# Pick Your Poison (and Antidote): The Effects and Counter Effects of Legislative Institutions

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#### **Abstract**

In many legislatures, one individual or faction has the option to use rules or coercion to completely impose their will on the opposition; to cut them entirely out of any formal role in the legislative process. Yet, examples abound in both democracies and dictatorships where the opposition is afforded at least some institutional role in the process of making law. Why is this allowed? Previous scholarship has primarily pointed to the benefits of letting the opposition play a role. In this paper, we instead consider the costs of legislative inclusion and model how those in power can minimize those costs. By modeling the relative effects of procedural "poisons" and "antidotes"-that is, legislative powers like the right to propose, the ability to amend, and the veto-we offer a richer foundation on which to derive hypotheses about the (1) conditions under which leaders will be more and less likely to grant legislative power to opposition actors, and (2) the particular constellations of leader and opposition legislative power that should show up most commonly across legislatures. While this study has implications for the study of democratic legislatures, we expect it to be most useful as scholars work to better understand the dynamics of legislatures in dictatorships.

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## 1 Introduction

In many legislatures, one individual or faction has the option to use rules or coercion to completely impose their will on the opposition;<sup>1</sup> to cut them entirely out of any formal role in the process of making law. In most democratic legislatures, there is a majority party or coalition and only a simple majority is required to change the rules of the legislature. More apparently, in dictatorships, the very existence of the legislature is often subject to the will of the leader. Yet, examples abound in both democracies and dictatorships where the opposition is afforded at least some institutional role in the process of making law. Why is this allowed?

Previous scholarship has primarily pointed to the benefits of letting the opposition play a role. Specifically, in democracies, there may be public audiences who would punish those in power for fully excluding their opposition on grounds that it is "unfair" or "undemocratic" (Fortunato, Provins, and Monroe 2019). In dictatorships, benefits of opposition inclusion range from securing a supporting coalition (Svolik 2012) or mollifying potential threats to power (Gandhi 2008) to satisfying an international audience so that aid or foreign investment (Levitsky and Way 2010) is more likely. Implicitly, all of these arguments suppose that these benefits must be sufficiently large to outweigh whatever costs the leaders pay,<sup>2</sup> presumably in terms of suboptimal policy outputs that result from granting the minority institutional tools. Yet, to this point, those costs have not been clearly articulated. How big are these policy losses and how–if at all–can leaders avoid them?

In this paper, we engage these issues directly by developing the theoretical concept of "procedural poisons and antidotes." We argue policy loss accrued due to "procedural poisons"-legislative procedures given to the opposition to play a role in the process of making law- can be managed by "procedural antidotes"- legislative procedures that allow those in power to recover policy losses." That is, we consider the theoretical policy loss that is expected to accrue

<sup>&</sup>lt;sup>1</sup>By 'the opposition', we mean an individual or a group that is perceived to have different policy preferences from ones of those in power. In democracies, a minority party/non-coalition party can be an example while a non-regime party can be an example.

<sup>&</sup>lt;sup>2</sup>By 'leaders', we mean the individuals or factions that have the option of creating or using rules or coercion to completely impose their will on a decision-making process.

to the leader under several common types of legislative power (e.g., proposal power, amendment power, and veto power) and then consider which powers the leader would need to retain to minimize policy loss in each case. Some of these antidotes are more effective than others; in some cases, leaders can theoretically eliminate policy loss, while in others the antidote is less effective. Importantly, we show that leaders are much better off, in absolute terms, when they are able to make the first proposal, but can much more effectively nullify the effects of opposition legislative powers when the opposition makes the first proposal.

We model variants of legislative institutional arrangements using spatial models and show that when the leader has first proposal power, her policy utility suffers significantly larger deficits when the opposition has the power to amend than when the opposition can offer a "second" proposal after the leader passes. Thus, when the leader has first proposal power, she will almost surely pick the second-proposal poison if given the option. Further, we find that the worst case scenario when the leader retains the ability to propose first is equivalent to the best case scenario when the leader concedes that legislative power to the opposition. The model results also suggest that if a leader is forced to give up first proposal power, a combination of all three antidotes–amendment power, second proposal power, and veto power–can significantly mitigate her policy losses.

By understanding the relative effects of these "poisons" and "antidotes," scholars should have a richer foundation on which to derive hypotheses about the (1) conditions under which leaders will be more and less likely to grant legislative power to opposition actors, and (2) the particular constellations of leader and opposition legislative power that should show up most commonly across legislatures. While this has implications for the study of democratic legislatures, we expect it to be most useful as scholars work to better understand the dynamics of legislatures in dictatorships.

#### 2 Literature

Some of the earliest formal work on legislative procedure, found in the social choice tradition, explores various rules to aggregate a collection of individual preferences into a decision of the group as a whole. Acknowledging the difficulty in producing a collective decision (Arrow 1950, Banks 1995, Condorcet 1994, McKelvey 1976), scholars have explored various preference aggregation rules, including social choice functions (Fishburn 1970, Riker 1982, Sen 1970) and voting rules (Black et al. 1958, McKelvey 1976, 1979, Nurmi 1987, Saari 1994, Straffin 1980).

More recently, the formal literature on legislative procedure–housed in the New Institutionalism—has intended to develop formal models of law-making process that focuses on combinations of institutional arrangements found in specific legislatures. Committee power and distributive politics in the House provide the foundation for Shepsle and Weingast (1987) and Weingast and Marshall (1988)'s models of legislative gate-keeping and distributive politics; strong majority control over the agenda in the U.S. House provides the inspiration for Cox and McCubbins (2005)'s Cartel model; the presence of the Senate filibuster and the presidential veto drive Krehbiel (1999)'s pivotal politics model; Costs associated with amendment power is analyzed with Den Hartog and Monroe (2011)'s bargaining model.

Yet, neither the abstract social choice literature nor the more recent attempts to capture specific legislative arrangements formally consider a menu of even the most fundamental institutional options. Rather, in the former literature, scholars are particularly interested in the effects and scope of a particular institutional power, while the latter presumes some starting arrangement and consider why we got there and what effect that has. Yet, in some legislative contexts—where a wider range of institutional combinations is possible—this mix-and-match menu approach is desirable.

This is particularly important for work on dictatorships, given the relative blank slate and total control facing dictators as they setup and then modify their legislatures to suit their needs. Comparative scholars have noted that dictators will face incentives to create legislative institutions (Gandhi 2008, Svolik 2012, Wright 2008) because such institutions strengthen the legislative institutions.

imacy of the ruling both domestically and internationally (Alagappa 1995, Thayer 2010) and manage potential challenges against a dictator's rule (Frantz and Kendall-Taylor 2014, Gandhi and Przeworski 2006); they can also be used for distributing spoils and isolating radical opposition groups (Abuza 2001, Lust-Okar 2005), gathering necessary information to reduce citizen grievances (Truex 2016), and promoting economic growth (Boix 2003, Gehlbach and Keefer 2011, 2012, Jensen, Malesky and Weymouth 2014). While Pepinsky (2014) rightfully points out that dictators create legislatures to reflect a particular constellation of their interests, the strategic calculations surrounding what is likely to go into those legislatures—and what consequences those choices will have—is entirely black boxed in that literature.

In what follows, we aim to unbox the complex institutional environment characterized by legislatures that have a unusual or wide ranging combinations of procedural institutions. In doing so, we intend to offer some prospective guidance to those considering the consequences of legislative institutional arrangements that are not commonly seen in past or present legislatures around the world.

# 3 A Simple Setup

To begin, we lay out a simple spatial model of a process of law-making. We impose various assumptions on actors, preferences, and the arrangements of legislative procedures, and ignore many other dynamics in order to build simple and tractable counterfactuals. The legislative process includes a leader (L), a median voter (M), and an opposition (O).<sup>3</sup> For simplicity, L and M are assumed to have different policy preferences, where M's ideal point is between L

<sup>&</sup>lt;sup>3</sup>Spatial models are developed and extensively used in the U.S. context. We acknowledge that considering a leader as a central player in a process of law-making is not conventional in the literature on the U.S. Congress, where party leaders or "medians" are the standard labels. The leaders depicted in previous models have a very limited range of legislative power. There are exceptions in the U.S. context, such as Krehbiel (1999) and Cameron (2000), but the leader's power is limited to the presidential veto and veto implications. In the comparative context, leaders have a broader set of powers, such as issuing a decree (Neto, Cox and McCubbins 2003) and having exclusive rights to propose bills (Barkan 2009). In the context of authoritarian states, leaders are active players in the process of law-making (Barkan 2009, Gandhi 2008, Malesky and Schuler 2010, Truex 2016). We think it is an important step to expand our conceptualization of the leader's role as more involved in a legislature/national assembly.

and O such that O is located equidistant from M and on the opposite side of M from L (i.e., |l-m|=|m-o|) in a unidimensional policy space as depicted in Figure 1.



Figure 1: Actors' ideal points in a unidimensional policy space

Policy choice (x) can be chosen from a proposal by L, (a), a proposal by O, (b), or a status quo policy (sq. Formally,  $x \in \{a, b, sq\}$ . All actors know the status quo policy, and it is the reversionary point in cases where the actors do not agree to pass a new law. Again, for simplicity and tractability, we assume that status quo policies are uniformly distributed throughout the unidimensional space. Each actor gets a maximum utility if a final policy outcome (x) is equal to their ideal point ( $p \in \{l, m, o\}$ ). They have a single peak utility function such that the payoff is -|p-x|. The utility of all actors are given by

$$U_L = -|l-x|$$

$$U_M = -|m-x|$$

$$U_O = -|o-x|$$

M is always given the legislative power to accept or reject a proposal. The median voter accepts a proposal if it gives a greater utility relative to the status quo and accepts an amendment if it gives greater utility than the previously proposed bills. Next, we consider L and O's strategies under several of the most common and most general types of legislative legislative powers: first proposal power, amendment power, second proposal power, and veto power.

#### 3.1 Strategies

#### 3.1.1 First Proposal Power

Actors may have the right to propose any bill first. We model the actors' first proposal power by putting an actor on the top of a game tree and giving the actor the option of proposing and not proposing any legislation on some policy dimension. If the actor chooses to propose, the new bill has to be different from the status quo. Conceptually proposing first may mean having ex-ante veto power. That is to say, leaders are able to filter out proposals so that unwanted proposals can never be presented in a national assembly. This idea is similar to the concept of negative agenda-setting power (Cox and McCubbins 2005). On the other hand, proposing first may mean an exclusive right to propose a bill for certain policy areas. For example, bills related to national budget and taxations are required to be proposed exclusively by the executive in some dictatorships (Barkan 2009). Such countries include Bangladesh, Bolivia, Ethiopia, Fiji, and Ghana (Elkins, Ginsburg and Melton 2016).

#### 3.1.2 Amendment Power

In proposing an amendment, the new proposal has to be different from the original proposal and the status quo. Amendment power is understudied in both the formal and empirical literature on the U.S. Congress (though, see Monroe, Robinson and Magleby (2018)) and on legislative behavior more generally. Yet, as we show below, amendment power can be extremely beneficial, both as a means of making inroads into affecting policy as the opposition and as a means of protecting policy positions as the leader. Note that while amendment power is straightforwardly identified in most legislative bodies, it is sometimes shrouded in a more complex procedure (see, for example, Roberts (2005) on the motion to recommit).

#### 3.1.3 Second Proposal Power

Note that this is distinct from amendment power; amendments, for our purposes, only occur when a proposal on some policy dimension has already been made, while second proposals occur on some policy dimension only when the other actor has passed on the opportunity to propose a new policy on that dimension. Thus, second proposals only compete (initially) against the status quo. If proposing, the new policy has to be different from the status quo. Many constitutions allow individual legislators to propose bills, but often with some constraints, such

that proposals may only be offered after a leader first had a chance to submit a policy proposal for consideration Barkan (2008).

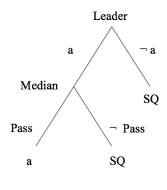
#### 3.1.4 Veto Power

Here, we mean ex-post veto power; the ability to reject a final proposal at the end of the arrangement of legislative procedures. Veto power in this sense is perhaps the most commonly studied type of legislative power, especially in the U.S. context where this is the focal point of presidential legislative power (Krehbiel 1999, Tsebelis 2002). Note that this is distinct from and, as we show, not always redundant to the exercise of ex-ante veto power. Here, we do not consider the implications of the ability to override an ex-post veto but think this worthy of future study.

In the remainder of the paper, we aim to learn how optimal strategies and policy outcomes change as these four legislative procedures are arranged in various ways. Broadly, we organize this exercise into two sections: the leader has first proposal power in the first section, and the opposition has this power in the second section. As readers will see, this dichotomy generates important variation in the effects of the opposition's ability to 'poison' the process and the leader's ability to mitigate those effects with procedural antidotes.

# 4 When the Leader Has First Proposal Power

Leaders often have the power to propose first. Indeed, this may be the most common and most important legislative power available to leaders and, in the simplest settings, the most powerful. In the simplest version of the model, which originated with Romer and Rosenthal (1978), the leader has first proposal power and bills pass by majority voting in a national assembly. Figure 2 shows the game tree.



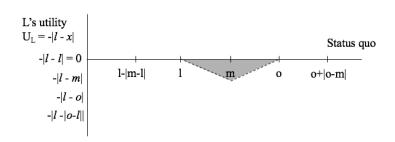


Figure 2: Leader's Exclusive Proposal Power paired with a Majority Voting

Figure 3: L's total utility through status quos from l-2|m-l| to o+2|o-m|

Figure 3 visualizes the leader's policy losses in this simplest version of the model. Throughout the rest of the paper, we use figures that operate identically. Thus, we think it useful to be somewhat deliberate in articulating the implications of different values within the figure at this first opportunity.

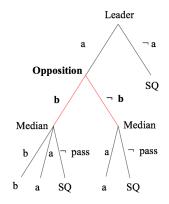
The X-axis represents the status quo policy at each point on that dimension, and the Y-axis shows how far policy ends up from the leader's ideal point for each corresponding status quo on the X-axis (i.e., a leader's utility). Thus, the shaded area represents policy losses that the leader incurs for all status quos on dimension x. For example, Figure 3 shows that a leader incurs policy losses only when the status quo lies between l and o. In particular, the loss is maximized when the status quo lies at m. When the status quo lies at m, the leader's utility is -|l-m|. When the policy outcome is x = l, it is exactly on the leader's most preferred policy and thus the dotted line intersects the x-axis at this point showing that the leader's utility is maximized for that status quo (and, in this case, all status quos to the left of that point). If sq = o (and all those to the right of that point), then the leader incurs no policy loss because the new policy will be at x = l.

For the remainder of this section—and in a sense, for the remainder of the paper, we treat this model as our baseline. That is, this is a model where the leader acts like a sort of agenda-setting dictator; the opposition acts as a bystander here, with no agenda-setting weapons to challenge

the leader with. In the next subsection, we examine what happens when a leader takes the 'poison' of giving the opposition the right to amend a proposal and how leader's 'antidotes'—amendment power—work to counteract any policy loses that accrue.

#### 4.1 Poison 1: Opposition's Amendment Power

Here, the opposition is given an institutional role and an option to amend bills proposed by a leader (game tree in Figure 4). Figure 5 visualizes policy losses for a leader across all status quos. The policy loss is -|l-m| in the status quo ranges left to l-|m-l| and right to m. When the status quo lies between l-|m-l| and m, the policy loss is less than -|l-m| and it becomes 0 when the status quo lies at l. Notice that the leader's losses here are substantial; L faces policy losses if and only if the status quo lies between l and m in the baseline model (Figure 3); however, L faces additional policy losses throughout all status quo ranges from l-2|m-l| to l-2|m-l| in Figure 5.



L's utility  $U_L = -|l-x|$  -|l-l| = 0 -|l-m| -|l-o| -|l-|o-l|| Status quo 0 + |o-m|

Figure 4: Poison: Opposition's Amendment Power

Figure 5: L's total utility through status quos from l-2|m-l| to o+2|o-m|

Next, consider what happens if the leader institutes its own amendment power as an antidote to the poison of the opposition's amendment power (game tree in Figure 6). To model this, we allow the leader an option to make a counter-offer after the opposition makes an amendment to the bill proposed by the leader. If the leader makes an amendment (a) to the opposition's amendment (b), the median voter gets to pass either a or b or pass none. For simplicity, and without consequence, we assume that the median voter considers a most recent amendment first (that is, if the leader makes an amendment, *a*, it is voted first). This antidote turns out to be totally ineffective at counteracting the poison, as leader utility under this arrangement is identical to that shown in Figure 5. Compared to the policy loss without the antidote (Figure 5, we do not observe any difference in Figure 7.

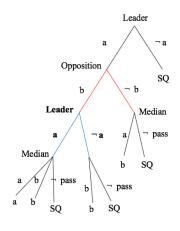


Figure 6: Leader's Amendment Power paired with Opposition's Amendment Power

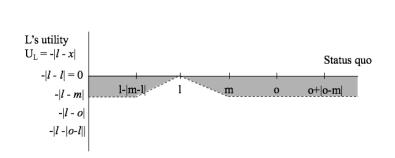
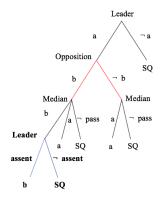


Figure 7: L's total utility through status quos from l-2|m-l| to o+2|o-m|

Next, consider outcomes if we substitute the leader's counter-proposal power for an ex-post veto (game tree in Figure 8). To model this, we allow the leader an option to decide whether or not to assent a bill amended by the opposition and passed by the median voter. If the leader assents the bill, the opposition's amendment becomes a new law. If the leader does not assent to it (i.e., the leader vetos the bill), the status quo stays as a new law. Here again, the veto is an ineffective procedural antidote, as leader utility again tracks perfectly with that shown in Figure 5.



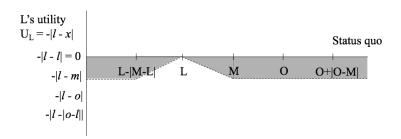


Figure 8: Leader's Veto Power paired with Opposition's Amendment Power

Figure 9: L's total utility through status quos from l-2|m-l| to o+2|o-m|

Even when we consider both antidotes together (game tree in Figure 10), losses remain the same. In short, opposition amendment power is a very damaging poison when the leader makes the first proposal, and the leader's available antidotes do little to inoculate the leader against policy losses in this case. In the next subsection, we examine a number of antidote procedures that can be used against second poison - Opposition's Second Proposal Power.

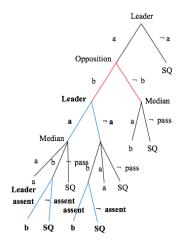


Figure 10: Leader's Amendment Power and Veto Power paired with Opposition's Amendment Power

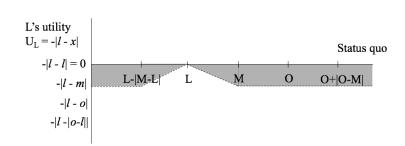
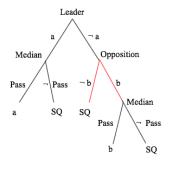


Figure 11: L's total utility through status quos from l-2|m-l| to o+2|o-m|

#### 4.2 Poison 2: Opposition's Second Proposal Power

The opposition may have the power to propose a bill only after being given the opportunity by the leader; we refer to this as second proposal power. To model this, we give the opposition an institutional option to propose a bill if the leader decides not to propose any bills or fails to pass a new bill (game tree in Figure 12). As before we find the Subgame Perfect Nash Equilibrium for this arrangement of legislative procedures and subsequent versions where the leader employs various antidotes.



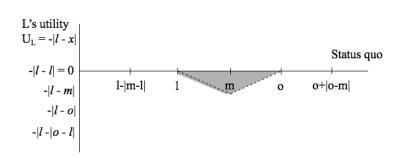


Figure 12: Poison 2: Opposition's Second Proposal Power

Figure 13: L's total utility through status quos from l-2|m-l| to o+2|o-m|

Figure 13 visualizes the leader's policy losses across all possible status quos given the arrangement of procedural poison and antidote in Figure 12. Strikingly, this poison is much less damaging to the leader's policy utility than opposition amendment power. Here, policy loss for the leader only slightly exceeds the baseline case where the opposition has no legislative power at all, and this small policy loss is by the leader's own hand as a preventative measure. In the baseline model, for status quo's between l and m, the leader will not make a proposal because no policy move will increase her utility but also satisfy m relative to the status quo. Here, if the leader employs that strategy, the opposition will take advantage of making a proposal after the leader passes the opportunity to do so. This strategy of no proposal moves policy as far to the right as possible, between m and o. To avoid this relatively larger policy loss, the leader will make a proposal  $\alpha$  to the right of the current status quo, thus eliminating the oppositions ability

to make a second proposal.

As a first antidote, we give the leader the power to propose a counter-offer to the opposition's amendment. We model this antidote by allowing the leader the option to propose a counter-offer if the opposition proposes a bill after the leader decides not to propose first (game tree in Figure 14). Here, again, the antidote is ineffective at mitigating the (admittedly small) policy losses that accrue to the leader from the opposition's second proposal poison; the equilibria policies are the same as the no-antidote condition shown in Figure 13.

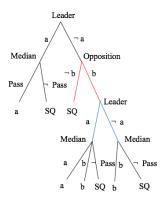


Figure 14: Leader's Amendment Power paired with Opposition's Second Proposal Power

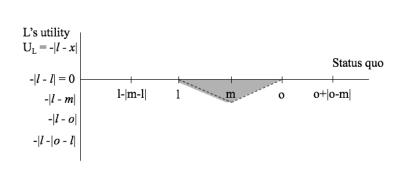


Figure 15: L's total utility through status quos from l-2|m-l| to o+2|o-m|

One interesting observation in this iteration of the model is that invoking the antidote procedure to amend a bill proposed by the opposition is not an optimal strategy for the leader when the status quo is between l and m. When the status quo is in this interval, as in the baseline model, the 'winset' is null as the leader cannot find a proposal that will simultaneously make better off both the leader and the median voter.<sup>4</sup> If the leader does not offer a new policy and lets the opposition propose, the opposition will propose b = m knowing that the leader cannot amend b, as the median will prefer b to any amendment. In this case, the leader is better off to propose  $a = sq + \alpha$  at the beginning of the process because it is closer to the leader than b = m.

<sup>&</sup>lt;sup>4</sup>The 'winset' is a set of policies (excluding the status quo) that are preferred by both the leader and the median voter. For a formal definition, see Tsebelis (2002).

Once  $a = sq + \alpha$  is offered by the leader, the opposition does not have an institutional role to counteract the passage.

This oddity goes away when we instead consider the effect of giving the leader's ex-post veto power as an antidote to the opposition's second proposal power (game tree in Figure 16). Here, the veto eliminates the very small policy losses created by the opposition's second proposal power (Figure 17; equilibrium policy losses match those under the baseline model that is shown in Figure 3. Similarly, when we combine both antidotes, giving the leader both amendment and veto power in response to the oppositions second proposal power (game tree in Figure 18), policy losses are identical to the no-antidote condition (Figure 19). The veto is doing the work, however, while the amendment power is essentially irrelevant as an antidote.

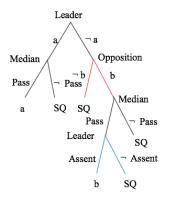


Figure 16: Leader's Veto Power paired with Opposition's Second Proposal Power

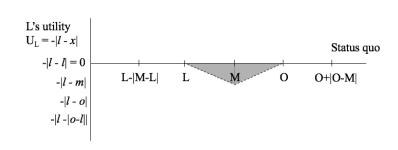


Figure 17: L's total utility through status quos from l-2|m-l| to o+2|o-m|

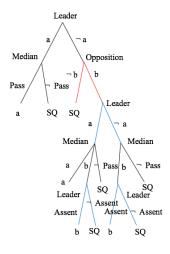


Figure 18: Leader's Amendment power and Veto Power paired with Opposition's Second Proposal Power

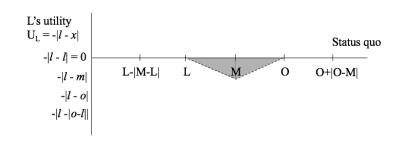


Figure 19: L's total utility through status quos from l-2|m-l| to o+2|o-m|

Before moving on to the next section, where we consider the final—and most potent—poison, it will be useful to take some inventory of the points so far. When the leader has first proposal power, her policy utility suffers significantly larger deficits when the opposition has the power to amend the leader's proposals than when the opposition can offer a "second" proposal after the leader passes. Moreover, neither of the proposed procedural antidotes—separately or in combination—reduced opposition amendment—driven policy losses, whereas even the very small policy losses suffered by the leader at the hands of opposition second—proposal power were mitigated by the leader's veto power. Thus, if the leader has the first proposal power, she will almost surely pick the second—proposal poison if given the option.<sup>5</sup>

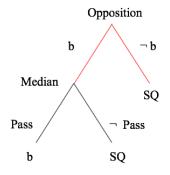
# 5 When the Opposition Has First Proposal Power

In this section, we consider our final procedural poison: opposition first proposal power. We set it apart as its own section for two reasons. First, giving the opposition first proposal power

<sup>&</sup>lt;sup>5</sup>Woo (2019) shows that this is empirically the case in dictatorships, and leaders in dictatorships often pair the opposition's second proposal power with the leader's veto power.

changes the structure of the game such that the possible poison-antidote combinations deviate slightly from the previous section. Second, baseline policy losses for this condition are substantially larger, and thus we consider deviations from a different baseline (which we explain below).

To model the opposition's first proposal power, we let the opposition have the option to propose b or not propose anything. If the opposition proposes b, the median voter decides whether or not to pass it. Figure 20 shows the arrangement of legislative procedures under this condition.



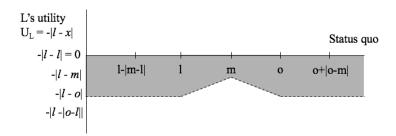


Figure 20: Opposition's First Proposal Power

Figure 21: L's total utility through status quos from l-2|m-l| to o+2|o-m|

Figure 21 shows the leader's policy losses for all possible status quos. Given that the leader plays only an observer's roll in this baseline model, comparisons to losses under the first two poisons have an apples-to-oranges quality to them. With that in mind, we note that policy losses for the leader are dramatically larger in this condition. Here, the leader's *smallest* policy loss -|l-m| (where the status quo is at m), which is her *largest* loss from the previous two poisons. As we move through our antidotes in the remainder of the section, however, a more striking apples-to-apples comparison will emerge: the leader's policy losses only drop back below this level with certain antidotes, and even then only for limited intervals of status quos.

#### 5.1 Antidote: Leader's Second Proposal Power

For our first antidote, we consider outcomes when the leader has the option to propose (i.e. make a second proposal) if the opposition does not propose any bill or if that bill fails passage by M (game tree in Figure 22). As Figure 23 shows, leader's policy losses under this condition are only slightly mitigated here. The logic is identical to that which *caused* slight leader losses when the opposition had second proposal power: the opposition will move policy away from their ideal point by  $\alpha$  for all status quos between m and o to avoid much larger moves away from his ideal point by way of a leader's second-proposal.

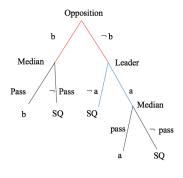


Figure 22: Leader's Second Proposal Power paired with Opposition's First Proposal Power

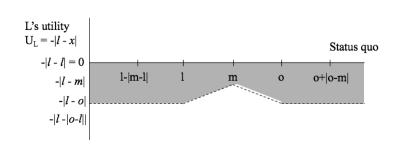
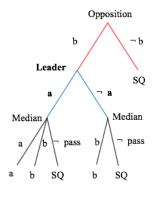
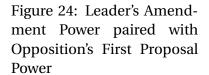


Figure 23: L's total utility through status quos from l-2|m-l| to o+2|o-m|

#### 5.2 Antidote: Leader's Amendment Power

When the leader's amendment power is the antidote (game tree in Figure 24), however, policy losses change considerably. As we see in Figure 25, compared to the leader's losses under the no-antidote condition (shown as the area between the X-axis and the dotted line), the leader's policy losses are significantly smaller. Over much of the range (all status quos to the left of m and to the right of o + |o - m|), a policy now moves to m, cutting the leader's losses by half in many cases.





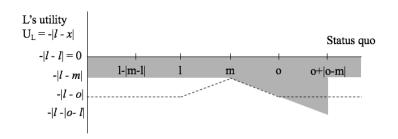


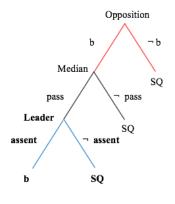
Figure 25: L's total utility through status quos from l-2|m-l| to o+2|o-m|

The amendment antidote is not beneficial for all status quos though. The leader suffers larger policy loses *because of* her amendment power for status quos between o and o + |o - m|. Here, the optimal strategy for the opposition is not to propose a new policy, whereas, in the no-antidote condition, the opposition moved these status quos to o. The opposition foresees that the leader will amend any proposal that the opposition makes to some point between l and m, making the opposition worse off than they are under the status quo. To avoid this, they forgo the move left for all of these status quos which, perversely, would be better for all three actors in the game.

#### 5.3 Antidote: Leader's Veto Power

Next, we model an arrangement where the leader is able to exercise the ex-post veto power as an antidote to the opposition's first proposal power (game tree in Figure 26). Figure 27 shows the equilibrium policies for all status quos under this arrangement. Here, the opposition can maximize utility by proposing b = o as long as the leader prefers b = o to the status quo. This includes all status quos left of l - |o - l| and right of o. For all status quos between l - |o - l| and l, the opposition will move policy as far to the right as the leader will allow (i.e. prefer the new

policy to the status quo). All status quos between  $\it l$  and  $\it o$  will remain unchanged.



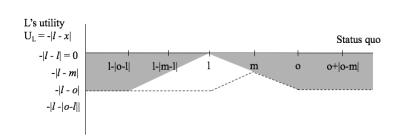


Figure 26: Leader's Veto Power paired with Opposition's First Proposal Power

Figure 27: L's total utility through status quos from l-2|m-l| to o+2|o-m|

While both amendment and veto power significantly reduce leader's losses, comparing Figures 25 and 27 highlights important differences in *which* status quos are better protected be each antidote. For more extreme status quos (consider those to the left of l - |m - l| and to the right of o + |o - m|), leader's losses are cut in half with the amendment antidote relative to the veto antidote or the baseline (depicted in Figure 28 by darker areas). Yet, for status quos in the middle of the space surrounding l, the veto causes losses to fall toward zero the closer they are to the leader's ideal point. Thus, while our primary aim in this paper is to consider policy losses across the entire space, there is a lesson here for future work: poisons and antidotes may be strategically chosen to fit the particular status quo distribution of legislative policy environment.

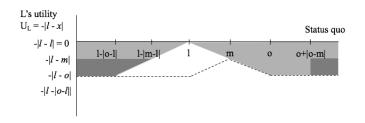


Figure 28: Policy Loss Reduced by L's Amendment Antidote

#### 5.4 Antidotes: Pair-Wise Combinations

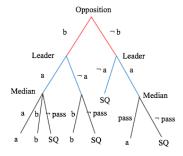


Figure 29: Leader's Second Proposal and Amendment Power Power paired with Opposition's First Proposal Power

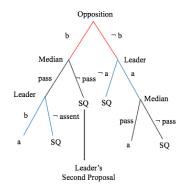


Figure 31: Leader's Second Proposal Power and Veto Power paired with Opposition's First Proposal Power

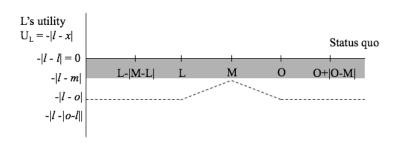


Figure 30: L's total utility through status quos from l-2|m-l| to o+2|o-m|

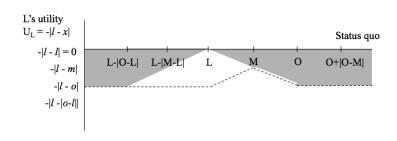
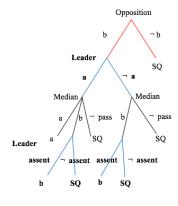


Figure 32: L's total utility through status quos from l-2|m-l| to o+2|o-m|



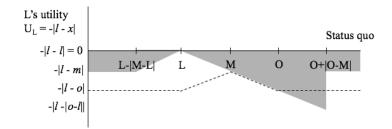


Figure 33: Leader's Amendment Power and Veto Power paired with Opposition's First Proposal Power

Figure 34: L's total utility through status quos from l-2|m-l| to o+2|o-m|

# 5.5 Antidote: Leader's Second Proposal Power, Amendment Power, and Veto Power

Finally, we consider the effect of all three antidote procedures in combination (game tree in Figure 35). As we see in Figure 36 and as one might expect, this arrangement of procedures is the Pareto dominant option; for all status quos in the space, leader losses are less than equal to or (in most cases) losses under any of the antidotes on their own. This combination performs especially well for status quos that lie near the leader's ideal point.

Note, however, that when we take a broader view, this poison-antidote arrangement is still relatively bad for the leader. To see this, compare Figure 36 to Figure 5, which shows policy losses for the leader when the leader has first proposal power and the opposition has the ability to amend. Recall that this was the worst case scenario for the leader across the first two poisons that we considered. The two figures are identical as shown in Figure ??. In other words, the worst case scenario when the leader retains the ability to propose first is equivalent to the best case scenario when the leader concedes that institutional power to the opposition.<sup>6</sup>

<sup>&</sup>lt;sup>6</sup>Den Hartog and Monroe (2011) incorporate this insight into their model of "Costly Consideration."

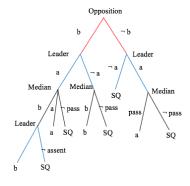


Figure 35: Leader's Second Proposal Power, Amendment Power and Veto Power paired with Opposition's First Proposal Power

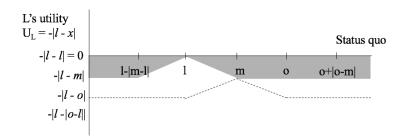


Figure 36: L's total utility through status quos from l-2|m-l| to o+2|o-m|

# 6 Speculation on Which Poison is Preferable

Within the formal modeling exercise, our aim has been to focus entirely on the policy payoffs to the leader. Accordingly, our narrative to this point has offered comparisons of various institutional based entirely on their relative maximizations of leader payoffs across a uniform distribution of status quos. In this section, we (informally) speculate about how leader preferences over institutions might change if we modify two assumptions: the shape of the status quo distribution and the "audience" value of particular institutions.

First, as is common in much of the formal literature on legislative process, we work within a uniform status quo distribution. Yet, if we instead consider that many leaders will face status quo distributions with concentrations of status quos at certain points, some institutional arrangements will seem more appealing to the leader even if she only considers policy payoffs.

For example, all of our preceding scenarios that include a leader first proposal or veto are increasingly advantageous for status quo distributions that are densely centered on the leader's ideal point, since she suffers very little policy loss for status quos near her ideal point under those institutional arrangements. Alternatively, when status quos are relatively extreme (i.e. left of the leader and right of the opposition), the leader should either prioritize first proposal

power or implement a full compliment of antidotes in response to the oppositions first proposal power. Woo (2019) systematically defines and test these implications in her investigation of dictatorial regimes.

Second, to this point we have assumed that the value of institutions are simply a function of the resulting policy outcomes. Yet, we opened the paper noting that leaders may be compelled to share power. Thus, one might naturally wonder *why* the leader is compelled to share power and how she can best satisfy the audience for that power sharing.

One approach to answering that question considers whether the "audience" is internal or external to the legislature. That is, if the audience for the sharing is the opposition themselves, then institutions that maximize the oppositions utility will be most valuable; here, opposition first proposal power may be preferred. On the other hand, if the audience is external, then giving the opposition a very visible set of procedural prerogatives—even if they amount to little policy advantage—may be most beneficial.

# 7 Conclusion

In this paper, we have used an analogy–poisons and antidotes–to further our understanding of the effects of pairing various agenda-setting institutions. In particular, we were motivated to understand the strategic institutional context in which leaders choose *which* specific powers to share and to retain when they have an incentive or an obligation to share at least some legislative power with their opposition. This might occur in democracies when public opinion demands "fairness" or adherence to "democratic" norms; or it might occur in authoritarian regimes when leaders need to secure domestic allies or opponents or signal to international audiences.

Substantively, our models show that when the leader has first proposal power, her policy utility suffers significantly larger deficits when the opposition has the power to amend than when the opposition can offer a "second" proposal after the leader passes. Moreover, neither of

the proposed agenda-setting antidotes that we considered (leader amendment or veto power)—separately or in combination—reduced opposition-amendment driven policy losses. Thus, when the leader has first proposal power, she will almost surely pick the second-proposal poison if given the option.

Yet, perhaps the key point came in understanding the relative effect of leader versus opposition first proposal power. The worst case scenario when the leader retains the ability to propose first is equivalent to the best case scenario when the leader concedes that institutional power to the opposition. However, if a leader is forced to give up first proposal power, a combination of all three antidotes–amendment power, second proposal power, and veto power–can significantly mitigate her policy losses.

While our primary aim in this paper was to consider policy losses across the entire space, one possible lesson here for future work considers the implications of relaxing the uniform status quos distributional assumption. Poisons and antidotes—and particular combinations of the two—performed very differently across the range of status quos. Thus, leaders may have an incentive to strategically choose their mix of institutional concessions and protections to fit the particular status quo distribution of their legislative policy environment. The specifics of this strategic calculation would be fertile ground for future work.

More broadly, while abstract, we think the theoretical results in this paper have direct empirical applications. Most directly, our results suggest that some legislative institutional arrangements should be more likely than others, given the incentives of leaders to maximize policy utility. Relatedly, when we do observe variation in the combination of agenda powers modeled here, our results offer some guidance as to who the policy winners and losers should be and how big those wins and losses should be. While there has been some investigation of this in the domestic context (see Carson, Monroe and Robinson (2011) for example), there is much more to do in the comparative arena, especially in authoritarian legislatures.

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