitment to a particular issue set (Kang 2020). Foreign leaders can also use the president's choice between a Senate-ratified treaty or executive agreement to infer his level of commitment to an international agreement (Martin 2005). Of these models, only (Judd 2017) directly considers voter welfare. He shows that high-skill executives "show off" unilaterally in equilibrium to win reelection, even when the exogenous default policy would generate higher welfare. In simplifying the policymaking process, these models focus squarely on the president's decisions. Congress is not generally an active player despite its formal and informal ability (Christenson and Kriner 2017) to constrain executive unilateralism.

Kang (N.d.) brings both institutional and signaling concerns together in a single model, analyzing how strong or weak separation of powers, along with electoral competition, can shape budgeting decisions. Depending on his policymaking competency and the strength of the legislature, the president may prefer to underfund a policy to deceive the voter about his own policy skill. Here, strong separation of powers ensures the executive cannot sent his own funding level, which improves voters' inferences and increases their welfare. Most similar to the present model, Stephenson and Nzelibe (2010) examines voter welfare under three different separation-of-power regimes—unilateral authority (where the president acts alone), checks and balances (where the president must secure Congressional approval), and opt-in checks (where the president may choose between acting alone or working with Congress). In the model, each branch may be captured by a hawkish faction with biased policy preferences, and voters devise an *ex-ante* electoral rule to constrain policymakers. The authors conclude that voter welfare is highest under opt-in checks because voters are able to leverage three degrees of freedom when apportioning credit or blame. Voters use these asymmetric rewards to discourage bad actions, although they never learn their agents' types or screen for unbiased agents.

Consistent with Stephenson and Nzelibe (2010), I find that a system with optional checks produces greater voter welfare than one in which the Constitutional policymaking process *must* be followed. However, the mechanism differs. Whereas the voter in Stephenson and Nzelibe (2010) uses a contracting approach to constrain captured politicians, voters in the present model use the agents' actions as well as policy outcomes to discipline bad agents and select congruent types (see Fearon 1999). This result is also related to Groseclose and McCarty (2001), in which Congress may propose a policy they know the president will veto to make him appear ideologically extreme. Here, the roles are reversed—it is the executive who chooses between policies and policymaking vehicles to reveal information about both himself and the legislature.

4 A Model of Separated Powers and Policymaking

This section describes the baseline model of policymaking between an executive and unitary legislature that will be analyzed in two alternative separation-of-powers regimes. In the Constitutional Regime, both politicians must agree on a policy proposal to alter the status quo; in the Unilateral Regime, the executive may still make policy with the legislature, as in the Constitutional Regime, or he may unilaterally make new policy on his own. In both settings, the legislature proposes a policy that the executive can either approve or veto. In the Unilateral Regime, the president can enact his own policy rather than veto if he chooses.

Both politicians vary in their policy preferences—some have interests congruent with the voter's while others have interests that are divergent. Because both politicians earn benefits from holding office, they can increase their payoffs if the voter believes they are congruent. After observing the policy outcome, a representative voter chooses whether to reelect or replace the executive and/or the legislator with a randomly drawn challenger from the same population. In the second period, the politican(s) propose a new policy,

payoffs are distributed, and the game ends. Although this two-period structure is standard in the political agency literature, the game form naturally maps back to the two-term American presidency. After identifying the actors' equilibrium strategies in both regimes, I compare policy outcomes and voter welfare.

4.1 The Policy Environment

Both regimes feature three players: the executive (E), a unitary legislator (L), and a representative voter (V). In each period $t \in \{1, 2\}$, each politician $i \in \{E, L\}$ selects a policy $x_i^t \in \{-1, 1\}$. The labels, -1 and 1, represent left and right policy solutions respectively, but should be thought of as different policy domains across periods. At the beginning of each period, a status quo policy, $x^q = 0$, is in place. To move policy away from this status quo, the politicians must propose (and depending on the regime, agree upon) a direction in which they will move policy. I refer to the retention of the status quo at the end of the period as *gridlock*. In the case that the executive works with the legislature (i.e. he forgoes unilateral action), the per-period policy outcome, x^t (no subscript) is the mean value of both politicians' individual policy choices, x_i^t (subscript i), on the real line:

$$x^t(x_E^t, x_L^t) = \frac{x_E^t + x_L^t}{2}$$

When both politicians choose the same policy, the outcome is simply that policy; when the politicians choose different policies, the period-t status quo, 0, is implemented instead. Admissible policy outcomes, then, are $x^t \in \{-1, 0, 1\}$. Without loss of generality, I assume the voter ("she") prefers the right policy alternative in each period, and to simplify the presentation of the model, she does not discount the future. The voter's per-period payoff is specified as:

$$u_V^t(x^t) = x^t$$

An important feature of the model is that the voter does not observe the politicians' individual policy selections (x_i^t), only the ultimate policy outcome (x^t) in each period.[7] In making this assumption, I appeal to the fact that a representative voter does not follow the back-and-forth between the executive and legislative branches (see e.g. Cameron 2012; Carpini and Keeter 1997; Bartels 1996). It is only when the policy debate ends and a final decision is reached that the voter learns whether or not policy has changed and what that change is.

4.2 Uncertainty About Politician Types

Both the executive and the legislature have preferences over policy conditional on their type, $\theta_i \in \{C, D\}$. A politician with type $\theta_i = C$ is *congruent*, that is, their preference over policy aligns with the voter's. A politician with type $\theta_i = D$ is *divergent*; their preference ranking over policy is opposite the voter's. At the beginning of the game, these types are drawn independently from different distributions and revealed to both politicians, but not the voter. However, the voter knows the distributions from which these types are drawn and holds a belief that both types are congruent more often than not. Formally, $\{\Pr(\theta_L = C) = \pi,\ \Pr(\theta_E = C) = \gamma\} > \frac{1}{2}$. Politicians receive per-period payoffs conditional on their type and the enacted policy. If a politician is congruent, her policy-specific payoff is x^t, while a divergent politician earns $-x^t$.

In addition to earning policy-specific benefits, politicians also receive a per-period office-holding benefit, $\beta_i \in (0, \bar{\beta})$, where $\bar{\beta} \equiv \frac{3+\pi}{2}$ for reasons that will become clear later. β_i is a random variable drawn independently for each politician from a uniform distribution when they enter office.[8] Note that this value does not change between periods if the politician remains in office. As with politician's preferences, voters do not know

[7] In the supplemental appendix, I relax this assumption and allow the voter to observe the individual actions with an exogenous probability τ. I show that the main results are not dependent on this assumption and are robust to reasonably large τ approaching 0.75.

[8] In the supplemental appendix, I show that the main results are robust to β_is drawn from any strictly increasing CDF.

$x_i^t \in \{-1, 1\}$	politician i's policy selection in period t
$x^t(x_L, x_E) \in \{-1, 0, 1\}$	policy outcome in period t
$\theta_i \in \{C, D\}$	politician i's type, congruent or divergent
$\pi \in (\frac{1}{2}, 1)$	prior probability the legislature is congruent
$\gamma \in (\frac{1}{2}, 1)$	prior probability executive is congruent
$\beta_i \in (0, \bar{\beta})$	politician i's office holding benefit
$\bar{\beta} = \frac{3+\pi}{2}$	office-holding benefit upper bound
$\alpha^t \in \{0, 1\}$	the executive's choice of legislation or unilateral action

Table 1: Notation

their politicians' realizations of β_i, only that they are drawn from a uniform distribution with open bounds $(0, \bar{\beta})$ The full, per-period payoff for congruent politicians for selecting policy x_t is given by:

$$u_i^t = (x^t; \theta_i = C, \beta_i) = x^t + \beta_i$$

A divergent politician's per-period policy payoff is given by:

$$u_i^t = (x^t; \theta_i = D, \beta_i) = -x^t + \beta_i$$

To simplify the presentation, politicians do not discount the future, and in the event that a politician leaves office, their second-period payoff is normalized to zero. Table 1 summarizes all relevant notation used throughout the paper (some of which will be introduced in the sections that follow).

4.3 Constitutional Sequence of Play, Solution Concept, and Equilibrium Refinement

The sequence of play in the Constitutional Regime between the executive, legislature, and voter proceeds as follows:

1. Nature draws two politicians with types (θ_i, β_i) from the population to serve as the executive and the legislature. These types are revealed to the politicians.

2. The legislature proposes a policy, x_L^1, which is revealed to the executive.

3. The executive makes his policy selection, x_E^1. If it is the same policy chosen by the legislature, that policy is enacted and $x^1 = x_E^1 = x_L^1$. If it is the opposite policy, the status quo, $x^q = x^1 = 0$ is retained. The voter observes x_1.

4. An election is held. The voter chooses to independently retain or replace each politician with a challenger drawn from the population. If challengers were installed, Nature draws their types.

5. The players repeat steps 2 and 3.

6. Players receive payoffs and the game ends.

In Section 6, I describe the Unilateral sequence of play, which follows the same basic framework with one deviation.

In both regimes, I solve for Perfect Bayesian equilibria. However, this solution concept does not completely pin down beliefs at terminal histories off the equilibrium path. As such, it permits a multiplicity of equilibria in which the voter holds beliefs about politicians' types that do not follow from what one might intuitively expect. For example, if the voter were to believe all politicians who enact policy $x^t = 1$ are divergent, with sufficient office-motivation, it would be possible to construct an equilibrium in which all politicians rationally pool on the voter's least favorite policy. Of course, the politician with the most to gain by deviating to $x^t = 1$ is the politician the voter would most want to reelect, rendering this equilibrium unsatisfying. In what follows, I focus on equilibria in which the voter forms beliefs by taking the politician's policy incentives into account were she to observe actions off the path of play (see e.g. Fox and Jordan 2011). I impose the following restrictions on the voter's off-path beliefs. First, if enacting $x^t = 1$ is off the path of play,

were the voter to observe that outcome, she would assign probability one to the belief that the executive is congruent. Similarly, if $x^t = -1$ is off the path of play, were the voter to observe that outcome, she would assign probability 0 to the belief that the executive is congruent. [9]

5 The Constitutional Regime

In the Constitutional Regime, the policymaking process follows a stylized version of that described in the Constitution. First, the legislature proposes a policy. Then, the executive ratifies the proposal (i.e. he selects $x_E^t = x_L^t$), which becomes law, or he rejects it in favor of the status quo (i.e. he selects $x_E^t = -x_L^t$). Recall, the voter does not observe the individual policy choices of each politician; she only see the ultimate outcome.

This informational asymmetry creates an agency problem. If the voter were to select policy herself, she would implement $x^t = 1$ in every period. However, both politicians have their own policy preferences which may not be congruent with the voter's. Because both politicians' types are drawn independently, four different type-combinations are possible: both congruent, congruent executive and divergent legislature, divergent executive and congruent legislature, and both divergent. As in many principle-agent models, career concerns bias policymaking towards the voter's preferences. Additionally, the separation-of-powers system insulates the policymaking process from divergent agents who would otherwise enact the voter's least favorite policy. However, requiring both politicians to agree on new policy may also prevent changes toward the voter's preferred policy when only one politician is congruent.

When the voter sees gridlock, she rationally concludes that one agent is more likely

[9] This refinement is in the spirit of the Universal Divinity (Banks and Sobel 1987), which rules out unnatural beliefs by asking the receiver to consider which types of senders could benefit most from the off-path message. Universal Divinity is not directly applicable to the current game in which two informed senders with private information engage in a sequential game before sending a subset of the information to an uninformed third party.

to be congruent. However, she also knows one agent is more likely to be divergent. The problem is that she does not know which one. As such, her posterior belief that either agent is congruent is lower than the prior that two new politicians will be congruent, and as such, she must replace them both. Gridlock results in welfare loss that unilateral action can offset, even with the risk of a divergent president enacting the voter's least favorite policy.

5.1 Analysis of the Constitutional Regime

I begin my formal analysis of the Constitutional Regime in the second period using backward induction. As there is no future election, all actors play the stage game Nash equilibrium. That is, they choose their type-preferred policy. Congruent politicians choose $x_i^2 = 1$ and divergent politicians will choose $x_i^2 = -1$. The voter can maximize her second-period payoff by reelecting congruent politicians and replacing divergent ones in the election stage.

At the time of the election, the voter does not always know her politicians' types with certainty. She can, however, make inferences and update her beliefs after observing the first-period policy outcome. I assume (and will later show) that there exists an equilibrium in which the voter reelects both politicians when policy $x^1 = 1$ is enacted and replaces both politicians otherwise.[10]

Definition 1. *(Constitutional Voting Rule) In the Constitutional Regime, the voter reelects both politicians when policy* $x^1 = 1$ *is enacted and replaces both politicians otherwise.*

This voting rule is trivial for congruent politicians as they maximize their policy payoff by selecting policy $x_i^1 = 1$. Divergent politicians, on the other hand, must choose between policy benefits today or reelection tomorrow. If a divergent politician resolves this tradeoff in favor of policy, I call them *policy motivated*, whereas a politician who resolves this

[10] If Bayes Rule would ever make the voter indifferent between reelecting or replacing a politician, I assume she chooses to reelect.

tradeoff in favor of reelection is called *office motivated*.

The intuition for each politician's first-period policy decision is as follows. If both politicians are congruent, they naturally agree on policy $x^1 = 1$. Doing so also ensures the voter's posterior beliefs about their respective types are weakly greater than the prior, and as such, they are both reelected. Now suppose one politician is congruent and the other is divergent. The congruent politician still maximizes their payoff by selecting $x_i^1 = 1$. The divergent politician faces a choice. He can either choose to pool with congruent types and pass $x_i^1 = 1$, win reelection, and force gridlock in the second period, or he can force gridlock in the first period to preserve the status quo at the cost of reelection. The divergent politician's choice depends on their realization of β_i. If $\beta_i < 1$, then the cost of passing his least preferred is higher than the benefit of holding office in the second period. If $\beta_i \geq 1$,[11] then reelection benefits offset first-period policy loss. Because β_i is a random variable drawn from a uniform distribution, the probability that $\beta_i < 1$ is given by:

$$\Pr(\beta_i < 1) = \frac{2}{3 + \pi}$$

Thus, $\frac{2}{3+\pi}$ represents the probability which which the divergent politician is policy motivated whereas $1 - \frac{2}{3+\pi}$ is the probability with which they are office motivated. This threshold does not depend on which actor is divergent, despite the sequential nature of the policymaking process.

When both actors are divergent, $\beta_i = 1$ is still the relevant threshold. In this type combination, however, the legislature's agenda-setting power defines the outcome. Because the legislature moves first, they effectively force the executive's hand. For example, if the legislature is office motivated, they would prefer to pool with congruent types and set first period policy to $x^1 = 1$. If the executive is also office motivated, then his choice is trivial: he would also prefer to set $x^1 = 1$. If the executive is policy motivated, given the

[11] When a politician is indifferent between two actions, I assume they default to choosing the voter's preferred policy.

		E	
		$\theta_E = C$	$\theta_E = D$
L	$\theta_L = C$	$x^1 = 1$	$x^1 \in \{0, 1\}$
	$\theta_L = D$	$x^1 \in \{0, 1\}$	$x^1 \in \{-1, 1\}$

Figure 1: First-period equilibrium policy outcomes across all possible type combinations in the Constitutional Regime

legislature's choice, he cannot enact $x^1 = 1$. Instead, he must choose between gridlock and loss today or reelection and his most preferred policy in the second period. He always resolves this tradeoff in favor of reelection. A similar logic holds for the case when the legislature is policy motivated and the executive is office motivated. The first-period policy when both actors are divergent is entirely dependent on the legislature's realization of β_L.

An intuitive way to think about the voter's information following the first period is to consider a 2×2 table, as in Figure 1, where each cell represents one of the four possible type combinations, $\{(\theta_E = C, \theta_L = C), (\theta_E = C, \theta_L = D) \ldots\}$, and so on. Within each cell, different policy outcomes are possible. When both politicians are congruent, the only outcome is the voter's preferred policy. When the politicians have different types, the divergent actor may either pool or force gridlock. When both actors are divergent, the legislature's agenda-setting power allows it to dictate policy, as the executive prefers either policy to gridlock. This table is also useful when considering what the voter learns from the policy outcome and how she updates following Bayes' Rule.

To show that these strategies constitute an equilibrium, the voter must follow through on the proposed reelection rule established in Definition 1. A rational voter who updates her beliefs following Bayes' Rule will only choose to retain an incumbent if her posterior belief about his congruence is weakly greater than her prior that his replacement will be congruent. First, from Table 1 it is clear that if the voter ever observes $x^1 = -1$,

both agents must be divergent, and she should replace them both. If the voter observes gridlock, then she knows one agent is divergent and one is congruent. Because she does not see her agents' individual policy choices, she cannot know which is which. Following Bayes' Rule, her belief that either agent is congruent is less than the prior that two new politicians will be congruent, so she replaces both. Finally, if she observes $x^1 = 1$, then her belief that both agents are congruent is weakly greater than the prior on replacements. Therefore, the voter will not deviate from the proposed voting rule given the strategies of her agents. Proposition 1 summarizes the actors' strategies in the Constitutional Regime.

Proposition 1. *(Constitutional Equilibrium) There exists an equilibrium in which the voter re-elects both politicians after observing $x_1 = 1$ and replaces both politicians otherwise. Both politicians choose their type-preferred policy in the second period, and in the first period:*

a. *If both politicians are congruent, they select policy $x_i^1 = 1$.*

b. *If $\theta_i = C$ and $\theta_j = D$, the congruent politician selects policy $x_i^1 = 1$. If $\beta_j \geq 1$, the divergent politician also selects $x_j^1 = 1$ and $x_j^1 = -1$ otherwise.*

c. *If both politicians are divergent and $\beta_L \geq 1$, both politicians select $x_i^1 = 1$. If $\beta_L < 1$, they both select $x_i^1 = -1$.*

Considering the strategies of the politicians established in Proposition 1, the voter's welfare in the Constitutional Regime is formally given by:

$$\begin{aligned} W_C \equiv & \gamma\pi \cdot 2 + \gamma(1-\pi)[\frac{2}{3+\pi}(\gamma+\pi-1) + (1-\frac{2}{3+\pi})] + \\ & (1-\gamma)\pi[\frac{2}{3+\pi}(\gamma+\pi-1) + (1-\frac{2}{3+\pi})] + (1-\gamma)(1-\pi)[\frac{2}{3+\pi}(\gamma+\pi-2)] \end{aligned} \tag{1}$$

The four terms in Equation 1 represent expected gains and losses the voter recieves from each type combination. For example, the first term $\gamma\pi \cdot 2$ indicates that the voter would get a payoff of 2 when both politicians are congruent (a payoff of one in the first period,

reelection, and a payoff of 1 in the second period). The second term, $\gamma(1-\pi)[\frac{2}{3+\pi}(\gamma+\pi-1)+(1-\frac{2}{3+\pi})]$ is the expected payoff of having a congruent executive and divergent legislature. With probability $(1-\frac{2}{3+\pi})$, the legislature is sufficiently office-motivated to choose $x_L^1=1$ in the first period and $x_L^2=0$ in the second period, for a total welfare gain of 1. With probability $\frac{2}{3+\pi}$, the legislature is not office motivated and gridlock occurs in the first period, which results in a payoff of 0. The voter replaces both politicians, and in the second period, her expected utility from a random draw is $\gamma+\pi-1$. Payoffs for the second two terms are similarly constructed to build the full Constitutional welfare equation.

Overall, the Constitutional Regime leads to mixed outcomes from the voter's perspective. On the one hand, she may see her most preferred policy outcome across all type combinations of the politicians. Additionally, her least preferred outcome is only enacted when both politicians are divergent and the legislature is policy motivated, which only occurs with probability $(1-\gamma)(1-\pi)\frac{2}{3+\pi} < \frac{1}{7}$. However, gridlock is costly. When the divergent politician pools with the congruent politician, the voter's total welfare is 1, whereas gridlock results in welfare loss as $\gamma+\pi-1 \leq 1$ due to the fact that she must take the random draw. In the next section, I show how unilateral action may increase voter welfare by allowing a congruent executive to enact the voter's preferred policy and signal politician types through gridlock.

6 The Unilateral Regime

I turn my attention to an alternative separation-of-powers regime in which the executive is given substantial unilateral authority to make policy without legislative consent. However, the use of these powers is costly. As such, the executive may forego unilateral action and work with the legislature to pass mutually agreeable policy as in the Constitutional Regime. This new decision, as well as the choice over policy, reveals information

to the voter about her politicians' types, which she can leverage in the electoral phase to more finely tune her selection. Although unilateral power may allow divergent executives to go unchecked, in Section 7, I show when the benefits outweigh the risk of bad unilateral policy as compared to the outcomes in the Constitutional Regime.

6.1 Sequence of the Unilateral Regime

The sequence of the Unilateral game is similar to the Constitutional game with one difference: after the legislature selects its policy for the period, the executive chooses his policy as well as a means of enacting that policy—legislatively ($\alpha^t = 0$) as in the Constitutional game, or unilaterally ($\alpha^t = 1$). If the executive chooses legislation, then the ultimate policy, x^t, is the average value of both policy inputs on the real line and the voter does not observe individual selections, as before. If, on the other hand, the executive chooses unilateral action, then his choice is implemented regardless of the legislature's preference. That is, $x^t = x_E^t$. Given the executive-branch resources necessary to create an executive order (Rudalevige 2012) as well as the ease with which future executives may overturn them (Thrower 2017), the executive pays a private cost of $\frac{1}{2}$ if he chooses $\alpha^1 = 1$.[12] The president's per-period utility function in the unilateral regime is given by:

$$u_E^t(x^t, \alpha^t; \theta_E, \beta_E) = \begin{cases} x^t - \frac{1}{2}\alpha^t + \beta_E & \text{if } \theta_E = C \\ -x^t - \frac{1}{2}\alpha^t + \beta_E & \text{if } \theta_E = D \end{cases}$$

Consistent with the legislative version of the game, the voter does not observe either politician's individual policy selection. However, the voter does observe, α^t—the way policy is implemented. If the executive chooses unilateral action, the voter can easily infer his policy choice and make inferences about his and the legislature's types. Thus, the

[12] In addition to capturing some of the real-world costs inherent in unilateral action, this cost is large enough to ensure the executive does not act unilaterally when he is indifferent between either policymaking vehicle but not so large as to overwhelm the policy benefit he can reap from using it. I show in the supplemental appendix that for any cost less than one, the main results are substantively similar.

voter never observes the politicians' individual choices, but she does see the outcomes of those choices and learns something about how those choices were made. Additionally, to ensure that the voter has an incentive to select a congruent legislature, I assume she bears a cost of unilateral action, ε, which is approaching 0 in the limit (Reeves and Rogowski 2016, 2018).[13] Both the voter and legislature retain the same utility functions from the Constitutional Regime.

6.2 Analysis of the Unilateral Regime

Again, we begin the analysis in the second period. As in the Constitutional Regime, neither politician has an incentive to signal congruence, so each will choose their most preferred policy. If both politicians share a type, then their choice is to pass that type's preferred policy, and the executive will do so legislatively. As unilateral action is costly, there is no incentive for the executive to choose $a^2 = 1$ when the legislature shares his type. If, on the other hand, politicians do not share types, the president will pass his type-preferred policy unilaterally. Although unilateral action comes with a cost, that cost is never so large as to overwhelm the policy benefit.

Lemma 1. *In the second period, if the executive and legislature do not share types, then the executive passes his preferred policy unilaterally. Otherwise, the executive and legislature pass the policy they both prefer through legislation.*

In the second period, the voter is weakly better off electing two congruent politicians, however, the choice of the executive takes on greater importance. Regardless of the legislature's type, the executive always implements his preferred policy. If the executive is congruent and the legislature is divergent, unilateral action breaks gridlock that would occur in the Constitutional Regime and increases voter welfare. If, however, types are reversed, the executive will have free rein to implement the voter's least favorite policy

[13] Obviously, if the voter prefers legislation so much so that she loses utility from unilateral action, when that private cost is large enough, the Unilateral Regime may no longer be preferable.

unilaterally, overcoming what would have been beneficial gridlock in the Constitutional Regime.

But unilateral action does more than break gridlock. The executive's choice over policymaking vehicles adds an additional dimension to the voter's informational environment. In the Constitutional Regime, the voter's equilibrium strategy is to replace both politicians in gridlock, even though she knows for certain that one of them is congruent. As I will show, the unilateral option—even if the executive does not use it—eliminates gridlock from the equilibrium outcome entirely, allowing the voter to make more sophisticated voting decisions. Although she does not observe individual policy selections, she can make several inferences conditional on observing (or not observing) unilateral action. For example, were the voter to see the executive unilaterally implement $x^1 = -1$, her least favorite policy, she can conclude with certainty that the president is divergent. A congruent president could never benefit from making this choice. Were she to see the executive enact $x^1 = 1$ unilaterally, she can be certain that the executive is congruent *and* the legislature is divergent. After all, if the legislature were congruent, it would no longer benefit the executive to act unilaterally (and divergent presidents never unilaterally enact the congruent policy as $\beta_i < (3 + \pi)/2$).

Given her richer informational environment, the voter's new electoral rule is as follows:

Definition 2. *(Unilateral Voting Rule) In the Unilateral Regime, the voter reelects both politicians when policy $x^1 = 1$ is enacted legislatively. She replaces both politicians when she sees any other legislative outcome. When she observes $x^1 = 1$ unilaterally, she reelects the president and replaces the legislature. When she observes $x^1 = -1$ unilaterally, she replaces the executive and retains the legislature.*

This electoral rule increases the voter's welfare over the Constitutional Regime by allowing the executive to break gridlock and reveal information about both politicians' types in the first period.

As before, the choice made by two congruent politicians is trivial—they maximize their own payoffs and secure reelection by enacting $x^1 = 1$ legislatively. Across all other type combinations, unilateral action alters the strategic calculus in ways that may harm or help the voter.

Suppose that the executive is congruent and the legislature is divergent. Here, unilateral action has the highest potential to help the voter in terms of policy and selection. In the Constitutional Regime, recall that the outcome depends on the value of β_L. When $\beta_L < 1$, gridlock occurs, the voter replaces both politicians, and she has probability $\pi\gamma$ of a positive payoff in the second period. If $\beta_L \geq 1$, the voter gets her preferred policy, reelects both politicians, and is guaranteed gridlock in the second period. In the Unilateral Regime, however, the voter *always* gets her most preferred policy in both periods. If $\beta_L \geq 1$, the legislature is office-motivated and proposes $x_L^1 = 1$. The executive accepts this proposal, both politicians are reelected, and by Lemma 1, the executive unilaterally enacts $x^2 = 1$ in the second period. If, however, $\beta_L < 1$, the legislature proposes $x_L^1 = -1$, but the executive is able to leverage unilateral action to pass $x^1 = 1$ *and* signal to the voter that he is congruent and the legislature is divergent. The voter reelects the executive, replaces the legislature, and gets her preferred policy in period two. Consistent with arguments of executive universalism (e.g. Howell and Moe 2016; Kagan 2001), when the executive and voter are ideologically aligned, unilateral action can overcome gridlock and increase welfare. But what about when the executive is divergent?

When the executive is divergent and the legislature is congruent, the voter has the most to lose from Unilateral action. In the Constitutional Regime, the choice of $x_L^1 = 1$ would protect the voter from the executive's divergent preferences. In the Unilateral setting, however, the executive has the option to bypass this check. The problem, from his perspective, is that in circumventing the legislature he reveals his divergence and will be replaced. When $\beta_E \geq 1$, the executive is office-motivated and pools with congruent types to pass the voter's preferred policy legislatively. In the second-period, however,

the executive has free rein to unilaterally implement the voter's least favorite policy. If $\beta_E < 1$, the executive is policy motivated and he unilaterally enacts $x^1 = -1$ in the first period. Consistent with Bayes' Rule, the voter replaces the executive in the election but retains the legislature.[14]

Finally, suppose both politicians are divergent. Both the executive and legislature would like to enact policy $x^1 = -1$, but electoral considerations may constrain them from acting in their short-term interest. In the Constitutional Regime, the legislature's agenda-setting power gave it complete control over policy selection, regardless of the president's electoral preferences. With the introduction of unilateral action, the legislature's agenda power is weaker. In the case that the legislature is office-motivated and presents the executive with $x_1^L = 1$, the executive can choose between passing $x_1^E = 1$ or unilaterally enacting $x_1^E = -1$. The point at which he is indifferent between these two choices is $\beta_E = \frac{1}{2}$. When $\beta_E \geq \frac{1}{2}$, he chooses the congruent policy. Otherwise, he chooses the divergent policy unilaterally. The probability with which $\beta_E < \frac{1}{2}$ is defined as:

$$\Pr\left(\beta_i < \frac{1}{2}\right) = \frac{1}{3+\pi}$$

which is trivially less than the probability $\beta_i < 1$. If the legislature presents the executive with $x_1^L = -1$, he chooses $x_1^E = -1$ legislatively. In making a prospective decision, the legislature must first consider the executive's choice when presented with the congruent policy. If the executive would also choose the congruent policy, then the legislature is indifferent when $\beta_L = 1$. However, if the executive is so policy motivated that he would unilaterally enact the divergent policy, then the legislature would choose the congruent

[14] Notice, though, what happens were the legislature to make the counterintuitive choice of $x_L^1 = -1$. For moderate values of β_E, the executive simply passes $x_E^1 = -1$ legislatively—a bad outcome for the congruent legislature. However, if the executive is very office motivated, i.e. $\beta_E > \frac{3+\pi}{2}$, he chooses to pass the congruent policy unilaterally. As such, I define the upper limit on as $\beta_i < \frac{3+\pi}{2} \equiv \bar{\beta}$ to focus on cases where unilateral action is maximally informative. Were $\bar{\beta}$ set to some arbitrarily larger value, the voter would adopt a mixed strategy, reelecting the executive with probability $p(\pi)$ and replacing him with probability $1 - p(\pi)$ after observing unilateral action enacting $x^1 = 1$. I leave this investigation to future work.

		E	
		$\theta_E = C$	$\theta_E = D$
L	$\theta_L = C$	$x^1 = 1, \alpha^1 = 0$	$x^1 = 1, \alpha^1 \in \{0, 1\}$
	$\theta_L = D$	$x^1 = 1, \alpha^1 = 0$ or $x^1 = -1, \alpha^1 = 1$	$x^1 \in \{0, 1\}, \alpha^1 \in \{0, 1\}$

Figure 2: First-period equilibrium policy outcomes across all possible type combinations in the Unilateral Regime

policy when $\beta_L > 2\gamma - 1$ and the divergent policy otherwise. Because the legislature will be reelected if the executive acts unilaterally, the legislature can take advantage of the executive to get its preferred policy *and* remain in office. This cut point occurs at:

$$\Pr(\beta_i < 2\gamma - 1) = \frac{4\gamma - 2}{3 + \pi}$$

Notice that $4\gamma - 2 < 2$, which implies that $\Pr(\beta_i < 2\gamma - 1) < \Pr(\beta_i < 1)$. Thus, both of these new thresholds are more easily satisfied than $\beta_i = 1$. The implication is that two divergent politicians in the unilateral regime are *more likely* to enact the voter's preferred policy in the first period than in the Constitutional Regime.

Again, I outline first period outcomes by type combination in Figure 2. When both politicians are congruent, the voter always gets her most preferred outcome as in the Constitutional Regime. Unilateral action strictly increases her welfare when the president is congruent the legislature is divergent—whether legislatively or unilaterally, she gets $x^1 = 1$. When the executive is divergent, the voter's expected payoff is weakly less than in the Constitutional Regime. Where the legislature would have blocked $x^1 = -1$, the executive can now impose it unilaterally. Finally, when both politicians are divergent, the potential outcomes (but not the paths to, or probabilities of, those outcomes) are unchanged.

To constitute a Perfect Bayesian equilibrium, the voting rule proposed in Definition

2 must be sequentially rational. Given that policy $x^1 = 1$ may always be enacted legislatively, the voter's belief that both politicians are congruent after observing $x^1 = 1$ is weakly greater than her priors. If she sees $x^1 = -1$ legislatively, she knows with certainty both politicians are divergent. Turning to unilateral action, only a congruent executive enacts $x^1 = 1$ unilaterally, and he does so only when the legislature is divergent, giving the voter perfect information about the politicians' types. Only a divergent executive enacts $x^1 = -1$ unilaterally, however, he may do so when the legislature is either congruent or divergent. Following Bayes' Rule, the voter updates in the legislature's favor, replacing the executive and retaining the legislature. Finally, gridlock is never an equilibrium outcome. Consistent with the refinement criteria established previously, were the voter to see gridlock, she would believe at least one agent were divergent. As in the Constitutional Regime, she would reduce her beliefs about either agent's congruence.[15] Thus, the voting rule is sequentially rational. Proposition 2 summarizes the actors' strategies in the Unilateral Regime.

Proposition 2. *(Unilateral Equilibrium) There exists an equilibrium in which the voter reelects both politicians after observing $x^1 = 1, a^1 = 0$ and replaces both politicians otherwise when $a^1 = 0$. She retains the executive and replaces the legislature when $x^1 = 1, a^1 = 1$ and replaces the executive and retains the legislature when $x^1 = -1, a^1 = 1$. Both politicians choose their type-preferred policy in the second period, and in the first period:*

a. If both politicians are congruent, they select policy $x_i^1 = 1$ and the executive selects $a^1 = 0$.

b. If $\theta_E = C$ and $\theta_L = D$ and:

- *$\beta_L \geq 1$, the legislature selects $x_L^1 = 1$ and the executive selects $x_E^1 = 1, a^1 = 0$.*
- *$\beta_L < 1$, the legislature selects $x_L^1 = -1$ and the executive selects $x_E^1 = 1, a^1 = 1$.*

c. If $\theta_E = D$ and $\theta_L = C$ and:

[15] I discuss this refinement assumption further in the supplemental appendix

- $\beta_E \geq 1$, *the legislature selects* $x_L^1 = 1$ *and the executive selects* $x_E^1 = 1, \alpha^1 = 0$.
- $\beta_E < 1$, *the legislature selects* $x_L^1 = 1$ *and the executive selects* $x_E^1 = -1, \alpha^1 = 1$.

d. If both politicians are divergent and:

- $\beta_E \geq \frac{1}{2}$ *and* $\beta_L \geq 1$, *both politicians select* $x_i^1 = 1$ *and the executive selects* $\alpha^1 = 0$.
- $\beta_E \geq \frac{1}{2}$ *and* $\beta_L < 1$, *both politicians select* $x_i^1 = -1$ *and the executive selects* $\alpha^1 = 0$.
- $\beta_E < \frac{1}{2}$ *and* $\beta_L \geq 2\gamma - 1$, *the legislature selects* $x_L^1 = 1$ *and the executive selects* $x_E^1 = -1, \alpha^1 = 1$.
- $\beta_E < \frac{1}{2}$ *and* $\beta_L < 2\gamma - 1$, *both politicians select* $x_i^1 = -1$ *and the executive selects* $\alpha^1 = 0$.

Considering the strategies of the politicians established in Proposition 1, the voter's welfare in the Unilateral Regime is formally given by:

$$\begin{aligned} W_U \equiv & \gamma\pi \cdot 2 + \gamma(1-\pi) \cdot 2 + (1-\gamma)\pi \left[\frac{2}{3+\pi}(2\gamma - 2)\right] + \\ & (1-\gamma)(1-\pi)\left[\frac{2}{3+\pi}\left(1 - \frac{1}{3+\pi}\right)(2\gamma - 2) + \right. \\ & \left. \frac{1}{3+\pi}\left[\frac{4\gamma - 2}{3+\pi}(2\gamma - 2) + \left(1 - \frac{4\gamma - 2}{3+\pi}\right)(2\gamma - 2)\right]\right] \end{aligned} \tag{2}$$

Equation 2 differs from Equation 1 in a few key ways. First, the second term $\gamma(1-\pi) \cdot 2$ is a strict improvement over the Constitutional Regime. The voter always gets her favorite policy in both periods when the executive is congruent and the legislature is divergent. However, the third term $(1-\gamma)\pi[\frac{2}{3+\pi}(2\gamma - 2)]$ is worse for the voter. When the executive is divergent and the legislature is congruent, if the executive is sufficiently office motivated (with $\Pr(1 - \frac{2}{3+\pi})$) he pools on $x_E^1 = 1$ but unilaterally enacts $x^2 = -1$ in the second period, resulting in a total payoff of 0 for the voter. If the divergent executive is office motivated, he unilaterally enacts $x^1 = -1$. The result is a first period payoff of -1 for the voter. He is replaced, and $2\gamma - 1$ represents the voter's expected welfare from

a randomly drawn executive in the second period. The fourth term, expected welfare when both politicians are divergent, is constructed similarly, except it takes the unilateral threshold, $\beta_E < \frac{1}{2}$ into account, noting that when both politicians are sufficiently office motivated, the voter's net gain over both periods is 0 and otherwise is $2\gamma - 2$. Ultimately, the legislator's lower bound does not play a role in the voter's expected welfare, only the path the agents take to get there.

From the voter's perspective, the Unilateral Regime leads to gains and losses. When the executive is congruent, the voter always gets her preferred policy. When the executive is divergent, the legislature loses some of its power to block the executive's actions. However, the introduction of unilateral action does not guarantee that the divergent executive will always enact bad policy. Rather, unilateral action allows the voter to learn more about her agents' types, which constrains the executive.

7 Voter Welfare Under Alternative Regimes

It is not surprising that voters stand to gain from unilateral action under the assumption that executive shares the voter's preferences. As James Madison writes in *The Federalist No. 51*, "If angels were to govern men, neither external nor internal controls on government would be necessary" (Hamilton, Jay and Madison 2001, 269). But voters do not necessarily know an executive's type *ex ante*, which necessitated the separation of powers in the first place. The Constitution places limits on executive power precisely to mitigate the malign impulses of a divergent actor. The relevant question is in which institutional framework are voters better off? Would they prefer a system as outlined in the Constitution, or do they fare better with expansive executive powers—even under less generous assumptions of executive motivation?

In the Constitutional setting, the modal outcome is gridlock, which occurs with probability $\gamma + \pi - 2\pi\gamma > 1/2$. Beyond reducing the voter's potential policy payoff, gridlock

also leads to the voter draw unfavorable inferences about both agents despite the fact that gridlock only occurs when one agent is congruent. The voter must replace both agents, which leads to lower welfare than when divergent agents choose to pool with congruent types in the first period. Unilateral action sidesteps this issue by allowing the president to "speak" directly to the voters. By acting unilaterally, the executive reveals information about his own and the legislature's type. In fact, gridlock never occurs in equilibrium in the unilateral regime. However, the voter is not strictly better off as unilateral action allows divergent executives to enact $x_E^t = -1$ even when legislature is congruent.

The key question is whether the gains from information and congruent unilateral action offset the losses from divergent unilateral action, above and beyond the expected utility of the Constitutional Regime. To determine the answer to this question, I set $W_U - W_C \equiv \Delta(\pi, \gamma)$, that is I subtract Equation 1 from 2. When $\Delta(\pi, \gamma) > 0$, the Unilateral Regime provides higher welfare. When $\Delta(\pi, \gamma) < 0$, the Constitutional Regime provides higher welfare. As one might intuitively expect, as the executive is more likely to be congruent (γ increases holding π constant) voter welfare increases under the Unilateral Regime. If the legislature is more likely to be congruent, increasing π while holding γ constant, welfare under the Unilateral Regime will decrease.

Proposition 3. *(Welfare Comparison) When $\Delta(\gamma, \pi) > 0$, the voter strictly prefers the Unilateral Regime. Furthermore, $\Delta(\gamma, \pi)$ is increasing (making the Unilateral Regime more preferable) in γ and decreasing (making the Unilateral Regime less preferable) in π.*

To investigate this relationship graphically, in Figure 3, I plot a different but related function, $\tilde{\gamma}(\pi)$, which is derived from setting $W_C = W_U$ and solving for γ on the left-hand side. The x-axis is π, the prior on legislative congruence, and the y-axis is γ, the prior on executive congruence. I also plot the 45-degree line ($\gamma = \pi$), which represents a case in which preferences for checks and balances are driven entirely by which agent is more likely to be congruent.

Here, it is interesting to note that $\tilde{\gamma}(\pi)$ does not fall squarely along the 45-degree line.

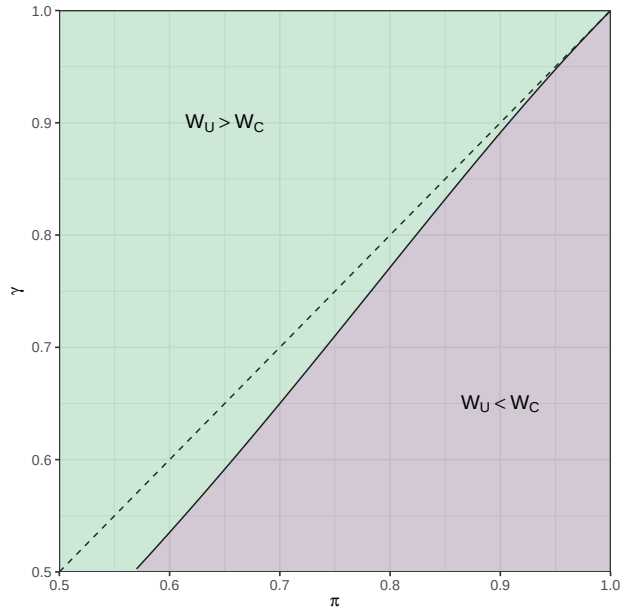

Figure 3: A comparison of voter welfare between the Constitutional Regime and Unilateral Regime. The x-axis tracks π, the prior on legislature congruence, while the y-axis plots γ, the prior on executive congruence. The solid line tracks $\tilde{\gamma}(\pi)$, the threshold at which the voter is indifferent between either regime type. The area above (below) the curve indicates when the voter would prefer the Unilateral (Constitutional) Regime. The dotted line is the 45-degree line, which represents a benchmark case where preferences over separation of powers follow directly from the priors on congruence. As $\tilde{\gamma}(\pi)$ is always weakly below the 45-degree line, I conclude that the Unilateral Regime provides higher voter welfare in expectation.

It is not simply the prior probability the executive will be congruent relative to the legislature that determines whether the voter would prefer a stronger or weaker executive. Rather, there are a range of π values that exceed γ for which the voter would still prefer the unilateral regime, depicted as a wedge area in Figure 3 between the dashed and solid lines. At the extreme, when $\pi = 0.6$ and $\gamma = 0.5$, voter welfare is strictly greater in the unilateral regime. This wedge area is decreasing as both agents are more likely to be congruent, but persists throughout. These less intuitive gains are a result of both the higher policy payoff in the congruent executive/divergent legislature condition as well as a richer information environment from unilateral action.

8 Robustness and Model Extensions

In the supplemental appendix, I present three extensions of the baseline model. First, I relax the assumption that the voter does not observe the politician's individual policy selections. Rather, the voter observes both the ultimate policy outcome, x^t, as well as each politician's choice in the policymaking game, x_L^t and x_E^t, with some fixed positive probability τ. To summarize the findings, as the probability the voter observes each politician's individual action increases, the Constitutional Regime becomes increasingly preferable. While the strategies and outcomes in the Unilateral Regime are essentially unchanged from the baseline model, the higher probability of transparency allows the voter to better replace divergent politicians in the Constitutional Regime given gridlock, at the expense of allowing deceptive behavior by the executive when both are divergent. However, the former effects dominate the latter, leading to increasing gains from transparency in the Constitutional Regime. I note that the effects of transparency do not significantly alter the conclusions of the baseline model until the probability of revelation gets quite high, above 0.7, indicating that the assumption about transparency in the baseline model is not driving the main results.

In a second extension, I relax the assumption that the voter's policy gains/losses are symmetric around the origin. In the baseline model, the voter nets a payoff of 1 for her favorite policy and -1 for her least favorite policy, but in this extension, the voter's loss from her least favorite policy is allowed to vary on the interval $(c, 1)$. This varying cost captures situations in which the status quo is so bad that any action is better than stasis as well as those in which the "bad" policy may cause severe loss. When $c \in (0, 1)$, even the "bad" policy is preferable to the status quo, and the unilateral regime is always preferable. When $c \in (-1, 0)$, the status quo is still preferable to $x^1 = -1$, however, the loss from the divergent policy is less than in the baseline model, meaning that while the Unilateral Regime is not always preferable, $\tilde{\gamma}(\pi)$ decreases as compared to the baseline, making the Unilateral Regime more preferable. However, when $c < -1$, the conditions in which the

voter prefers the Unilateral Regime shrink. In fact, when $c < -2$, the conclusions of the baseline model begin to break down—even when γ is slightly larger than π, the voter prefers the Constitutional Regime. However, for extreme costs, there are still regions of the parameter space, those in which γ is large π is small, for which the voter would prefer the Unilateral Regime. As voters regularly approve of the president at higher rates than Congress, we may currently find ourselves in such a situation.

In the final extension, I relax two additional assumptions. First, that β_i is drawn from a uniform distribution and second that the cost of unilateral action is equal to $1/2$. Instead, I allow β_i to be drawn from any strictly increasing CDF and allow the cost of unilateral action, κ, to range on the interval between $(0, 1)$. The substantive results from both changes are minimal, however, the interpretation is more nuanced. Although $\tilde{\gamma}(\pi)$ always falls below the 45-degree line (indicating that the Unilateral Regime is the preferable one), the size of the wedge area is highly dependent on the probability that $\beta_i > 1$. As it becomes more likely that β_i will be less than 1, the Unilateral Regime becomes increasingly preferable. The logic behind this comparative static is that as it becomes more likely that the divergent politician is policy-motivated (and thus will cause gridlock or enact the voter's least preferred policy) the more welfare-enhancing unilateral action becomes. Although the risk of a divergent executive unilaterally enacting the voter's least favorite policy increases, that risk is offset by the gains from a congruent executive unilaterally enacting her favorite policy.

9 Discussion

Americans have always been skeptical of executive power, yet many also see a role for the president in tackling the nation's increasingly complex challenges. Recent increases in polarization, divided government, and Congressional gridlock have tempered concerns and led to proposals that would expand the president's policymaking authority (Howell

and Moe 2016; Kagan 2001). However, these proposals often begin from a presumption of presidential "universalism"—that a president, elected by a national constituency, will act in the national interest. Recent research suggests this assumption may not be borne out in word (Wood 2009) or deed (Kriner and Reeves 2015), which raises questions about the welfare effects of expansive executive power.

In this model, I integrate two strands of the formal literature about executive unilateralism—separation of powers and electoral signaling—while also allowing the executive to have congruent or divergent policy preferences. I then compare political behavior between the executive and the legislature as well as accountability and voter welfare across two regimes. In the Constitutional Regime, the executive must work with the legislature to pass policy, while in the Unilateral Regime, he is able to choose between unilateral and legislative action. When the executive must work with Congress, gridlock is the modal outcome, which leads not only to policy loss but informational loss as well. In gridlock, the voter does not learn which of her agents is divergent, and thus, rationally dismisses them both in the electoral stage. Endowed with unilateral powers, the congruent executive is able to circumvent gridlock and reveal type-dependent information both about himself and the legislature. Although presidents may be both divergent and policy motivated—unilaterally enacting the voter's least favorite policy—the voter is often able to use electoral pressure to hold divergent presidents accountable. Divergent unilateral action reveals the executive's type and leads to removal. As one might intuitively expect, when one politician is highly likely to be congruent and the other is highly likely to be divergent, the voter fares better in the regime that delegates more power to the more congruent agent. However, when priors on congruence are not too different, even when the legislature is more likely to be congruent, welfare is higher in the Unilateral Regime. The gains the voter can expect from a congruent executive circumventing a divergent legislature outweigh the expected losses when the executive is divergent as well as the welfare losses from gridlock under the Constitutional Regime.

Formal models necessarily present stylized versions of the policymaking process. One key assumption of the model is that the executive and legislature know each other's types with certainty, which may not hold in the real world. Although some uncertainty would likely preserve the main result, if the executive is unsure of the legislature's type, then unilateral action is not always a clear signal. A second simplifying assumption is that the cost of unilateral action is always lower than the benefit the executive can obtain by acting unilaterally. In some ways, this limits the extent to which the information gained from unilateral action can benefit the voter. In the case that unilateral action is not always possible in the second period (for example, if the cost is a random variable drawn in each period), then the voter's selection decision about the legislature would take on more weight, which would likely increase the value of signaling. Finally, I assume strong presidential powers under the Unilateral Regime but do not consider the possibility of democratic backsliding or authoritarianism. If the executive is able to use his increased power to circumvent or cancel future elections, then the conclusions about accountability would no longer be relevant.

If we assume a more powerful executive upholds democratic norms, then an increase in executive power increases voter welfare in expectation, especially when Congress is unlikely to be congruent and/or when the potential for gridlock is high. These gains come both from policy outcomes and gains from signaling. Unilateral action allows the president to reveal politician types, which cannot be communicated through gridlock. While divergent presidents do leverage unilateral action to implement "bad" policies in equilibrium, they are somewhat constrained by their electoral ambitions. If members of Congress continue to focus on "message politics" at the expense of pursuing much needed reform (Lee 2016), expanding executive "energy"—beyond the current fast track proposals—has the potential to improve voter welfare without an overwhelming risk to "safety in the republican sense."

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A Proofs of the Baseline Model

A.1 Proofs for the Constitutional Regime

Proposition 1. *(Constitutional Equilibrium) There exists an equilibrium in which the voter reelects both politicians after observing $x_1 = 1$ and replaces both politicians otherwise. Both politicians choose their type-preferred policy in the second period, and in the first period:*

a. If both politicians are congruent, they select policy $x_i^1 = 1$.

b. If $\theta_i = C$ and $\theta_j = D$, the congruent politician selects policy $x_i^1 = 1$. If $\beta_j \geq 1$, the divergent politician also selects $x_j^1 = 1$ and $x_j^1 = -1$ otherwise.

c. If both politicians are divergent and $\beta_L \geq 1$, both politicians select $x_i^1 = 1$ and $x_i^1 = -1$ otherwise.

Proof of Proposition 1. I solve the game by backward induction.

In the second period, there is no future election. As such, both politicians have no incentive to signal and will select their most preferred policy. Congruent politicians will select $x_i^2 = 1$ and divergent politicians will select $x_i^2 = -1$. If both politicians are congruent, the policy outcome will be $x^2 = 1$. If both politicians are divergent, the policy outcome will be $x^2 = -1$. If the politicians have different types, the policy outcome will be gridlock ($x^2 = 0$). Given these outcomes, the voter's incentive is to maximize her probability of selecting congruent politicians after the first period. To do so, she employs a voting rule to reelect both politicians if $x^1 = 1$ and replace both politicians otherwise.

Conditional on the voting rule, politicians in the first period will maximize their utility given their type. A reduced version of the game tree is presented in Figure A1 at the end of this section. The tree presents both politicians' strategies in the first period as well as the sum of first and second period payoffs following the electoral decision. The full derivation of the payoffs shown at each terminal node—as well as all possible type combinations, actions, policy outcomes, and electoral decisions—are presented in Table

A1 at the end of this section. To reduce notation, in the text that follows, a utility function $u_i(x_i^1 = 1, x_i^2 = 1; \beta_i, x_j^1 = 1, x_j^2 = 1)$ will be abbreviated as $u_i(1, 1; \beta_i, 1, 1)$.

In the first period, If both politicians are congruent enacting policy $x^t = 1$ is strictly dominant as both politicians signal that they are of the preferred type and achieve their highest policy payoff.

If the president is congruent and the legislature is divergent, then the executive always selects $x_E^1 = 1$. If the legislature selects $x_L^1 = 1$, then $x^1 = 1$ is enacted, both politicians are reelected and in the second period, the politicians select the policy that matches their type, which results in gridlock and a payoff of 0. The legislature's payoff is:

$$u_L(1, -1; \beta_L, 1, 1) = 2\beta_L - 1$$

If the legislature selects $x_L^1 = -1$ instead, then gridlock results and both politicians are replaced. The legislature's payoff is:

$$u_L(-1; \beta_L, 1) = \beta_L$$

The legislature would prefer to select $x_L^1 = 1$ when:

$$u_L(1, -1; \beta_L, 1, 1) \geq u_L(-1; \beta_L, 1)$$
$$2\beta_L - 1 \geq \beta_L$$
$$\beta_L \geq 1$$

Recall from the main text that politicians' office-holding benefits are drawn from a uniform distribution with support on the open interval, $\beta_i \sim \mathcal{U}(0, \frac{3+\pi}{2})$. Thus, the probability that a politician's office-holding benefit will be less than 1 is:

$$\Pr(\beta_i < 1) = \frac{1}{\frac{3+\pi}{2}} = \frac{2}{3+\pi}$$

If the president is divergent and the legislature is congruent, the legislature always selects $x_L^1 = 1$. If the executive selects $x_E^1 = 1$, then $x^1 = 1$ is enacted, both politicians are reelected and in the second period, the politicians select the policy that matches their type, which results in gridlock and a payoff of 0. If the executive selects $x_E^1 = -1$ instead, then gridlock results and both politicians are replaced. The executive's payoffs from these outcomes are:

$$u_E(1, -1; \beta_E, 1, 1) = 2\beta_E - 1 \geq \beta_E = u_E(-1; \beta_E, 1)$$

The executive would prefer to select $x_E^1 = 1$ when $\beta_E \geq 1$, which occurs with probability $1 - \frac{2}{3+\pi}$. Note that this is the same condition as above.

Finally, **if both politicians are divergent**, the executive will follow the legislature's lead. If the legislature chooses $x_L^1 = 1$, then $x_E^1 = 1$ strictly dominates $x_E^1 = -1$. The opposite is true when the legislature selects $x_L^1 = -1$. Therefore, the legislature must choose between two different two-period payoffs:

$$u_L(1, -1; \beta_L, 1, -1) = 2\beta_L \geq \beta_L + 1 = u_L(-1; \beta_L, -1)$$

The legislature would prefer to select $x_L^1 = 1$ when $\beta_L \geq 1$, which occurs with probability $1 - \frac{2}{3+\pi}$. Note that this is the same condition as above.

Given these strategies, we can now check to ensure it is **Bayes rational for the voter to follow her proposed voting rule**. The probability that both politicians are congruent conditional on seeing $x^1 = 1$ is weakly greater than the prior on replacing an incumbent with a challenger:

$$\Pr(\theta_E = C | x^1 = 1) = \frac{\gamma\left[\pi + (1-\pi)\left(1 - \frac{2}{3+\pi}\right)\right]}{\gamma\left[\pi + (1-\pi)\left(1 - \frac{2}{3+\pi}\right)\right] + (1-\gamma)\left(1 - \frac{2}{3+\pi}\right)} = \frac{\gamma(1+3\pi)}{1+\pi+2\gamma\pi} \geq \gamma$$

Similarly:

$$\Pr(\theta_L = C|x^1 = 1) = \frac{\pi\left[\gamma + (1-\gamma)\left(1 - \frac{2}{3+\pi}\right)\right]}{\pi\left[\gamma + (1-\gamma)\left(1 - \frac{2}{3+\pi}\right)\right] + (1-\pi)\left(1 - \frac{2}{3+\pi}\right)} = \frac{\pi(1+2\gamma+\pi)}{1+\pi+2\gamma\pi} \geq \pi$$

The probability that both politicians are congruent conditional on seeing $x^1 = 0$ is less than the prior on replacing an incumbent with a challenger:

$$\Pr(\theta_E = C|x^1 = 0) = \frac{\gamma(1-\pi)\left(\frac{2}{3+\pi}\right)}{\gamma(1-\pi)\left(\frac{2}{3+\pi}\right) + (1-\gamma)\pi\left(\frac{2}{3+\pi}\right)} = \frac{\gamma - \gamma\pi}{\gamma + \pi - 2\gamma\pi} < \gamma \text{ iff } \pi > \frac{1}{2}$$

Similarly:

$$\Pr(\theta_L = C|x^1 = 0) = \frac{\pi(1-\gamma)\left(\frac{2}{3+\pi}\right)}{\pi(1-\gamma)\left(\frac{2}{3+\pi}\right) + (1-\pi)\gamma\left(\frac{2}{3+\pi}\right)} = \frac{\pi - \gamma\pi}{\gamma + \pi - 2\gamma\pi} < \pi \text{ iff } \gamma > \frac{1}{2}$$

As $\{\pi, \gamma\} > 1/2$ by assumption, the voter prefers to replace both incumbents when she sees gridlock.

Finally, it is trivial to show that the voter prefers to replace both incumbents conditional on seeing $x^1 = -1$ as this outcome only occurs in equilibrium when both politicians are divergent.

Thus, the voter will stick to her proposed voting rule and we have established that Proposition 1 is an equilibrium □

Having outlined the all relevant strategies and their associated cut points, we can now calculate the voter's expected welfare in the Constitutional Regime as established in Equation 1. Let $\nu \in \{0, 1\}$ represent the voter's choice to respectively replace or retain a politician. Note that the voter's expected second-period welfare when she replaces both politicians is given by:

$$\begin{aligned} u_V^2(\nu = 0, \nu = 0; x^2, \gamma, \pi) &= \gamma\pi(1) + \gamma(1-\pi)(0) + (1-\gamma)\pi(0) + (1-\gamma)(1-\pi)(-1) \\ &= \gamma + \pi - 1 \end{aligned}$$

Then, we can define her total expected welfare as:

$$
\begin{aligned}
W_C \equiv & \gamma\pi \cdot 2 + \\
& \gamma(1-\pi)\left[\left(\frac{2}{3+\pi}\right)(\gamma+\pi-1) + \left(1-\left(\frac{2}{3+\pi}\right)\right)\cdot 1\right] + \\
& (1-\gamma)\pi\left[\left(\frac{2}{3+\pi}\right)(\gamma+\pi-1) + \left(1-\left(\frac{2}{3+\pi}\right)\right)\cdot 1\right] + \\
& (1-\gamma)(1-\pi)\left[\left(\frac{2}{3+\pi}\right)(-1+\gamma+\pi-1) + \left(1-\left(\frac{2}{3+\pi}\right)\right)\cdot 0\right]
\end{aligned}
\tag{A2}
$$

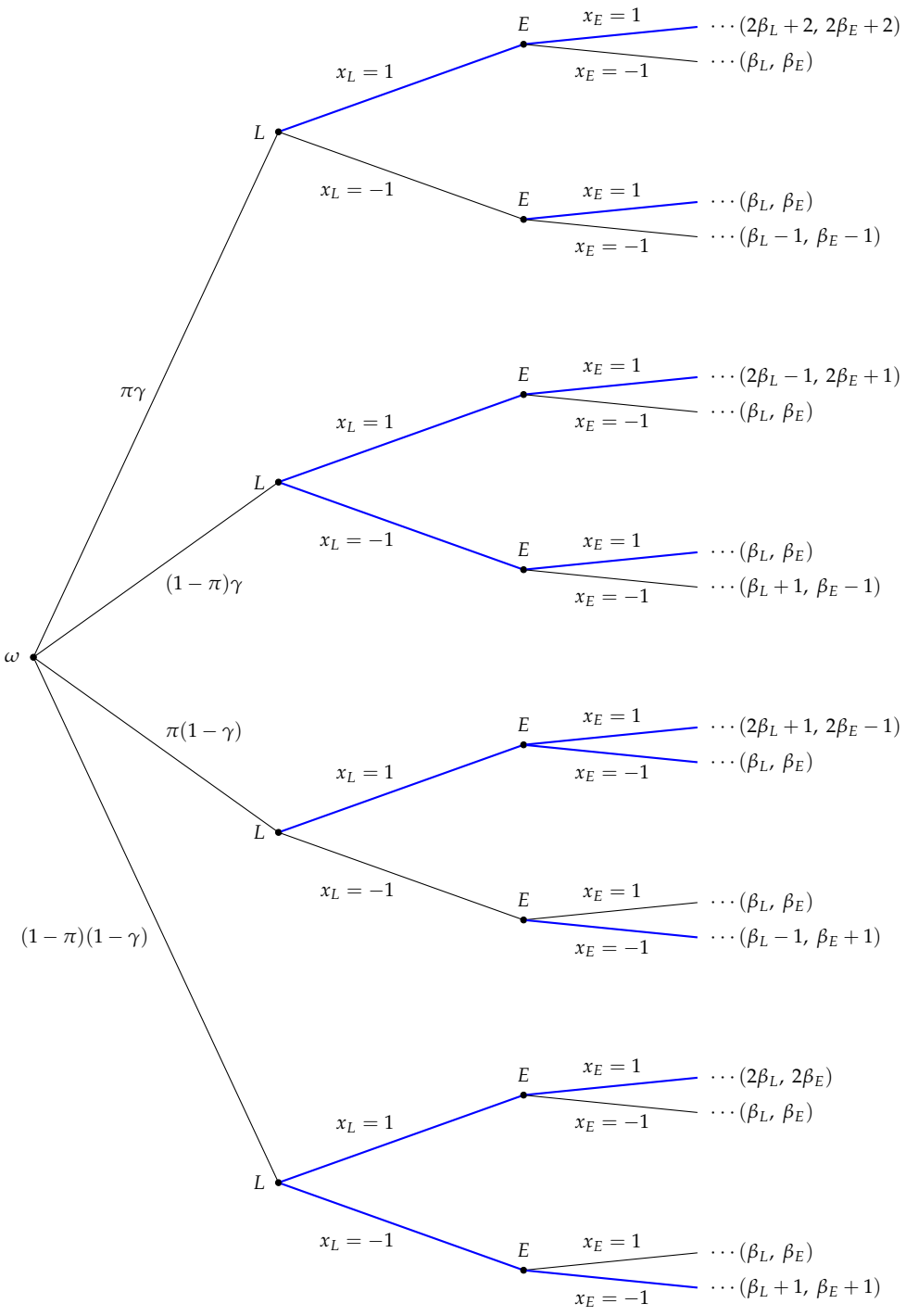

Figure A1: First period game tree and final payoffs following the voter's electoral decision and second period policy selections in the Constitutional Regime

Table A1: Payoffs for the Constitutional Regime

Type Combination	t_1 Action	t_1 Policy	t_1 Payoff	Voter's Electoral Decision	t_2 Action	t_2 Policy	t_2 Payoff	Total Payoff
$\theta_L = C,\ \theta_E = C$	$x_L^1 = 1$ $x_E^1 = 1$	$x_1 = 1$	$\beta_L + 1$ $\beta_E + 1$	Reelect Both	$x_L^2 = 1$ $x_E^2 = 1$	$x_2 = 1$	$\beta_L + 1$ $\beta_E + 1$	$2\beta_L + 2$ $2\beta_E + 2$
	$x_L^1 = 1$ $x_E^1 = -1$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = 1$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = -1$	$x_1 = -1$	$\beta_L - 1$ $\beta_E - 1$	Replace Both				$\beta_L - 1$ $\beta_E - 1$
$\theta_L = D,\ \theta_E = C$	$x_L^1 = 1$ $x_E^1 = 1$	$x_1 = 1$	$\beta_L - 1$ $\beta_E + 1$	Reelect Both	$x_L^2 = -1$ $x_E^2 = 1$	$x_2 = 0$	β_L β_E	$2\beta_L - 1$ $2\beta_E + 1$
	$x_L^1 = 1$ $x_E^1 = -1$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = 1$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = -1$	$x_1 = -1$	$\beta_L + 1$ $\beta_E - 1$	Replace Both				$\beta_L + 1$ $\beta_E - 1$
$\theta_L = C,\ \theta_E = D$	$x_L^1 = 1$ $x_E^1 = 1$	$x_1 = 1$	$\beta_L + 1$ $\beta_E - 1$	Reelect Both	$x_L^2 = 1$ $x_E^2 = 1$	$x_2 = 0$	β_L β_E	$2\beta_L + 1$ $2\beta_E - 1$
	$x_L^1 = 1$ $x_E^1 = -1$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = 1$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = -1$	$x_1 = -1$	$\beta_L - 1$ $\beta_E + 1$	Replace Both				$\beta_L - 1$ $\beta_E + 1$
$\theta_L = D,\ \theta_E = D$	$x_L^1 = 1$ $x_E^1 = 1$	$x_1 = 1$	$\beta_L - 1$ $\beta_E - 1$	Reelect Both	$x_L^2 = -1$ $x_E^2 = -1$	$x_2 = -1$	$\beta_L + 1$ $\beta_E + 1$	$2\beta_L$ $2\beta_E$
	$x_L^1 = 1$ $x_E^1 = -1$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = 1$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = -1$	$x_1 = -1$	$\beta_L + 1$ $\beta_E + 1$	Replace Both				$\beta_L + 1$ $\beta_E + 1$

A.2 Proofs for the Unilateral Regime

To reduce notation, in the section that follows, a utility function $u_E((x_E^1 = 1, \alpha^1 = 1), (x_E^2 = 1, \alpha^2 = 1); \beta_E, x_L^1 = 1, x_L^2 = 1)$ is abbreviated as $u_E((1,1),(1,1); \beta_i, 1, 1)$.

Lemma 1. *In the second period, if the executive and legislature do not share types, then the executive passes his preferred policy unilaterally. Otherwise, the executive and legislature pass the policy they both prefer through legislation.*

Lemma 1. After the second period, the game ends. As such, the politicians select their most preferred actions. When both politicians are congruent, they select $x_i^2 = 1$ and when they are divergent, they select $x_i^2 = -1$. As unilateral action is costly, the executive sets $\alpha^2 = 0$ in these cases. Now suppose the executive is congruent and the legislature is divergent. The legislature chooses its most preferred action, $x_L^2 = -1$. However, the executive may choose between $x_E^2 = 1, \alpha^2 = 0$ or $x_E^2 = 1, \alpha^2 = 1$:

$$u_E^2((1,0); \beta_E, -1) = \beta_E < \beta_E + \frac{1}{2} = u_E^2((1,1); \beta_E, -1)$$

As $u_E^2((1,1) > u_E^2((1,0)$, the executive would always prefer to act unilaterally. The same logic follows when the legislature is congruent and the executive is divergent. □

Proposition 2. *(Unilateral Equilibrium) There exists an equilibrium in which the voter reelects both politicians after observing $x^1 = 1, \alpha^1 = 0$ and replaces both politicians otherwise when $\alpha^1 = 0$. She retains the executive and replaces the legislature when $x^1 = 1, \alpha^1 = 1$ and replaces the executive and retains the legislature when $x^1 = -1, \alpha^1 = 1$. Both politicians choose their type-preferred policy in the second period, and in the first period:*

a. If both politicians are congruent, they select policy $x_i^1 = 1$ and the executive selects $\alpha^1 = 0$.

b. If $\theta_E = C$ and $\theta_L = D$ and:

- *$\beta_L \geq 1$, the legislature selects $x_L^1 = 1$ and the executive selects $x_E^1 = 1, \alpha^1 = 0$.*

- $\beta_L < 1$, *the legislature selects* $x_L^1 = -1$ *and the executive selects* $x_E^1 = 1, \alpha^1 = 1$.

c. If $\theta_E = D$ *and* $\theta_L = C$ *and:*

- $\beta_E \geq 1$, *the legislature selects* $x_L^1 = 1$ *and the executive selects* $x_E^1 = 1, \alpha^1 = 0$.
- $\beta_E < 1$, *the legislature selects* $x_L^1 = 1$ *and the executive selects* $x_E^1 = -1, \alpha^1 = 1$.

d. If both politicians are divergent and:

- $\beta_E \geq \frac{1}{2}$ *and* $\beta_L \geq 1$, *both politicians select* $x_i^1 = 1$ *and the executive selects* $\alpha^1 = 0$.
- $\beta_E \geq \frac{1}{2}$ *and* $\beta_L < 1$, *both politicians select* $x_i^1 = -1$ *and the executive selects* $\alpha^1 = 0$.
- $\beta_E < \frac{1}{2}$ *and* $\beta_L \geq 2\gamma - 1$, *the legislature selects* $x_L^1 = 1$ *and the executive selects* $x_E^1 = -1, \alpha^1 = 1$.
- $\beta_E < \frac{1}{2}$ *and* $\beta_L < 2\gamma - 1$, *both politicians select* $x_i^1 = -1$ *and the executive selects* $\alpha^1 = 0$.

Proof of Proposition 2. I solve the game by backward induction.

In the second period, we have established politician behavior in Lemma 1. Given these outcomes, the voter's incentive is to maximize her probability of selecting congruent politicians after the first period. Assume she follows the voting rule established in Proposition 2.

Conditional on the voting rule, politicians in the first period will maximize their utility given their type. A reduced version of the game tree is presented in Figure A2 at the end of this section. The tree presents both politicians' strategies in the first period as well as the sum of first and second period payoffs following the electoral decision. The full derivation of the payoffs shown at each terminal node—as well as all possible type combinations, actions, policy outcomes, and electoral decisions—are presented in Tables A2 and A3 at the end of this section.

If both politicians are congruent, enacting policy $x^1 = 1$ is strictly dominant as both politicians signal their positive type and achieve their highest policy payoff. As unilateral action is costly, the executive selects $a^t = 0$ in both periods.

If the president is congruent and the legislature is divergent, then the executive always selects $x_E^1 = 1$. If the legislature selects $x_L^1 = 1$, then the executive selects $x_E^1 = 1, a^1 = 0$ and $x^1 = 1$ is enacted. The voter reelects both politicians and in the second period, the executive selects $x_E^2 = 1, a^2 = 1$. If the legislature selects $x_L^1 = -1$, it is strictly dominant for the executive to select $x_E^1 = 1, a^1 = 1$. The executive is retained and the legislature is replaced. If the new legislature is congruent, the executive selects $x_E^2 = 1, a^2 = 0$; if the new legislature is divergent, the executive selects $x_E^2 = 1, a^2 = 1$. At the outset, the legislature will choose $x_L^1 = 1$ when:

$$u_L(1, -1; \beta_L, (1,0), (1,1) = 2\beta_L - 2 \geq \beta_L - 1 = u_L(-1; \beta_L, (1,1))$$

$$\beta_L \geq 1$$

which occurs with probability $1 - \frac{2}{3+\pi}$.

If the president is divergent and the legislature is congruent, the legislature always selects $x_L^1 = 1$.[16] If the executive selects $x_E^1 = 1$, he also selects $a^1 = 0$ and $x^1 = 1$ is enacted. Both politicians are reelected and in the second period, the executive selects $x_E^2 = -1, a^2 = 1$. If the executive selects $x_E^1 = -1$, he also selects $a^1 = 1$. The executive is replaced, the legislature is retained, and the new executive dictates the second period policy. In the second period, the legislature always selects $x_L^2 = 1$. With probability γ, the challenger is congruent and chooses $x_C^2 = 1, a^2 = 0$. With probability $1 - \gamma$, the challenger is divergent and chooses $x_C^2 = -1, a^2 = 1$. The key decision is the incumbent executive's choice in the first period following the legislature's decision of $x_L^1 = 1$. The executive

[16] This is true because $\beta_i \leq \bar{\beta} \leq \frac{3+\pi}{2}$ by definition. If this were not true, the congruent legislature could choose $x_L^1 = -1$ and the executive would choose $x_E^1 = 1, a = 1$. I rule out this possibility to concentrate on the cases in which unilateral action is an informative signal. If this condition did not hold, then a pooling equilibrium would exist in which both types of executive unilaterally enact policy $x^1 = 1$ unilaterally.

chooses $x_E^2 = 1, \alpha^2 = 0$ when:

$$u_E((1,0),(-1,1);\beta_E,1,1,) = 2\beta_E - \frac{1}{2} \geq \beta_E + \frac{1}{2} = u_E((-1,1);\beta_E,1)$$
$$\beta_E \geq 1$$

which occurs with probability $1 - \frac{2}{3+\pi}$.

Finally, **if both politicians are divergent** and the legislature selects $x_L^1 = 1$, the executive chooses between $x_E^1 = 1, \alpha^1 = 0$ or $x_E^1 = -1, \alpha^1 = 1$. If he chooses the former, both politicians are reelected and in the second period, they both select $x_i^2 = -1$ and $\alpha^1 = 0$. If he chooses the latter, then the legislature is retained, the executive is replaced, and the second period outcome depends on the executive challenger's type. If he is divergent, he chooses $x_C^2 = -1, \alpha^1 = 0$. If he is congruent, he selects $x_C^1 = 1, \alpha^1 = 1$. Conditional on the legislature selecting $x_L^1 = 1$, the executive chooses $x_E^1 = 1, \alpha^1 = 0$ over $x_E^1 = -1, \alpha^1 = 1$ when:

$$u_E((1,0),(-1,0);\beta_E,1,-1,) = 2\beta_E \geq \beta_E + \frac{1}{2} = u_E((-1,1);\beta_E,1)$$
$$\beta_E \geq \frac{1}{2}$$

which occurs with probability $1 - \frac{1}{3+\pi}$. This probability is derived from:

$$\Pr\left(\beta_i < \frac{1}{2}\right) = \frac{\frac{1}{2}}{\frac{3+\pi}{2}} = \frac{1}{3+\pi}$$

Note that this outcome is more likely than $\beta_i \geq 1$.

If the legislature selects $x_L^1 = -1$, the executive selects $x_E^1 = -1, \alpha^1 = 0$. Conditional on $\beta_E \geq 1$, the legislature will choose $x_L^1 = 1$ when:

$$u_L(1,-1;\beta_E,(1,0),(-1,0)) = 2\beta_L \geq \beta_L + 1 = u_L(-1;\beta_L,(-1,0))$$
$$\beta_L \geq 1$$

Conditional on $\beta_E < 1$, the legislature will choose $x_L^1 = 1$ when:

$$u_L(1, -1; \beta_E, (-1, 1), (...)) = 2\beta_L + 2 - 2\gamma \geq \beta_L + 1 = u_L(-1; \beta_L, (-1, 0))$$
$$\beta_L \geq 2\gamma - 1$$

which occurs with probability:

$$\Pr(\beta_i \geq 2\gamma - 1) = 1 - \frac{2\gamma - 1}{\frac{3+\pi}{2}} = 1 - \frac{4\gamma - 2}{3 + \pi}$$

Given these strategies, we can now check to ensure it is **Bayes rational for the voter to follow her proposed voting rule**. First, consider the cases in which the executive does not act unilaterally. The probability that both politicians are congruent conditional on seeing $x^1 = 1, a^1 = 0$ is weakly greater than the prior on replacing an incumbent with a challenger:

$$\Pr(\theta_E = C | x^1 = 1, a^1 = 0) =$$
$$\frac{\gamma\left[\pi + (1-\pi)\left(1 - \left(\frac{2}{3+\pi}\right)\right)\right]}{\gamma\left[\pi + (1-\pi)\left(1 - \left(\frac{2}{3+\pi}\right)\right)\right] + (1-\gamma)\left[\pi\left(1 - \left(\frac{2}{3+\pi}\right)\right) + (1-\pi)\left(1 - \left(\frac{2}{3+\pi}\right)\right)\left(1 - \left(\frac{1}{3+\pi}\right)\right)\right]} \geq \gamma$$

Similarly:

$$\Pr(\theta_L = C | x^1 = 1, a^1 = 0) =$$
$$\frac{\pi\left[\gamma + (1-\gamma)\left(1 - \left(\frac{2}{3+\pi}\right)\right)\right]}{\pi\left[\gamma + (1-\gamma)\left(1 - \left(\frac{2}{3+\gamma}\right)\right)\right] + (1-\pi)\left[\gamma\left(1 - \left(\frac{2}{3+\pi}\right)\right) + (1-\gamma)\left(1 - \left(\frac{2}{3+\pi}\right)\right)\left(1 - \left(\frac{1}{3+\pi}\right)\right)\right]} \geq \pi$$

Trivially, when $x^1 = -1$ and $a^1 = 0$, the voter can infer both politicians are divergent with certainty.

Now consider the probability that both politicians are congruent conditional on seeing $x^1 = 1, a^1 = 1$. Because the divergent executive never enacts $x^1 = 1$ unilaterally, the voter can be certain he is congruent. Additionally, if the executive enacts $x^1 = 1$ unilaterally, he

does so because the legislature has not given him the option to enact $x^1 = 1$ legislatively. Because unilateral action is costly, the executive never chooses $x^1 = 1, \alpha^1 = 1$ when the legislature is congruent, therefore, she can infer that the legislature must be divergent. As such, she retains the executive and dismisses the legislature.

What does the voter believe conditional on seeing $x^1 = -1, \alpha^1 = 1$? First, only a divergent executive enacts policy $x_1 = -1$ unilaterally, and as such, the executive must be divergent. However, a divergent executive may choose $x_1 = -1, \alpha^1 = 1$ when the legislature is either congruent and divergent. Therefore, the voter's posterior is:

$$\Pr(\theta_L = C | x^1 = -1, \alpha^1 = 1) = \frac{\pi(1-\gamma)\left(\frac{2}{3+\pi}\right)}{\pi(1-\gamma)\left(\frac{2}{3+\pi}\right) + (1-\pi)(1-\gamma)\left(\frac{1}{3+\pi}\right)\left(1-\frac{4\gamma-2}{3+\pi}\right)} > \pi$$

which implies that the voter will retain the legislature when a divergent executive unilaterally enacts $x^1 = -1$.

Finally, gridlock never occurs in equilibrium, and as such, the voters beliefs about the politicians' types *were she to see gridlock* are not well-defined. Classical signaling refinements, such as the Intuitive Criterion or Universal Divinity assume that if an out-of-equilibrium signal is sent by some sender, then the voter should update her beliefs conditional on which type(s) or sender(s) have the most to gain from sending an off-path signal. However, neither of these refinements naturally map onto a game in which two agents with private information make a joint signal to an uninformed receiver. This problem does not arise in the Constitutional Regime as all three admissible outcomes, $x^1 = \{-1, 0, 1\}$, occur in equilibrium with positive probability, and as such, all beliefs are well-defined by Bayes Rule. In the Unilateral Regime, gridlock is never on the equilibrium path, and as such, we must consider the voter's beliefs in this instance. First, notice that gridlock is always equilibrium dominated for the congruent executive. Even if the voter were to hold the most beneficial off-path beliefs (i.e. that gridlock implied that the executive was congruent and the legislator was divergent), the congruent executive

would still be able to increase his payoff by selecting policy $x^1 = 1, \alpha^1 = 1$ in the first period:

$$u_E((1,1),(1,\alpha);\beta_E,-1,x_C^2) = 2\beta_E + 1 + \frac{\pi}{2} > 2\beta_E + \frac{1}{2} + \frac{\pi}{2} = u_E((1,0),(1,\alpha);\beta_E,-1,x_C^2)$$

Were the voter to witness gridlock, she would believe the executive to be divergent with probability 1. The sequential nature of the policymaking game prevents further analysis of this sort vis-a-vis the legislature, because the legislature never directly selects gridlock. However, the choice as to whether to retain or replace the legislature is actually mathematically irrelevant to the voter's ultimate payoff as the executive's type perfectly determines the second period outcome. As such, I assume the voter dismisses the legislator were she to witness gridlock, however, this assumption does not materially affect the policy or welfare outcome.

Thus, the voter will stick to her proposed voting rule and we have established that Proposition 2 is an equilibrium □

Having outlined the all relevant strategies and their associated cut points, we can now calculate the voter's expected welfare in the Unilateral Regime as established in Equation 2. Note that the voter's expected second-period welfare when she replaces both politicians is given by:

$$\begin{aligned} u_V^2(\nu = 0, \nu = 0; x^2, \gamma, \pi) &= \gamma\pi(1) + \gamma(1-\pi)(1) + (1-\gamma)\pi(-1) + (1-\gamma)(1-\pi)(-1) \\ &= 2\gamma - 1 \end{aligned}$$

Then, we can define her total expected welfare as:

$$
\begin{aligned}
&W_U \equiv \gamma\pi(2)+ \\
&\gamma(1-\pi)[\left(\frac{2}{3+\pi}\right)(1+\pi\cdot 1+(1-\pi)\cdot 1)+\left(1-\left(\frac{2}{3+\pi}\right)\right)(1+1)]+ \\
&(1-\gamma)\pi[\left(\frac{2}{3+\pi}\right)(-1+\gamma\cdot 1+(1-\gamma)\cdot(-1))+\left(1-\left(\frac{2}{3+\pi}\right)\right)(1-1)]+ \\
&(1-\gamma)(1-\pi)\Bigg[\left(1-\left(\frac{2}{3+\pi}\right)\right)\left(1-\left(\frac{1}{3+\pi}\right)\right)\cdot 0+\left(\frac{2}{3+\pi}\right)\left(1-\left(\frac{1}{3+\pi}\right)\right)(2\gamma-2)+ \\
&\left(\frac{1}{3+\pi}\right)\left(1-\left(\frac{4\gamma-2}{3+\pi}\right)\right)(-1+\gamma\cdot 1+(1-\gamma)\cdot(-1))+\left(\frac{1}{3+\pi}\right)\left(\frac{4\gamma-2}{3+\pi}\right)(2\gamma-2)\Bigg]
\end{aligned}
\tag{A3}
$$

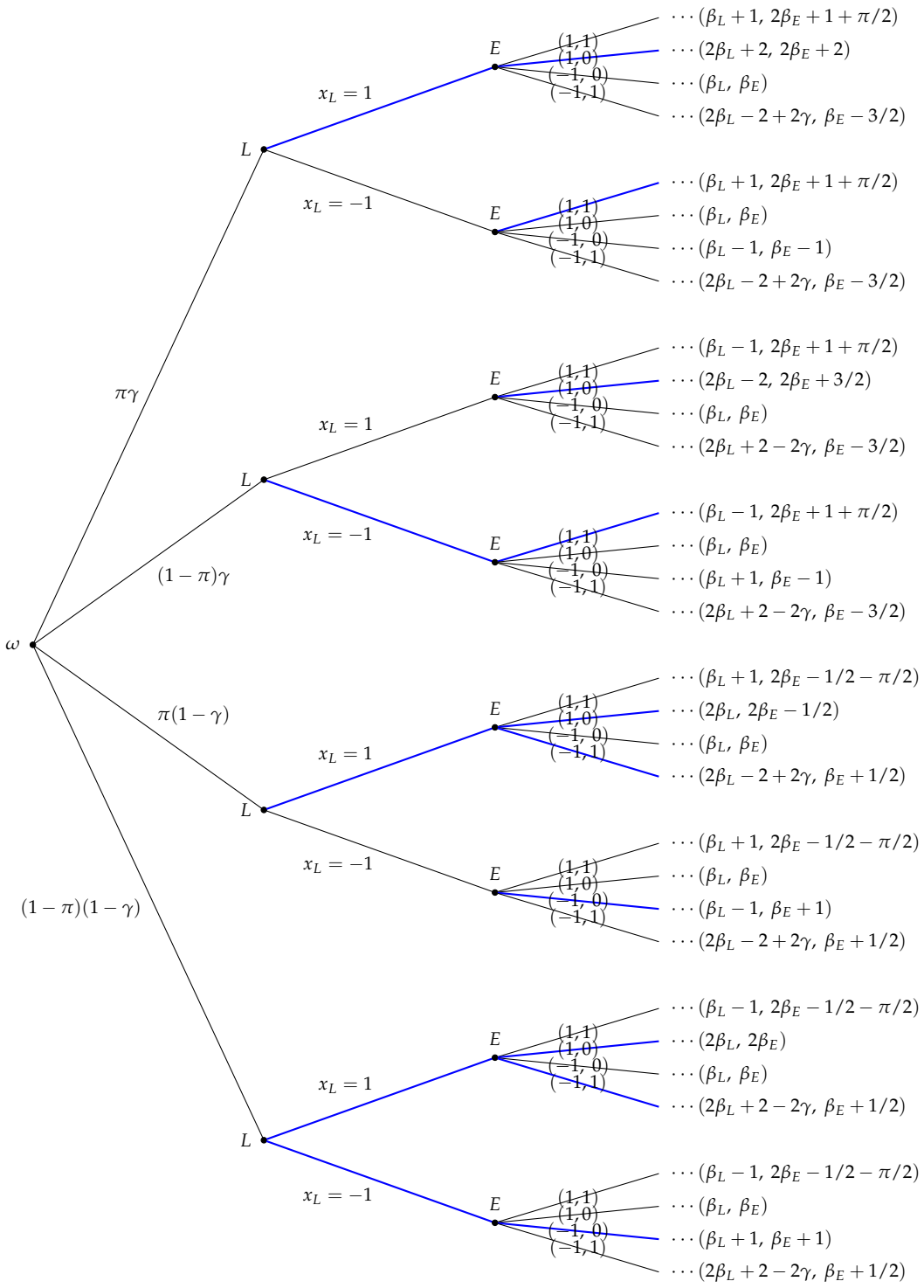

Figure A2: The truncated game tree for the Unilateral Regime. The tree represents decisions in the first period policymaking game of complete information and presents payoffs for the full, two-period game following Lemma 1.

Table A2: Payoffs for the Unilateral Regime, Part 1

Type Combination	t_1 Action	t_1 Policy	t_1 Payoff	Voter's Electoral Decision	t_2 Action	t_2 Policy	t_2 Payoff	Total Payoff
$\theta_L = C$, $\theta_E = C$	$x_L^1 = 1$ $x_E^1 = 1, \alpha = 1$	$x_1 = 1$	$\beta_L + 1$ $\beta_E + 1 - 1/2$	Reelect E, Replace L	$x_C^2 \in \{-1, 1\}$ $x_E^2 = 1, \alpha \in \{0, 1\}$	$x_2 = 1$	 $\beta_E + \pi \cdot 1 + (1 - \pi)(1 - 1/2)$	$\beta_L + 1$ $2\beta_E + 1 + \pi/2$
	$x_L^1 = 1$ $x_E^1 = 1, \alpha = 0$	$x_1 = 1$	$\beta_L + 1$ $\beta_E + 1$	Reelect Both	$x_L^2 = 1$ $x_E^2 = 1, \alpha = 0$	$x_2 = 1$	$\beta_L + 1$ $\beta_E + 1$	$2\beta_L + 2$ $2\beta_E + 2$
	$x_L^1 = 1$ $x_E^1 = -1, \alpha = 0$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = 1$ $x_E^1 = -1, \alpha = 1$	$x_1 = -1$	$\beta_L - 1$ $\beta_E - 1 - 1/2$	Reelect L, Replace E	$x_L^2 = 1$ $x_C^2 \in \{-1, 1\}, \alpha \in \{0, 1\}$	$x_2 \in \{-1, 1\}$	$\beta_L + \gamma \cdot 1 + (1 - \gamma)(-1)$	$2\beta_L - 2 + 2\gamma$ $\beta_E - 3/2$
	$x_L^1 = -1$ $x_E^1 = 1, \alpha = 1$	$x_1 = 1$	$\beta_L + 1$ $\beta_E + 1 - 1/2$	Reelect E, Replace L	$x_C^2 \in \{-1, 1\}$ $x_E^2 = 1, \alpha \in \{0, 1\}$	$x_2 = 1$	 $\beta_E + \pi \cdot 1 + (1 - \pi)(1 - 1/2)$	$\beta_L + 1$ $2\beta_E + 1 + \pi/2$
	$x_L^1 = -1$ $x_E^1 = 1, \alpha = 0$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = -1, \alpha = 0$	$x_1 = -1$	$\beta_L - 1$ $\beta_E - 1$	Replace Both				$\beta_L - 1$ $\beta_E - 1$
	$x_L^1 = -1$ $x_E^1 = -1, \alpha = 1$	$x_1 = -1$	$\beta_L - 1$ $\beta_E - 1 - 1/2$	Reelect L, Replace E	$x_L^2 = 1$ $x_C^2 \in \{-1, 1\}, \alpha \in \{0, 1\}$	$x_2 \in \{-1, 1\}$	$\beta_L + \gamma \cdot 1 + (1 - \gamma)(-1)$	$2\beta_L - 2 + 2\gamma$ $\beta_E - 3/2$
$\theta_L = D$, $\theta_E = C$	$x_L^1 = 1$ $x_E^1 = 1, \alpha = 1$	$x_1 = 1$	$\beta_L - 1$ $\beta_E + 1 - 1/2$	Reelect E, Replace L	$x_C^2 \in \{-1, 1\}$ $x_E^2 = 1, \alpha \in \{0, 1\}$	$x_2 = 1$	 $\beta_E + \pi \cdot 1 + (1 - \pi)(1 - 1/2)$	$\beta_L - 1$ $2\beta_E + 1 + \pi/2$
	$x_L^1 = 1$ $x_E^1 = 1, \alpha = 0$	$x_1 = 1$	$\beta_L - 1$ $\beta_E + 1$	Reelect Both	$x_L^2 = -1$ $x_E^2 = 1, \alpha = 1$	$x_2 = 1$	$\beta_L - 1$ $\beta_E + 1 - 1/2$	$2\beta_L - 2$ $2\beta_E + 3/2$
	$x_L^1 = 1$ $x_E^1 = -1, \alpha = 0$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = 1$ $x_E^1 = -1, \alpha = 1$	$x_1 = -1$	$\beta_L + 1$ $\beta_E - 1 - 1/2$	Reelect L, Replace E	$x_L^2 = -1$ $x_C^2 \in \{-1, 1\}, \alpha \in \{0, 1\}$	$x_2 \in \{-1, 1\}$	$\beta_L + \gamma \cdot (-1) + (1 - \gamma) \cdot 1$	$2\beta_L + 2 - 2\gamma$ $\beta_E - 3/2$
	$x_L^1 = -1$ $x_E^1 = 1, \alpha = 1$	$x_1 = 1$	$\beta_L - 1$ $\beta_E + 1 - 1/2$	Reelect E, Replace L	$x_C^2 \in \{-1, 1\}$ $x_E^2 = 1, \alpha \in \{0, 1\}$	$x_2 = 1$	 $\beta_E + \pi \cdot 1 + (1 - \pi)(1 - 1/2)$	$\beta_L - 1$ $2\beta_E + 1 + \pi/2$
	$x_L^1 = -1$ $x_E^1 = 1, \alpha = 0$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = -1, \alpha = 0$	$x_1 = -1$	$\beta_L + 1$ $\beta_E - 1$	Replace Both				$\beta_L + 1$ $\beta_E - 1$
	$x_L^1 = -1$ $x_E^1 = -1, \alpha = 1$	$x_1 = -1$	$\beta_L + 1$ $\beta_E - 1 - 1/2$	Reelect L, Replace E	$x_L^2 = -1$ $x_C^2 \in \{-1, 1\}, \alpha \in \{0, 1\}$	$x_2 \in \{-1, 1\}$	$\beta_L + \gamma \cdot (-1) + (1 - \gamma) \cdot 1$	$2\beta_L + 2 - 2\gamma$ $\beta_E - 3/2$

Table A3: Payoffs for the Unilateral Regime, Part 2

Type Combination	t_1 Action	t_1 Policy	t_1 Payoff	Voter's Electoral Decision	t_2 Action	t_2 Policy	t_2 Payoff	Total Payoff
$\theta_L = C$, $\theta_E = D$	$x_L^1 = 1$ $x_E^1 = 1, \alpha = 1$	$x_1 = 1$	$\beta_L + 1$ $\beta_E - 1 - 1/2$	Reelect E, Replace L	$x_C^2 \in \{-1, 1\}$ $x_E^2 = -1, \alpha \in \{0, 1\}$	$x_2 = -1$	$\beta_E + \pi(1 - 1/2) + (1 - \pi) \cdot 1$	$\beta_L + 1$ $2\beta_E - 1/2 - \pi/2$
	$x_L^1 = 1$ $x_E^1 = 1, \alpha = 0$	$x_1 = 1$	$\beta_L + 1$ $\beta_E - 1$	Reelect Both	$x_L^2 = 1$ $x_E^2 = -1, \alpha = 1$	$x_2 = -1$	$\beta_L - 1$ $\beta_E + 1 - 1/2$	$2\beta_L$ $2\beta_E - 1/2$
	$x_L^1 = 1$ $x_E^1 = -1, \alpha = 0$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = 1$ $x_E^1 = -1, \alpha = 1$	$x_1 = -1$	$\beta_L - 1$ $\beta_E + 1 - 1/2$	Reelect L, Replace E	$x_L^2 = 1$ $x_C^2 \in \{-1, 1\}, \alpha \in \{0, 1\}$	$x_2 \in \{-1, 1\}$	$\beta_L + \gamma \cdot 1 + (1 - \gamma) \cdot (-1)$	$2\beta_L - 2 + 2\gamma$ $\beta_E + 1/2$
	$x_L^1 = -1$ $x_E^1 = 1, \alpha = 1$	$x_1 = 1$	$\beta_L + 1$ $\beta_E - 1 - 1/2$	Reelect E, Replace L	$x_C^2 \in \{-1, 1\}$ $x_E^2 = -1, \alpha \in \{0, 1\}$	$x_2 = -1$	$\beta_E + \pi \cdot 1 + (1 - \pi)(1 - 1/2)$	$\beta_L + 1$ $2\beta_E - 1/2 - \pi/2$
	$x_L^1 = -1$ $x_E^1 = 1, \alpha = 0$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = -1, \alpha = 0$	$x_1 = -1$	$\beta_L - 1$ $\beta_E + 1$	Replace Both				$\beta_L - 1$ $\beta_E + 1$
	$x_L^1 = -1$ $x_E^1 = -1, \alpha = 1$	$x_1 = -1$	$\beta_L - 1$ $\beta_E + 1 - 1/2$	Reelect L, Replace E	$x_L^2 = 1$ $x_C^2 \in \{-1, 1\}, \alpha \in \{0, 1\}$	$x_2 \in \{-1, 1\}$	$\beta_L + \gamma \cdot 1 + (1 - \gamma) \cdot (-1)$	$2\beta_L - 2 + 2\gamma$ $\beta_E + 1/2$
$\theta_L = D$, $\theta_E = D$	$x_L^1 = 1$ $x_E^1 = 1, \alpha = 1$	$x_1 = 1$	$\beta_L - 1$ $\beta_E - 1 - 1/2$	Reelect E, Replace L	$x_C^2 \in \{-1, 1\}$ $x_E^2 = -1, \alpha \in \{0, 1\}$	$x_2 = -1$	$\beta_E + \pi(1 - 1/2) + (1 - \pi) \cdot 1$	$\beta_L - 1$ $2\beta_E - 1/2 - \pi/2$
	$x_L^1 = 1$ $x_E^1 = 1, \alpha = 0$	$x_1 = 1$	$\beta_L - 1$ $\beta_E - 1$	Reelect Both	$x_L^2 = -1$ $x_E^2 = -1, \alpha = 0$	$x_2 = -1$	$\beta_L + 1$ $\beta_E + 1$	$2\beta_L$ $2\beta_E$
	$x_L^1 = 1$ $x_E^1 = -1, \alpha = 0$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = 1$ $x_E^1 = -1, \alpha = 1$	$x_1 = -1$	$\beta_L + 1$ $\beta_E + 1 - 1/2$	Reelect L, Replace E	$x_L^2 = -1$ $x_C^2 \in \{-1, 1\}, \alpha \in \{0, 1\}$	$x_2 \in \{-1, 1\}$	$\beta_L + \gamma \cdot (-1) + (1 - \gamma) \cdot 1$	$2\beta_L + 2 - 2\gamma$ $\beta_E + 1/2$
	$x_L^1 = -1$ $x_E^1 = 1, \alpha = 1$	$x_1 = 1$	$\beta_L - 1$ $\beta_E - 1 - 1/2$	Reelect E, Replace L	$x_C^2 \in \{-1, 1\}$ $x_E^2 = -1, \alpha \in \{0, 1\}$	$x_2 = -1$	$\beta_E + \pi \cdot (1 - 1/2) + (1 - \pi) \cdot 1$	$\beta_L - 1$ $2\beta_E - 1/2 - \pi/2$
	$x_L^1 = -1$ $x_E^1 = 1, \alpha = 0$	$x_1 = 0$	β_L β_E	Replace Both				β_L β_E
	$x_L^1 = -1$ $x_E^1 = -1, \alpha = 0$	$x_1 = -1$	$\beta_L + 1$ $\beta_E + 1$	Replace Both				$\beta_L + 1$ $\beta_E + 1$
	$x_L^1 = -1$ $x_E^1 = -1, \alpha = 1$	$x_1 = -1$	$\beta_L + 1$ $\beta_E + 1 - 1/2$	Reelect L, Replace E	$x_L^2 = -1$ $x_C^2 \in \{-1, 1\}, \alpha \in \{0, 1\}$	$x_2 \in \{-1, 1\}$	$\beta_L + \gamma \cdot (-1) + (1 - \gamma) \cdot 1$	$2\beta_L + 2 - 2\gamma$ $\beta_E + 1/2$

A.3 Proofs for the Welfare Comparison

Proposition 3 *When $\Delta(\gamma, \pi) > 0$, the voter strictly prefers the Unilateral Regime. Furthermore, $\Delta(\gamma, \pi)$ is increasing (making the Unilateral Regime more preferable) in γ and decreasing (making the Unilateral Regime less preferable) in π.*

Proposition 3. To determine when voter welfare is higher under Unilateral Regime, set $\Delta(\gamma, \pi) \equiv W_U - W_C$, which is Equation A3 $-$ Equation A2:

$$W_U - W_C = \frac{2\gamma^2\left(2\pi^2+\pi-7\right)+\gamma\left((2\pi-1)\pi^2+31\right)-\pi(\pi(\pi+6)+15)-2}{(\pi+3)^2} \equiv \Delta(\gamma,\pi) \tag{A4}$$

When the function, $\Delta(\gamma, \pi)$ is positive, the Unilateral Regime provides higher voter welfare than the Constitutional Regime, and when $\Delta(\gamma, \pi)$ is negative, the Constitutional Regime provides higher voter welfare. To derive comparative statics, I take partial first derivatives of $\Delta(\gamma, \pi)$ with respect to each parameter.

First $\Delta(\gamma, \pi)$ is increasing in γ:

$$\frac{\partial\Delta(\gamma,\pi)}{\partial\gamma} = \frac{4\gamma\left(2\pi^2+\pi-7\right)+(2\pi-1)\pi^2+31}{(\pi+3)^2}$$

By inspection, it can be shown that $\frac{\partial\Delta(\gamma,\pi)}{\partial\gamma} > 0$. The denominator is squared, and so is positive. As for the numerator, upon expansion, the two negative terms are -28γ and $-\pi^2$, and as $31 - 28\gamma - \pi^2 > 0$, the entire numerator is positive. Therefore, $\frac{\partial\Delta(\gamma,\pi)}{\partial\gamma} > 0$, and so $\Delta(\gamma, \pi)$ is increasing in γ.

Second, $\Delta(\gamma, \pi)$ is decreasing in π:

$$\begin{aligned}\frac{\partial\Delta(\gamma,\pi)}{\partial\pi} =& \frac{2\gamma^2(4\pi+1)+\gamma\left(2\pi^2+2(2\pi-1)\pi\right)-\pi(\pi+6)-\pi(2\pi+6)-15}{(\pi+3)^2} - \\ & \frac{2\left(2\gamma^2\left(2\pi^2+\pi-7\right)+\gamma\left((2\pi-1)\pi^2+31\right)-\pi(\pi(\pi+6)+15)-2\right)}{(\pi+3)^3}\end{aligned}$$

Note that $\frac{\partial\Delta(\gamma,\pi)}{\partial\pi}$ is maximized at -1 when $\gamma = \pi = 1$. Thus $\Delta(\gamma, \pi)$ is decreasing in

π. □

B Model Extensions

B.1 Transparency

In this section, I relax the assumption that the voter only observes the ultimate policy output (x^t). Instead, I define an exogenous probability of transparency, $\tau \in (0,1)$ with which the voter observers the politicians' individual inputs (x_i^t) as well as the ultimate policy outcome. With probability τ, the voter can implement a more refined voting rule conditioned on the individual agent's actions. This voting rule improves her two-period payoff, primarily by allowing her to keep the congruent politician and replace the divergent politician when observing gridlock, at the small cost of allowing the divergent executive to pool with congruent types through gridlock when both politicians are divergent. With probability $1-\tau$, however, the voter only observes the ultimate policy outcome as in the baseline model and follows the same voting rule. I show that for $\tau < 0.72$, the main conclusions of the baseline model, while attenuated, continue to hold. For extremely large values of τ, the Unilateral Regime still provides higher welfare when the executive is likely to be congruent, but is no longer the ex-ante best regime as signaling gains from unilateral action are less valuable under large-to-full transparency.

B.1.1 Model Setup

Suppose that in both regimes, after policy is implemented, the voter observes x_i^t, the politicians' individual policy inputs with probability $\tau \in (0,1)$. When both agents choose the same action, the voter does not learn anything more than she could infer in the baseline model from the ultimate policy outcome. However, revealing actions leads to new information both in gridlock—where previously the voter only learned that politicians disagreed, but not how—and when the executive acts unilaterally—where previously the voter could infer the executive's action but not the legislature's.

When the voter does not observe the politician's individual actions (with probability

$1-\tau$), she continues to follow the same voting rules are described in Definitions 1 and 2 in the main text. However, when the voter does observe each politician's individual actions, she adopts a new and more straightforward voting rule—retain politicians who choose $x_i^1 = 1$ and replace politicians who choose $x_i^1 = -1$.

B.1.2 The Constitutional Regime

I solve the game by backward induction. In the second period, the politicians do not need to stand for election. As in the baseline model, each agent will simply choose their type-preferred policy. Two congruent politicians will enact $x^2 = 1$; two divergent politicians will enact $x^2 = -1$, and two politicians with different types will find themselves in gridlock. As before, the voter wants to select two congruent politicians, which may incentivize divergent politicians to act like congruent politicians. However, the exogenous probability of action-revelation will determine which voting rule the voter will deploy and will also modify the agents' first period actions.

First, notice that in the Constitutional Regime, action revelation provides no additional information if policy change occurs. For example, if the first-period policy outcome is $x^1 = 1$, the voter would infer (correctly) that both politicians chose $x_i^1 = 1$, as policy can only change when the politicians agree. Thus, gridlock is the only instance in which action-revelation can make a difference. Surprisingly, the probability of transparency does little to change the politicians' strategic decisions. Consider the case of a congruent executive and divergent legislature. In the baseline model, the divergent legislature chooses between policy $x_L^1 = 1$ in the first period and a two-period payoff of $u_L(1, 0; \beta_L, 1, 1) = 2\beta_L - 1$ and $x_L^1 = -1$ which causes gridlock and electoral loss for a payoff of $u_L(0; \beta_L, 1) = \beta_L$. The executive, in this case, always selects $x_E^1 = 1$: in the first instance he nets $u_E(1, 1; \beta_E, 1, 0) = 2\beta_E + 1$, and in the second, $u_E(1; \beta_E, 0) = \beta_E$. Now consider that with some probability τ, the agents' individual actions are revealed. If the legislature were to select $x_L^1 = 1$, whether or not actions are revealed, the voter will retain

both politicians. In both instances, she knows that the politicians selected $x_i^1 = 1$ and it is Bayes' rational to retain them both. If the legislature selects $x_L^1 = -1$, its payoff is unchanged: $u_L(0; \beta_L, 1) = \beta_L$. Either the voter does not learn the legislature's individual choice and dismisses both politicians, or, she learns the legislature selected $x_L^1 = -1$ and dismisses it. Therefore, the cut point at which the legislature chooses between either strategy is the same as it is in the baseline model: $\beta_E = 1$. The executive earns a higher payoff in the latter case:

$$u_E(1, 1; \beta_E, \tau, 0, x_L^2) = \beta_E + \tau(\beta_E + \pi)$$

as he is retained, and this increases the voter's welfare. Whereas she would otherwise dismiss both politicians and net a second period payoff of $\gamma + \pi - 1$, now she retains the congruent executive and replaces the divergent legislature which leads to a second period payoff of $\pi > \gamma + \pi - 1$. The logic is quite similar when the legislature is congruent and the executive is divergent.

One other important change occurs when both agents are divergent. If the legislature chooses $x_L^1 = 1$, the executive chooses between $x_E^1 = 1$ with a payoff of $u_E(1, -1; \beta_E, 1, -1) = 2\beta_E$ and $x_E^1 = -1$ and a payoff of β_E as transparency reveals him to be the bad actor. Thus, if the legislature chooses $x_L^1 = 1$, so too does the executive. However, if the legislature chooses $x_L^1 = -1$, the executive can earn a higher payoff by choosing $x_E^1 = 1$ and causing gridlock when:

$$u_E(1, -1; \beta_E, \tau, -1, x_L^2) = \beta_E + \tau(\beta_E + 1 - \pi) \geq \beta_E + 1 = u_E(-1; \beta_E, -1)$$
$$\beta_E \geq \frac{1 - \tau + \tau\pi}{\tau}$$

Whereas the legislature's draw of β_L completely determined the outcome when both politicians were divergent in the baseline model, transparency now gives the office-motivated executive some leverage. When $\beta_E \geq \frac{1-\tau+\tau\pi}{\tau}$, the legislature will always choose $x_L^1 = 1$.

When $\beta_E < \frac{1-\tau+\tau\pi}{\tau}$, then the legislature chooses $x_L^1 = 1$ when $\beta_L \geq 1$ or $x_L^1 = -1$ otherwise. We can determine the probability with which β_E fails to achieve the cutoff by:

$$\Pr\left(\beta_E < \frac{1-\tau+\tau\pi}{\tau}\right) = \frac{\frac{1-\tau+\tau\pi}{\tau}}{\frac{3+\pi}{2}} = \frac{2(1-\tau+\tau\pi)}{\tau(3+\pi)}$$

For compactness, define $\eta \equiv \Pr\left(\beta_E < \frac{1-\tau+\tau\pi}{\tau}\right)$. One small complication is the fact that τ appears in the denominator of η such that for small τ, $\eta > 1$, which is not an admissible probability. If τ were too small, then it would be impossible for β_E to exceed η, at which point, the strategy set would change such that the divergent legislature would determine the outcome as in the baseline model. That value of τ can be calculated by determining when τ is small enough to cause the executive's cutpoint to exceed the maximum value of β_E, $\frac{3+\pi}{2}$:

$$\frac{1-\tau+\tau\pi}{\tau} > \frac{3+\pi}{2}$$
$$\tau < \frac{2}{5-\pi}$$

Depending on the value of π, this threshold is met when $\tau \in [4/9, 1/2]$. That is, when τ exceeds this threshold, then play proceeds as specified. When τ falls below this threshold, play continues precisely as it does in the baseline model when both politicians are divergent. The intuition is that when transparency is unlikely enough, the divergent executive does not find gridlock profitable. To ease the interpretation of the model, going forward, I will focus on two cases—one in which $\tau < 4/9$ and one in which $\tau > 1/2$, which has the effect of fixing the strategies for all values of π. For more information on the path of play, in Figure B1, I construct a first-period game tree with two-period payoffs and derive all payoffs for all type combinations in Table B1.

Before stating the new equilibrium fully, I will first show that the voter will adhere to the voting rules established at the beginning of this section. First, if she does not see the politician's individual actions, when she observers $x^1 = 1$, she will retain both agents, even when accounting for the change when both politicians are divergent. First,

if $\tau < 4/9$, strategies are exactly as they are in the baseline model and $\{\Pr(\theta_E = C|x^1 = 1), \Pr(\theta_E = L|x^1 = 1)\} > \{\gamma, \pi\}$. When $\tau > 1/2$:

$$\Pr(\theta_E = C|x^1 = 1) = \frac{\gamma\left(\pi + (1-\pi)\left(1 - \frac{2}{3+\pi}\right)\right)}{\gamma\left(\pi + (1-\pi)\left(1 - \frac{2}{3+\pi}\right)\right) + (1-\gamma)\left[\pi\left(1 - \frac{2}{3+\pi}\right) + (1-\pi)\left((1-\eta) + \eta\left(1 - \frac{2}{3+\pi}\right)\right)\right]} > \gamma$$

$\Pr(\theta_L = C|x^1 = 1)$ is constructed similarly and is also greater than π. Regardless of the value of τ, gridlock is observed with the same probability as in the baseline model, and enacting $x^1 = -1$ reveals that both politicians are divergent. If, on the other, the voter does observe the outcomes, she will retain all politicians that choose $x_i^1 = 1$ and replace politicians who chose $x_i^1 = -1$. As only divergent politicians choose $x_1^1 = -1$, the voting rule is sensible. When politicians choose $x_i^1 = 1$ and $\tau > 1/2$:

$$\Pr(\theta_E = C|x_E^1 = 1) = \frac{\gamma}{\gamma + (1-\gamma)\left[\pi\left(1 - \frac{2}{3+\pi}\right) + (1-\pi)\left((1-\eta) + \eta\left(1 - \frac{2}{3+\pi}\right)\right)\right]} > \gamma$$

and the logic for $\Pr(\theta_L = C|x_E^1 = 1)$ is similar. If $\tau < 4/9$:

$$\Pr(\theta_E = C|x_E^1 = 1) = \frac{\gamma}{\gamma + (1-\gamma)\left[\pi\left(1 - \frac{2}{3+\pi}\right) + (1-\pi)\left(1 - \frac{2}{3+\pi}\right)\right]} > \gamma$$

and the logic for $\Pr(\theta_L = C|x_E^1 = 1)$ is similar. Thus, the voting rule is Bayes' rational and the equilibrium is established.

Proposition 4. *(Constitutional Equilibrium with Transparency) There exists an equilibrium in which the voter reelects both politicians when $x^1 = 1$ and dismisses them otherwise in the absence of transparency; otherwise, she retains politicians who choose $x_i^1 = 1$ and dismisses them otherwise. Both politicians choose their type preferred policy in period two and in period one:*

a. If both politicians are congruent, they select policy $x_i^1 = 1$.

b. If $\theta_i = C$ and $\theta_j = D$, the congruent politician selects policy $x_i^1 = 1$. If $\beta_j \geq 1$, the divergent politician also selects $x_j^1 = 1$ and $x_j^1 = -1$ otherwise.

c. If both politicians are divergent, $\tau > 1/2$, and $\beta_E < \frac{1-\tau+\tau\pi}{\tau}$ and $\beta_L < 1$, both politicians select $x_i^1 = -1$ and $x_i^1 = 1$ otherwise.

d. If both politicians are divergent, $\tau < 4/9$, $\beta_L < 1$, both politicians select $x_i^1 = -1$ and $x_i^1 = 1$ otherwise.

When $\tau < 4/9$, voter welfare is given by:

$$\begin{aligned} W_C' \equiv & \gamma\pi \cdot 2 + \gamma(1-\pi)\left[\left(1 - \frac{2}{3+\pi}\right) + \left(\frac{2}{3+\pi}\right)((1-\tau)(\gamma+\pi-1)+\tau\pi)\right] \\ & (1-\gamma)\pi\left[\left(1 - \frac{2}{3+\pi}\right) + \left(\frac{2}{3+\pi}\right)((1-\tau)(\gamma+\pi-1)+\tau\gamma)\right] + \\ & (1-\gamma)(1-\pi)\left[\left(\frac{2}{3+\pi}\right)(\gamma+\pi-2)\right] \end{aligned} \tag{B2}$$

When $\tau > 1/2$, voter welfare is given by:

$$\begin{aligned} W_C'' \equiv & \gamma\pi \cdot 2 + \gamma(1-\pi)\left[\left(1 - \frac{2}{3+\pi}\right) + \left(\frac{2}{3+\pi}\right)((1-\tau)(\gamma+\pi-1)+\tau\pi)\right] \\ & (1-\gamma)\pi\left[\left(1 - \frac{2}{3+\pi}\right) + \left(\frac{2}{3+\pi}\right)((1-\tau)(\gamma+\pi-1)+\tau\gamma)\right] + \\ & (1-\gamma)(1-\pi)\left[\eta\left(\frac{2}{3+\pi}\right)(\gamma+\pi-2)\right] \end{aligned} \tag{B3}$$

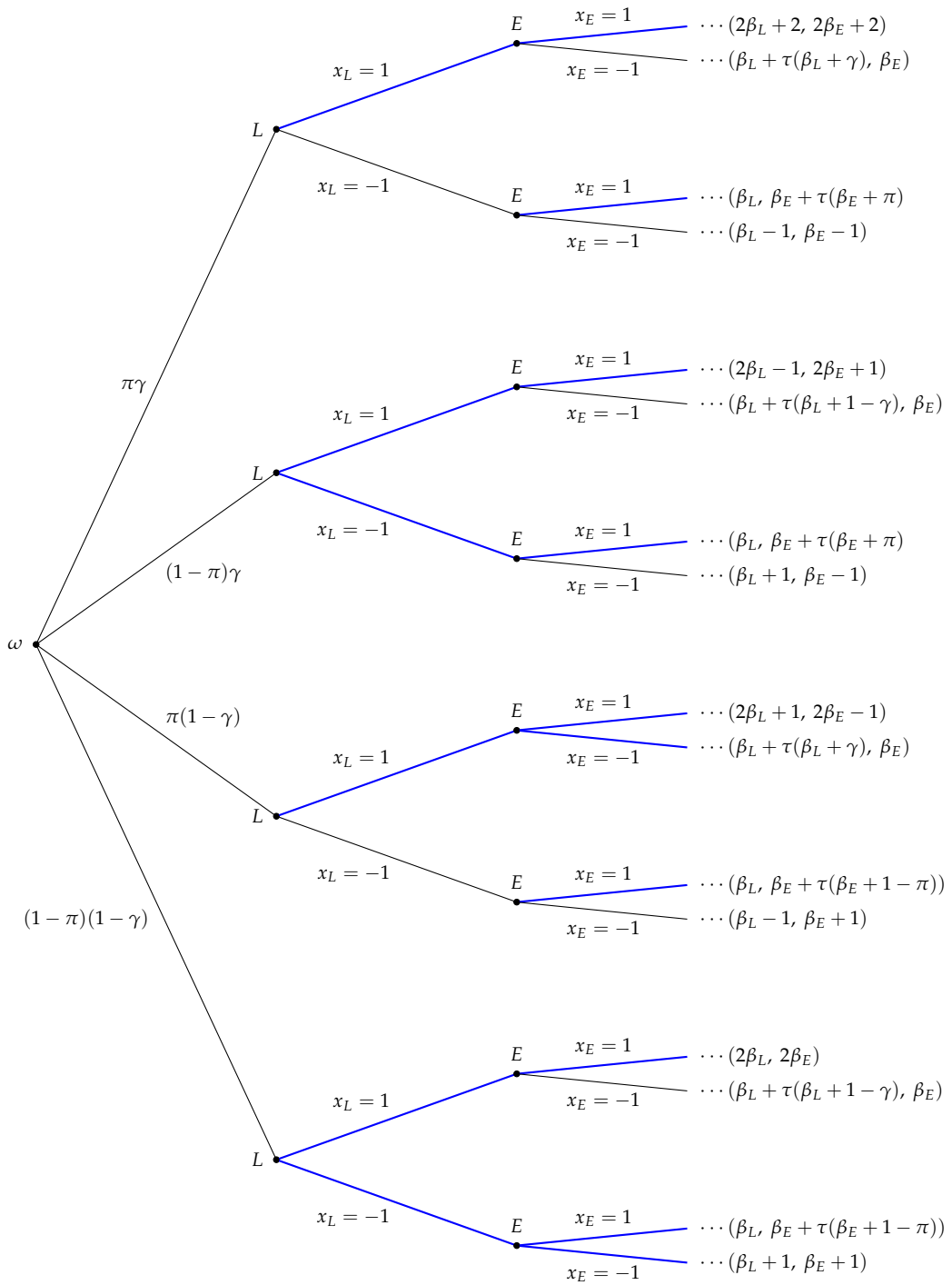

Figure B1: First period game tree and final payoffs following the voter's electoral decision and second period policy selections in the Constitutional Regime with transparency.

Table B1: Payoffs for the Constitutional Regime with Revealed Actions

Type Combination	t_1 Action	t_1 Policy	t_1 Payoff	Voter's Electoral Decision	t_2 Action	t_2 Policy	t_2 Payoff	Total Payoff
$\theta_L = C$, $\theta_E = C$	$x_L^1 = 1$ $x_E^1 = 1$	$x_1 = 1$	$\beta_L + 1$ $\beta_E + 1$	Reelect Both	$x_L^2 = 1$ $x_E^2 = 1$	$x_2 = 1$	$\beta_L + 1$ $\beta_E + 1$	$2\beta_L + 2$ $2\beta_E + 2$
	$x_L^1 = 1$ $x_E^1 = -1$	$x_1 = 0$	β_L β_E	Reelect L with $\Pr(\tau)$, Replace E	$x_L^2 = 1$ $x_C^2 \in \{-1, 1\}$	$x_2 \in \{0, 1\}$	$\tau(\beta_L + \gamma \cdot 1 + (1 - \gamma)(0))$	$\beta_L + \tau(\beta_L + \gamma)$ β_E
	$x_L^1 = -1$ $x_E^1 = 1$	$x_1 = 0$	β_L β_E	Replace L, Reelect E with $\Pr(\tau)$	$x_C^2 \in \{-1, 1\}$ $x_E^2 = 1$	$x_2 \in \{0, 1\}$	$\tau(\beta_E + \pi \cdot 1 + (1 - \pi) \cdot 0)$	β_L $\beta_E + \tau(\beta_E + \pi)$
	$x_L^1 = -1$ $x_E^1 = -1$	$x_1 = -1$	$\beta_L - 1$ $\beta_E - 1$	Replace Both				$\beta_L - 1$ $\beta_E - 1$
$\theta_L = D$, $\theta_E = C$	$x_L^1 = 1$ $x_E^1 = 1$	$x_1 = 1$	$\beta_L - 1$ $\beta_E + 1$	Reelect Both	$x_L^2 = -1$ $x_E^2 = 1$	$x_2 = 0$	β_L β_E	$2\beta_L - 1$ $2\beta_E + 1$
	$x_L^1 = 1$ $x_E^1 = -1$	$x_1 = 0$	β_L β_E	Reelect L with $\Pr(\tau)$, Replace E	$x_L^2 = -1$ $x_C^2 \in \{-1, 1\}$	$x_2 \in \{-1, 0\}$	$\tau(\beta_L + \gamma \cdot 0 + (1 - \gamma) \cdot 1)$	$\beta_L + \tau(\beta_L + 1 - \gamma)$ β_E
	$x_L^1 = -1$ $x_E^1 = 1$	$x_1 = 0$	β_L β_E	Replace L, Reelect E with $\Pr(\tau)$	$x_C^2 \in \{-1, 1\}$ $x_E^2 = 1$	$x^2 \in \{0, 1\}$	$\tau(\beta_E + \pi \cdot 1 + (1 - \pi) \cdot 0)$	β_L $\beta_E + \tau(\beta_E + \pi)$
	$x_L^1 = -1$ $x_E^1 = -1$	$x_1 = -1$	$\beta_L + 1$ $\beta_E - 1$	Replace Both				$\beta_L + 1$ $\beta_E - 1$
$\theta_L = C$, $\theta_E = D$	$x_L^1 = 1$ $x_E^1 = 1$	$x_1 = 1$	$\beta_L + 1$ $\beta_E - 1$	Reelect Both	$x_L^2 = 1$ $x_E^2 = -1$	$x_2 = 0$	β_L β_E	$2\beta_L + 1$ $2\beta_E - 1$
	$x_L^1 = 1$ $x_E^1 = -1$	$x_1 = 0$	β_L β_E	Reelect L with $\Pr(\tau)$, Replace E	$x_L^2 = 1$ $x_C^2 \in \{-1, 1\}$	$x_2 \in \{0, 1\}$	$\tau(\beta_L + \gamma \cdot 1 + (1 - \gamma) \cdot 0)$	$\beta_L + \tau(\beta_L + \gamma)$ β_E
	$x_L^1 = -1$ $x_E^1 = 1$	$x_1 = 0$	β_L β_E	Replace L, Reelect E with $\Pr(\tau)$	$x_C^2 \in \{-1, 1\}$ $x_E^2 = -1$	$x_2 \in \{-1, 0\}$	$\tau(\beta_E + \pi \cdot 0 + (1 - \pi) \cdot 1)$	β_L $\beta_E + \tau(\beta_E + 1 - \pi)$
	$x_L^1 = -1$ $x_E^1 = -1$	$x_1 = -1$	$\beta_L - 1$ $\beta_E + 1$	Replace Both				$\beta_L - 1$ $\beta_E + 1$
$\theta_L = D$, $\theta_E = D$	$x_L^1 = 1$ $x_E^1 = 1$	$x_1 = 1$	$\beta_L - 1$ $\beta_E - 1$	Reelect Both	$x_L^2 = -1$ $x_E^2 = -1$	$x_2 = -1$	$\beta_L + 1$ $\beta_E + 1$	$2\beta_L$ $2\beta_E$
	$x_L^1 = 1$ $x_E^1 = -1$	$x_1 = 0$	β_L β_E	Reelect L with $\Pr(\tau)$, Replace E	$x_L^2 = -1$ $x_C^2 \in \{-1, 1\}$	$x_2 \in \{-1, 0\}$	$\tau(\beta_L + \gamma \cdot 0 + (1 - \gamma) \cdot (-1))$	$\beta_L + \tau(\beta_L + 1 - \gamma)$ β_E
	$x_L^1 = -1$ $x_E^1 = 1$	$x_1 = 0$	β_L β_E	Replace L, Reelect E with $\Pr(\tau)$	$x_C^2 \in \{-1, 1\}$ $x_E^2 = -1$	$x_2 \in \{-1, 0\}$	$\tau(\beta_E + \pi \cdot 0 + (1 - \pi) \cdot 1)$	β_L $\beta_E + \tau(\beta_E + 1 - \pi)$
	$x_L^1 = -1$ $x_E^1 = -1$	$x_1 = -1$	$\beta_L + 1$ $\beta_E + 1$	Replace Both				$\beta_L + 1$ $\beta_E + 1$

B.1.3 The Unilateral Regime

I solve the game by backward induction. In the second period, the politicians do not need to stand for election. Lemma 1 still applies, so the executive's type perfectly determines second period policy. A congruent executive will enact $x_E^2 = 1$ legislatively if the legislature is congruent and unilaterally if the legislature is divergent. A similar logic holds for a divergent executive.

As in the Constitutional Regime with transparency, the voter will condition her voting rule on whether or not the politicians individual actions are revealed. If not, then her voting rule is as established in Definition 2. If actions are revealed, then the voter has the potential to learn more about her agents' types in gridlock or when unilateral action is chosen (recall that in the baseline model, the voter can infer the executive's choice through unilateral action but does not observe what the executive or legislator individually chose). With transparency, the voter conditions reelection on the individual actions (both policy and unilateral action for the executive)—keeping politicians who choose $x_i^1 = 1$ and dismissing those who choose $x_i^1 = -1$. Although this voting strategy caused some changes in the Constitutional Regime, as I will show, unilateral action allows the congruent executive to avoid gridlock entirely, which rules it out as a possible strategy for divergent executives. As such, the strategies (and thus voter welfare) under the Unilateral Regime follows from the baseline model.

To see this, first consider the case of a congruent executive. If the legislature is also congruent, then it is strictly dominant to legislatively enact $x^1 = 1$. If the legislature is divergent and is office-motivated, then the executive will choose $x_E^1 = 1$ legislatively, both politicians will be reelected, and then the executive will unilaterally enact the same policy in the second period. If the legislature is policy-motivated and chooses $x_L^1 = 1$, then the executive will choose to unilaterally enact $x_E^1 = 1$. In the baseline model without transparency, this decision leads the voter to update unfavorably about the legislature. However, transparency does nothing to change the voter's inferences. If the voter observes

the legislature's action in this case, she will learn that the legislature chose $x_L^1 = -1$ and dismiss her with certainty. As in the baseline model, the legislator's cut point on this decision occurs at $\beta_L = 1$.

Now consider the cases when the executive is divergent. If the legislature is congruent, it will select $x_L^1 = 1$ and the executive will choose between $x_E^1 = 1, \alpha^1 = 0$ or $x_E^1 = -1, \alpha^1 = 1$, choosing the former when $\beta_E \geq 1$ as in the baseline model. Finally, when both politicians are divergent, if the legislator selects $x_L^1 = 1$, then the executive is office-motivated and chooses $x_E^1 = 1, \alpha^1 = 0$ when $\beta > 1/2$, or he is policy-motivated and chooses $x_E^1 = -1, \alpha^1 = 1$ otherwise. If the legislature chooses $x_L^1 = -1$, the executive must choose $x_E^1 = -1, \alpha^1 = 0$ unlike in the Constitutional Regime where he may choose gridlock based on the value of τ. This must be the case because if the divergent executive chooses gridlock (which could provide a higher payoff if he is especially policy-motivated), he will reveal that he is divergent; the congruent executive is always able to use unilateral action to circumvent gridlock, which is not the case in the Constitutional Regime and is what allows for more interesting behavior there.

Thinking about Bayesian updating in this context is quite straightforward. As the strategies are the same (and occur with the same frequency) as in the baseline model, when the voter does not observe individual actions, then her voting rule is rational. If the voter observes individual actions, this should only matter in the context of gridlock (which does not occur in equilibrium) or unilateral action. The policy $x^1 = 1$ is only ever unilaterally enacted when the executive is congruent and the legislature is divergent, so learning the individual actions does nothing to change the voter's inferences. When $x^1 = -1$ and $\alpha^1 = 1$, then the executive is certainly divergent and learning individual actions does not change that. Further, the voter assumes the legislator is congruent despite the fact that this situation can occur either when the legislature is congruent or divergent and office-motivated. However, the executive only chooses $x^1 = -1, \alpha^1 = 1$ if the legislature (or either type) chooses $x_L^1 = 1$, and so learning individual actions does nothing to

change the voter's inferences. As in the baseline model, the equilibrium refinement criteria requires that were the voter to see gridlock, she would dismiss both politicians. The refinement requires that she dismiss the legislature, and only a divergent executive could be incentivized to choose gridlock. Thus, Proposition 2 holds even under transparency, and τ never enters the voter's welfare function, so it is the same as it is in Equation 2.

B.1.4 Welfare Comparison

To determine when voter welfare is higher under the Unilateral Regime, we must consider the cases when $\tau < 4/9$ and $\tau > 1/2$. Consider, the former case. Define $\Delta'(\gamma, \pi, \tau) \equiv W_U - W'_C$, which is Equation A3 − Equation B3:

$$\begin{aligned} &W_U - W'_C = \\ &\frac{2\gamma^2(\pi(-(2\pi+5)\tau+2\pi+1)+3\tau-7)+\gamma\left(-\pi^2(1-6\tau)+2\pi^3+16\pi\tau-6\tau+31\right)}{(\pi+3)^2} - \\ &\frac{\pi(\pi(\pi+2\tau+6)+6\tau+15)-2}{(\pi+3)^2} \\ &\equiv \Delta'(\gamma, \pi, \tau) \end{aligned} \tag{B4}$$

Of particular interest is:

$$\frac{\partial \Delta'(\gamma, \pi, \tau)}{\partial \tau} = \frac{2\gamma^2((-2\pi-5)\pi+3)+\gamma\left(6\pi^2+16\pi-6\right)-\pi(2\pi+6)}{(\pi+3)^2} < 0$$

Thus, increasing transparency reduces welfare under the Unilateral Regime relative to the Constitutional Regime as expected. To develop some intuition about whether transparency can reverse the conclusions of the baseline model (put simply, can increasing τ ever cause $\Delta'(\gamma, \pi, \tau) \leq 0$ when $\pi = \gamma$ and $\max\{\tau\} = 4/9$)?

$$\Delta'(\gamma = \pi, \pi, \tau = 4/9) = \frac{2(\pi-1)^2\left(19\pi^2+30\pi-9\right)}{9(\pi+3)^2} > 0$$

which is always positive. Therefore, we have for any $\tau < 4/9$, the conclusions of the baseline model—that the Unilateral Regime is *ex ante* preferable—hold.

Next, define $\Delta''(\gamma, \pi) \equiv W_U - W_C''$, which is Equation A3 − Equation B3 for $\tau > 1/2$:

$$
\begin{aligned}
&W_U - W_C'' = \\
&-2\gamma^2\left(\pi^2\tau(2\tau-1)+\pi\left(5\tau^2-7\tau+2\right)-3\tau^2+12\tau-2\right)+\gamma \\
&\left(\pi^2\left(6\tau^2+17\tau-4\right)+2\pi\left(8\tau^2-23\tau+8\right)-6\tau^2+61\tau-12\right)-2\pi^2\left(\tau^2+11\tau-2\right)+\pi^3\tau+\pi \\
&\left(-6\tau^2+19\tau-12\right)-22\tau+8\Big/(\pi+3)^2\tau \\
&\equiv \Delta''(\gamma,\pi,\tau)
\end{aligned}
\tag{B5}
$$

Of interest is the first derivative with respect to τ:

$$\frac{\partial\Delta''(\gamma,\pi,\tau)}{\partial\tau} = \frac{2(\gamma-1)\left(2(\pi-1)(\gamma+\pi-2)-(\pi+3)\tau^2(\gamma(2\pi-1)-\pi)\right)}{(\pi+3)^2\tau^2} < 0$$

As expected, increasing transparency decreases welfare in the Unilateral Regime as compared to the Constitutional Regime. However, $\Delta''(\gamma = \pi, \pi, \tau) \leq 0$ in some cases. Consider, for example, $\Delta''(0.5, 0.5, \tau)$, which should indicate the case when transparency is most likely to increase Constitutional welfare relative to Unilateral welfare:

$$\Delta''(0.5,0.5,\tau) = \frac{1}{98}\left(-14\tau+\frac{8}{\tau}-7\right) \leq 0$$
$$\tau \geq \frac{1}{28}(\sqrt{497}-7) \approx 0.55$$

which tells us that the Constitutional Regime is *ex-ante* preferable when $\tau > 0.55$.

To investigate this relationship graphically, in Figure B2, I plot $\tilde{\gamma}''(\pi, \tau)$ at different levels of τ, which is constructed by setting $W_C'' = W_U$ and solving for γ. The x-axis is π, the prior on legislative congruence, and the y-axis is γ, the prior on executive congruence. I also plot the 45-degree line ($\gamma = \pi$), which represents the case in which preferences for

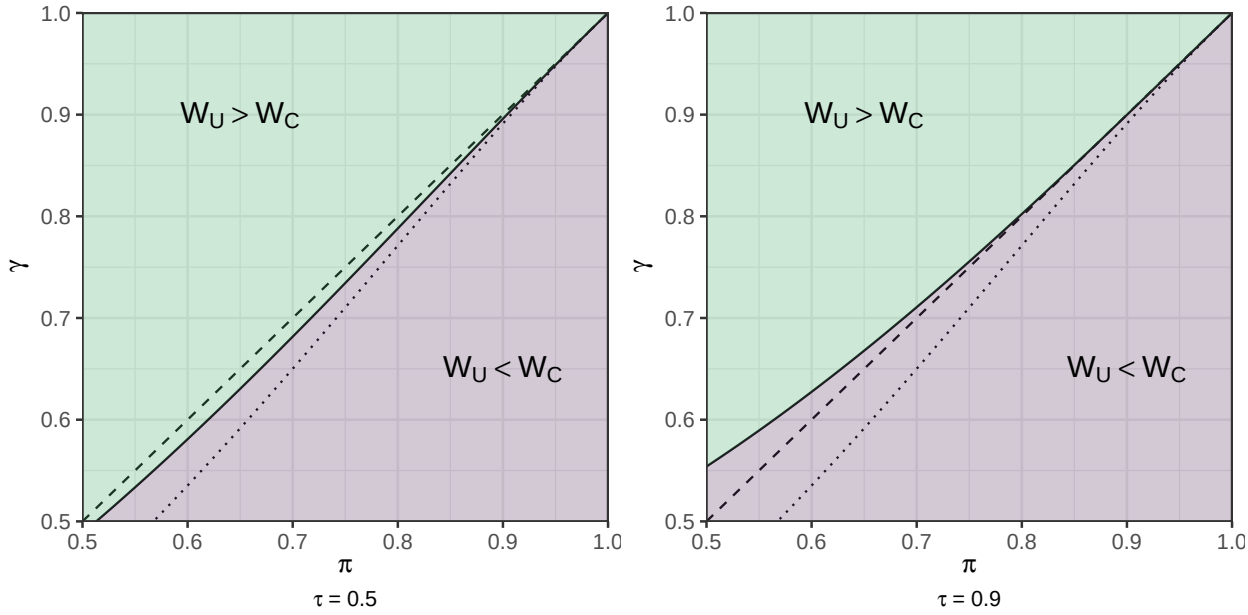

Figure B2: A comparison of voter welfare between the Constitutional Regime and Unilateral Regime with transparency. The x-axis tracks π, the prior on legislature congruence, while the y-axis plots γ, the prior on executive congruence at various levels of τ, transparency. The solid line tracks $\tilde{\gamma}''(\pi, \tau)$, the threshold at which the voter is indifferent between either regime type. The area above (below) the curve indicates when the voter would prefer the Unilateral (Constitutional) Regime. The dashed line is the 45-degree line, which represents a benchmark case where preferences over separation of powers follow directly from the priors on congruence and the dotted line is $\tilde{\gamma}(\pi)$ from the baseline model. For moderate values of τ, the $\tilde{\gamma}''(\pi, \tau)$ falls below the 45-degree line, indicating that it is the preferable regime type. Even for extreme values of τ, the Constitutional Regime is only marginally more preferable when γ and π are close and low.

separation of powers follow directly from the priors on political congruence.

As in the baseline model, the Constitutional Regime is preferable when $\pi >> \gamma$ and vice versa for the Unilateral Regime. When τ is moderate, the Unilateral Regime still provides higher welfare when π and γ are close; $\tilde{\gamma}(\pi, \tau)$ falls below the 45-degree line indicating that the Unilateral Regime is *ex ante* preferable. Even for extreme values of τ, the Unilateral Regime may still be preferable when γ and π are close but large, however, it is not the case when γ and π are small.

B.2 Asymmetric Costs

In this section, I relax the assumption that the voter's payoffs from policy, $x^t = 1$ and $x^t = -1$, are symmetric around the status quo at $x^t = 0$. Suppose the politicians' utility functions are equivalent to the baseline model while the voter's per-period utility function is given by:

$$u_V(x^t, c) = \begin{cases} 1 & \text{if } x^t = 1 \\ c & \text{if } x^t = -1 \end{cases}$$

where $c < 1$. Thus, $c > 0$ represents a situation in which any movement is better than maintaining the status quo and $c < -1$ represents a situation in which the voter's least preferred policy may be costlier than their preferred policy benefits them.

As the politicians utility functions, and thus strategies, do not change, we need only examine the voter's welfare equations to determine how this shapes preferences over regime type. Generalizing Equation A2, we can calculate the voter's welfare in the Constitutional Regime as:

$$\begin{aligned} &W_C^{\dagger} \equiv \gamma\pi \cdot 2 + \\ &\gamma(1-\pi)\left[\left(\frac{2}{3+\pi}\right)(\gamma\pi + (1-\gamma)(1-\pi)(-c)) + \left(1 - \left(\frac{2}{3+\pi}\right)\right)\cdot 1\right] + \\ &(1-\gamma)\pi\left[\left(\frac{2}{3+\pi}\right)(\gamma\pi + (1-\gamma)(1-\pi)(-c)) + \left(1 - \left(\frac{2}{3+\pi}\right)\right)\cdot 1\right] + \\ &(1-\gamma)(1-\pi)\left[\left(\frac{2}{3+\pi}\right)(-c + \gamma\pi + (1-\gamma)(1-\pi)c) + \left(1 - \left(\frac{2}{3+\pi}\right)\right)\cdot (1-c)\right] \end{aligned} \tag{B6}$$

And similarly for the Unilateral Regime from Equation A3:

$$
\begin{aligned}
&W_U^\dagger \equiv \gamma\pi \cdot 2 + \\
&\gamma(1-\pi)[\left(\frac{2}{3+\pi}\right)(1+\pi\cdot 1+(1-\pi)\cdot 1)+\left(1-\frac{2}{3+\pi}\right)(1+1)]+ \\
&(1-\gamma)\pi[\left(\frac{2}{3+\pi}\right)(-c+\gamma\cdot 1+(1-\gamma)(-c))+\left(1-\frac{2}{3+\pi}\right)(1-c)]+ \\
&(1-\gamma)(1-\pi)\Bigg[\left(1-\frac{2}{3+\pi}\right)\left(1-\frac{1}{3+\pi}\right)(1-c)+ \\
&\left[1-\left(1-\frac{2}{3+\pi}\right)\left(1-\frac{1}{3+\pi}\right)\right](-c+\gamma\cdot 1+(1-\gamma)(-c))\Bigg]
\end{aligned}
\tag{B7}
$$

Then, define $\Delta^\dagger(\gamma,\pi,c) \equiv W_U^\dagger - W_C^\dagger$ where:

$$
\begin{aligned}
\Delta^\dagger(\gamma,\pi,c) \equiv &\frac{c(1-\gamma)(-\gamma(7-\pi(4-\pi(2\pi+3)))+\pi(\pi(\pi+7)+15)+1)}{(\pi+3)^2}+ \\
&\frac{(1-\pi)(-\gamma(-\gamma(\pi+1)(2\pi+7)+\pi(\pi+12)+23)+\pi+1)}{(\pi+3)^2}
\end{aligned}
$$

As expected, $\Delta^\dagger(\gamma,\pi,c)$ is decreasing in c:

$$
\frac{\partial\Delta^\dagger(\gamma,\pi,c)}{\partial c} = -\frac{(1-\gamma)(1-7\gamma+15\pi+4\gamma\pi+7\pi^2-3\gamma\pi^2+\pi^3-2\gamma\pi^3)}{(\pi+3)^2} < 0
$$

To see this, notice that $1+15\pi$ is larger than all the negative terms combined for all values of γ and π. As $-c$ becomes larger, the voter bears a larger cost when her least preferred policy is enacted, thus the Constitutional Regime becomes increasing preferable for a larger range of the parameter space.

To investigate this relationship graphically, I plot $\tilde{\gamma}^\dagger(\pi,c)$ (a function constructed by setting $W_U^\dagger = W_C^\dagger$ and solving for γ) in Figure B3. On the right, I plot this function when $c = -0.5$, which shows that the Unilateral Regime provides higher welfare under broader conditions than in the baseline model. On the left, I set $c = -2$, which shows that for moderate asymmetry of costs, the conclusions of the baseline model no longer hold. Normatively, Figure B3 may underscore the differences between arguments like

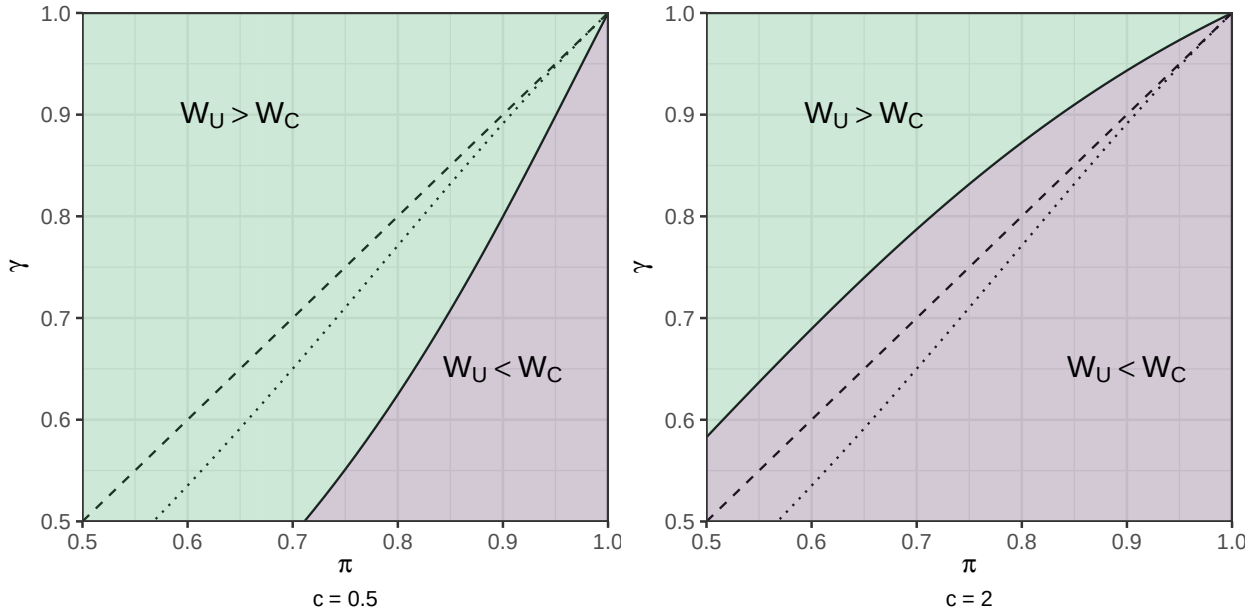

Figure B3: A comparison of voter welfare between the Constitutional Regime and Unilateral Regime with asymmetric costs. The x-axis tracks π, the prior on legislature congruence, while the y-axis plots γ, the prior on executive congruence at various levels of c, the cost the voter bears when her least favorite policy is enacted. The solid line tracks $\tilde{\gamma}^{\dagger}(\pi, c)$, the threshold at which the voter is indifferent between either regime type. The area above (below) the curve indicates when the voter would prefer the Unilateral (Constitutional) Regime. The dashed line is the 45-degree line, which represents a benchmark case where preferences over separation of powers follow directly from the priors on congruence and the dotted line is $\tilde{\gamma}(\pi)$ from the baseline model. For moderate values of $c > 1$, the $\tilde{\gamma}^{\dagger}(\pi, c)$ falls below the 45-degree line, indicating that it is the preferable regime type. However, for modestly negative values of c, here $c = 2$, the Constitutional Regime is preferable when γ and π are close.

Howell and Moe (2016), who argue that any solution is superior to the status quo, and the Founders, who were more skeptical of change.

B.3 Generic Distribution of β_i and Varying Cost of Unilateral Action

In this extension, I relax the assumption that $\beta_i \sim \mathcal{U}[0, (3+\pi)/2]$ as well as the assumption that the cost of unilateral action is $1/2$. Instead, suppose that β_i is drawn from any strictly increasing CDF with support $[0, (3+\pi)/2]$ and that the cost of unilateral action is given by $\kappa \in (0, 1)$.

Despite these changes, the underlying structure of the game has not changed. First,

the politicians already had perfect information about their own and the other politicians office-holding benefit. Changing the underlying distribution changes voter welfare, but not the agents' strategic choices. Second, for any $\kappa \in (0,1)$, Lemma 1 still holds—the executive will always use unilateral action in the second period when the legislature does not share his type.

Before proceeding to the voter welfare calculation, however, we need to establish two definitions regarding the cut points. First, let $\phi \equiv F_\beta(1)$ and $\psi \equiv F_\beta(1-\kappa)$. The latter replaces $\Pr(\beta_i < 1/2)$ from the baseline model. Also note that because F_β is strictly increasing, $\psi \leq \phi$. Now we are ready to define $W_C^\ddagger$ as:

$$\begin{aligned} W_C^\ddagger \equiv & \gamma\pi \cdot 2 + \gamma(1-\pi)\left[\phi(\gamma+\pi-1) + (1-\phi)\cdot 1\right] + \\ & (1-\gamma)\pi\left[\phi(\gamma+\pi-1) + (1-\phi)\cdot 1\right] + (1-\gamma)(1-\pi)\left[\phi(-1+\gamma+\pi-1)\right] \end{aligned} \tag{B8}$$

and $W_U^\ddagger$ as:

$$\begin{aligned} W_U^\ddagger \equiv & \gamma\pi \cdot 2 + \gamma(1-\pi)[\phi(1+\pi\cdot 1+(1-\pi)\cdot 1) + (1-\phi)\,(1+1)] + \\ & (1-\gamma)\pi[\phi(-1+\gamma\cdot 1+(1-\gamma)\cdot(-1)) + (1-\phi)\,(1-1)] + \\ & (1-\gamma)(1-\pi)\left[\phi\,(1-\psi)\,(2\gamma-2) + (\psi)\,(2\gamma-2)\right] \end{aligned} \tag{B9}$$

Define $\Delta^\ddagger(\gamma,\pi,\phi,\psi) \equiv W_U^\ddagger - W_C^\ddagger$, which is equal to:

$$\begin{aligned} & \Delta^\ddagger(\gamma,\pi,\phi,\psi) \equiv \gamma^2(-\phi(-2\eta(1-\pi)-\pi+2) - 2\eta(1-\pi)) + \\ & \gamma(\phi(\eta(4\pi-4)+(\pi-2)\pi+3) + 4\eta(1-\pi)+1) - 2(1-\phi)\eta \end{aligned}$$

From the first derivative with respect to ψ, we see that $\Delta^\ddagger(\gamma,\pi,\phi,\psi)$ is decreasing in ψ, that is, the more likely $\beta_E < 1-\kappa$, the welfare under the Unilateral Regime decreases

relative to the Constitutional Regime:

$$\frac{\partial \Delta^{\ddagger}(\gamma,\pi,\phi,\psi)}{\partial \psi} = -\gamma^2(2(1-\pi)-2\phi(1-\pi))-\gamma(4\phi(1-\pi)+4\pi-4)-2(\phi\pi-\phi-\pi+1) < 0$$

The effect of ϕ is less certain. When π is larger, increasing ϕ decreases welfare under the Unilateral Regime relative to the Constitutional Regime, but increasing ϕ when π is low has the opposite effect.

$$\frac{\partial \Delta^{\ddagger}(\gamma,\pi,\phi,\psi)}{\partial \phi} = -\gamma^2(-2\psi(1-\pi)-\pi+2)-\gamma(4\psi(1-\pi)+(2-\pi)\pi-3)-2\psi(\pi-1)-\pi$$

In Figure B4, I plot $\tilde{\gamma}^{\ddagger}(\pi,\phi,\psi)$, which is constructed by setting $W_U^{\ddagger} = W_C^{\ddagger}$ and solving for γ, at varying levels of ϕ. The variable ϕ is the probability that divergent types will separate in the first period, and is similar to the probability of gridlock. For all levels of ϕ, the Unilateral Regime is the *ex ante* preferred regime as $\tilde{\gamma}^{\ddagger}(\pi,\phi,\psi) \leq \gamma$. As ϕ increases, two things happen. In the Constitutional Regime, first-period gridlock is more likely, however, in the the Unilateral Regime, the divergent executive is more likely to enact $x^1 = -1$ unilaterally. The loss from the former effect is generally larger than the loss from the latter effect, and so increasing ϕ increases welfare in the Unilateral Regime relative to the Constitutional Regime.

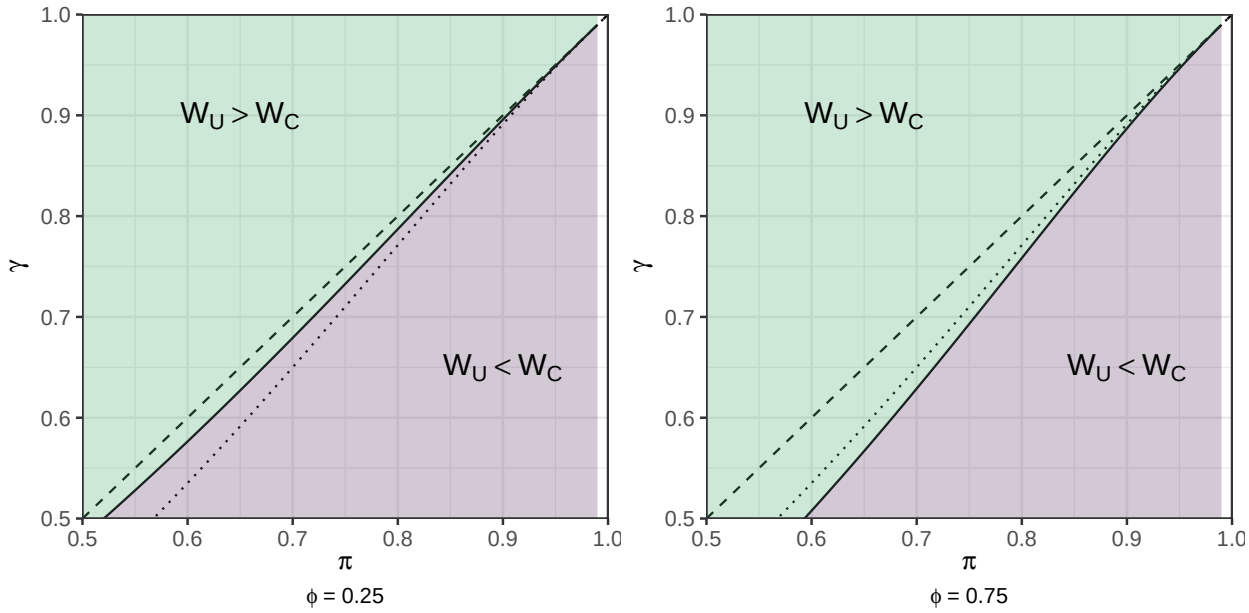

Figure B4: A comparison of voter welfare between the Constitutional Regime and Unilateral Regime with non-uniform β_i. The x-axis tracks π, the prior on legislature congruence, while the y-axis plots γ, the prior on executive congruence at various levels of ϕ, the probability with which divergent politicians are policy motivated. The solid line tracks $\tilde{\gamma}^{\ddagger}(\pi, \phi, \psi)$, the threshold at which the voter is indifferent between either regime type. The area above (below) the curve indicates when the voter would prefer the Unilateral (Constitutional) Regime. The dashed line is the 45-degree line, which represents a benchmark case where preferences over separation of powers follow directly from the priors on congruence and the dotted line is $\tilde{\gamma}(\pi)$ from the baseline model. For low to moderate values of ϕ, the Unilateral Regime is modestly *ex-ante* preferable when π and γ are close. For larger ϕ, welfare under the Unilateral Regime equals and even exceeds the baseline model. Note $\psi = 0.2$.