Waiting to Win, Choosing to Lose

How Competitive Elections Stymie Policy Change

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August 30, 2017

Policy change has captured the attention of political scientists as much in the past two decades as perhaps any other topic in the study of political institutions. In the US context, studies of policy change have examined a wide variety of potential explanations for policy change patterns, ranging from legislator partisanship (e.g., Binder 1999, 2003), to gerrymandering, to economic inequality (e.g., McCarty, Poole, and Rosenthal 2006), and more. In the comparative context, Tsebelis (2002) initiated a large literature that attributes policy change to the number of and distance between veto players in a political system. Although in many ways diverse in nature, most explanations for policy change relate in some way to the notion of elite-level polarization. Indeed, when politicians' policy preferences diverge, it is less likely that they will agree to change status quo policies. This has long been the central finding of the policy change literature.

Perhaps unsurprisingly, research connecting the slowing of policy change to elite polarization arose contemporaneously with increases in popular accounts of these phenomena in American politics. This was not the case, however, with another notable characteristic of American politics over the same time period: the increase in competitiveness over partisan control of Congress and the White House. To be clear, this is not to say that researchers neglected to study how elections shape policy, and how competitiveness of elections influ-

ences outcomes. Indeed, political science has a long tradition of examining the influence of elections on policy outcomes and representation, and many studies examined the policy ramifications of often-uncompetitive individual races throughout much of the 20th and 21st Centuries. Moreover, the connection between elections and policymaking underlies the foundational assumption behind most modern congressional research, that members of Congress are single-minded seekers of reelection (Mayhew 1974). Yet in spite of this longstanding interest in the connection between elections and policy outcomes, studies of gridlock and policy change rarely incorporate electoral dynamics into their theoretical models and empirical predictions. Likewise, studies of representation have seldom addressed how policy representation may be linked to the broader institutional arrangements within which politicians are embedded.

In this paper, I aim to show that electoral dynamics interact with partisan polarization to shape the strategic environment within which policy change occurs. More specifically, I will develop a new theory of policy change that articulates and tests the conditions under which electoral competition encourages or stymies policy change, even beyond what polarization alone might predict. Unlike previous models of policy change, the model allows relevant actors to condition their strategic choices on the electoral prospects of their party. Ultimately, the model seeks to demonstrate that electoral competitiveness decreases policy change when it is likely to benefit the majority party and accelerates when the majority party stands to lose in the next election. By conceiving of agenda-setters as forward-looking in their bargaining calculus, this project would become among the first to systematically examine the electoral foundations of policy change, alongside the traditional determinants deriving from elites' preferences alone. The project therefore speaks to the policy change literature not only in American politics, but in comparative settings as well. Moreover, because actors in the model may opt against introducing policies that move the status quo in their direction, the project will also provide a rationale for why major policy efforts (such as the 2007 immigration reform efforts in the United States) nevertheless occasionally fail—a phenomenon that is not in equilibrium in current models of policy change.

This overview proceeds as follows. First, I demonstrate how current studies of elections and policy change fail to speak to one another, leaving gaps in our understanding about

how elections influence policy change. Second, I outline my theory and formal model, which incorporates electoral dynamics into the policy change process. Third, I discuss four common electoral scenarios in light of this proposed model, in order to demonstrate conditions under which potential electoral changes sytmie and accelerate policy change. Finally, I propose two possible empirical approaches, data collection efforts, and statistical methodologies for testing predictions deriving from the model. To conclude, I summarize the signficance of the project and implications of the work.

Current Literature

Beginning with Mayhew's (1991) seminal study on divided government, research on policy change has generally focused on two main explanatory factors: the prevelance of veto players or pivots and their spatial locations, and the agenda-setting roles of political parties. Krehbiel (1998), for instance, proposes a model of policy change that links changes in policy to the distance between institutional pivots in the American political system, as created by the Constitution and parliamentary rules. More generally, Tsebelis (2002) connects policy change to the total number of institutional *and* partisan veto players in a political system, as well as the distance between them. Cox and McCubbins (2005) point to the agenda-setting powers of the majority party in Congress as a powerful force in policy change dynamics. For each of these theoretical approaches, much scholarly attention has been paid to testing empirical implications from the models (e.g., Howell et al. 2000, Chiou and Rothenberg 2003, Woon and Cook 2015).

While these models of policy change have differed in emphases (particularly regarding the role of political parties), each of them has shared a common feature: a "static" model design. By static, I do not mean that players cannot alternate offers, or that there are no subgames. Rather, the models begin and end within the same legislative "period" and are not influenced by elections. But while studies of policy change do not commonly incorporate electoral dynamics into their theoretical models, a large literature has long connected elections to policy outcomes, as noted above. Indeed, since at least Miller and Stokes's seminal study on representation in 1963, scholars of Congress and American state legislatures have shown a

deep interest in uncovering how constituencies influence policymaking through the electoral process. These studies have varied widely in the outcome of interest, such as the provision of public goods (e.g., Jackson and King 1989), sponsorship and cosponsorhip activity (e.g., Sulkin 2005), credit-claiming for the provision of pork (e.g., Grimmer 2013), and of course, roll-call voting (e.g., Achen 1978). Such studies have also extended beyond Congress, using a wide variety of novel methodologies to capture policy responsiveness in legislatures across America (e.g., Butler and Nickerson 2011, Wright et al. 1987, Lax and Phillips 2012). Nevertheless, in spite of this broad literature linking elections to policymaking, aggregate models of policy change do not incorporate elections—even though elections have been shown to condition individual legislators' behaviors in a wide variety of settings.

If elections influence the strategic choices made by individual legislators in legislatures, one might imagine that elections similarly influence choices of actors relevant to aggregate policy change—particularly party leaders and agenda-setters. Some recent studies have begun to explore some of this dynamic, articulating how elections might shape party leader decisionmaking. Lee (2016), for example, argues that insecure majority control incentivizes party leaders and other members of Congress to heighten partisan conflict and accentuate differences between parties, which makes for good politics in the upcoming election. The result, she argues, is a prioritization of "messaging" over "governing" in Congress and, ostensibly, a decrease in productivity. Koger and Lebo (2017) echo a similar sentiment, arguing that Congress has neglected to fulfill its governmental functions, instead empowering party leadership in an all-consuming desire win to elections. The result, they argue, is an increase in party unity and, likely, intense filtering of the policy agenda.

But while these studies each suggest that party competition may influence policy change, they stop short of incorporating these electoral dynamics into an aggregate model of policy change. Indeed, while both studies argue that electoral competition between the parties likely decreases overall legislative output, they have yet to posit a more general theory that articulates the conditions under which competition should should discourage (or encourage) legislative activity. In this paper, my aim is posit and suggests tests for a theory that enumerates such conditions, more clearly delineating how elections influence parties and their choices regarding policy change. In the next section, I outline such a theory, and in

the section following, I posit a variety of tests of that theory.

A Theory of Policy Change

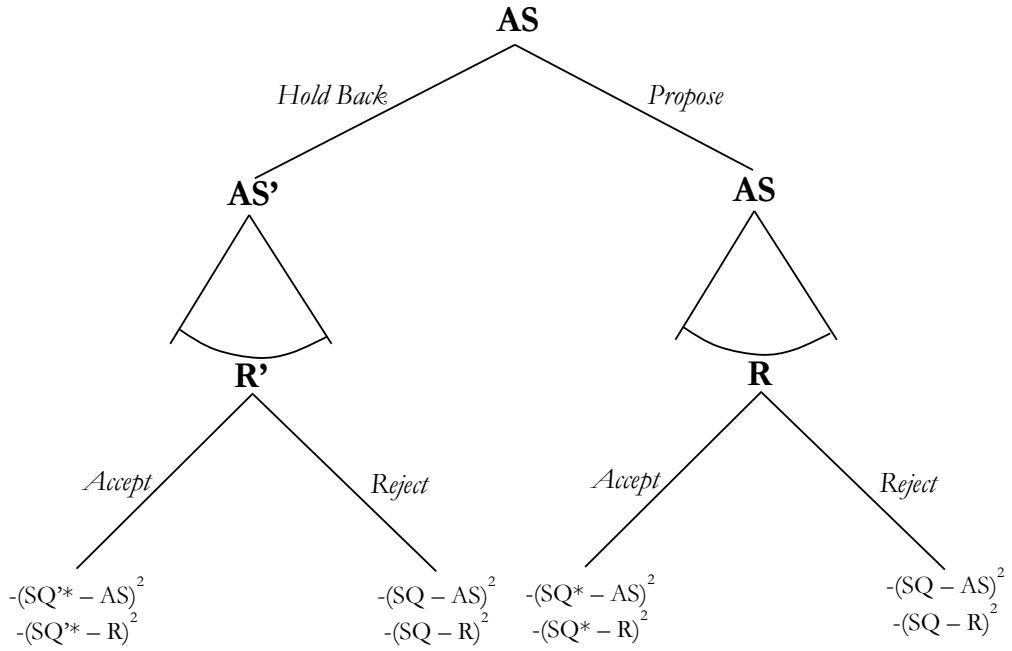
Game Sequence

In order to capture how electoral dynamics influence policy change, I build a dynamic spatial model of policy change with an endogenous status quo. The model is a bargaining game between two actors, an agenda-setter (AS) and a receiver (R), and occurs in one policy dimension. The game sequence proceeds as follows. In the first or "present" round, the agenda-setter must decide for a given status quo policy SQ_i whether or not to propose an alternative SQ' ("propose" versus "hold back"). If she does propose an alternative, the game shifts to the receiver, who must then select whether to "accept" or "reject" the proposed policy change. If the receiver chooses to accept the alternative, the game ends, with payoffs realized via a quadratic loss function comparing the new policy to each of the players' ideal points. Should the receiver chooses to reject the alternative, the status quo persists. Thus, the result of Round 1 can be either a new policy or the status quo, much as in any traditional spatial model.

Unlike traditional spatial models, however, if the "status quo" result is reached because of "holding back" behavior by AS, the game does *not* end. Instead, an election occurs, shifting the location of agenda-setter to AS' and the receiver to R' with some probability $\Pr(AS') = s$ and $\Pr(R') = r$, respectively. Notationally, then, if a shift in AS or R does occur in Round 2, I will refer to said second-round actors as AS' and R'. If, however, no change occurs, I will simply refer to AS and R similarly in both rounds. In the second round, the game proceeds in a fashion similar to Round 1. That is, AS first decides whether or not to propose an alternative to the status quo, and R decides whether to accept or reject that proposal. If the proposal is accepted, the game ends with a new policy of $SQ_i'' = SQ_i^*$. If the proposal is rejected, the game ends with the same status quo policy, $SQ_i = SQ_i^*$.[1] Payoffs are realized via a standard quadratic loss function. Figure 1 depicts the extensive form of this game.

[1]Note that status quo policies are indexed by i, in order to indicate that the agenda-setter encounters many status quo policies within a given legislative period.

Figure 1: Extensive Form of Dynamic Policy Change Model



Before discussing key assumptions and player features, an important asymmetry in this model bears mentioning. That is, the game only reaches the second round if the status quo persists. The reason for this feature is drawn from substantive observations of the American legislative system. That is, I argue that when policy change occurs for one status quo in the present legislative session (in the U.S. case, the present Congress), it is highly unlikely to occur again in the next session. Policy advocates in the U.S. Congress denote this feature of legislative politics frequently. In their recent paper on policymaking, for example, Buisseret and Bernhardt (2017) underscore the following commentary offered by environmental advocates from TheClean.org, with regard to proposed cap-and-trade legislation: "Will [the public] see [the legislation] as a 'win'—that the problem is solved? If so, what will that mean for pushing for the needed steps later?" In other words, if compromise legislation prevails today, such progress will preclude further reforms in the future. Such a result will occur, they say, because the public will no longer see a reason to push their legislators toward further reform. Policy advocates from other issue areas echoed a similar sentiment in interviews for Crosson and Heaney's (2016) studies on coalition lobbying, stating that "Passing legislation as close as possible to our ideal policy is important, because if we go back to

Congress next year and ask for the rest of what we want, they will deny us and tell us they have already 'done' [issue redacted]."[2] In other words, Congress has already addressed the problem brought forth by the public and interest community, and they must allocate scarce agenda space to some other issue yet to be addressed. Taken together, these substantive observations not only provide a strong justification for the aforementioned asymmetry in game continuation, but they provide some anecdotal evidence for the idea that political elites do in fact consider future policy change possibilities in their present policy-change calculus.

Player Identities and Features

My model builds most directly upon foundational work by Romer and Rosenthal (1978) and Krehbiel (1998), in that actors in my model bargain in one-dimensional policy space over an exogenously determined status quo. However, I depart from these models in two key ways. First, and most importantly, my model is dynamic, in that reconfigurations of actors following an election now condition the choices made by the agenda-setter. This drastically alters player strategy in the first round of bargaining and, as I detail below, sometimes increases and sometimes decreases policy change compared to the static case. However, a second departure also bears mentioning. That is, while previous models of policy change, such as Krehbiel (1998), include a larger number of players with specific identities, I keep the number of players (and the specificity of those players) low, in order to increase the flexilibility of the model. That is to say, because the specific identities of the agenda-setter and pivotal actor are fluid, subject to intense scholarly debate, or some combination of the two, my model simplifies the bargaining environment into two key players—an agenda-setter and a single veto agent—who do not have to take on any specific identity. Doing so allows my model to make a specific theoretical point, although in empirical tests of the model, of course, I will make assumptions about who and where the agenda-setter and receiver are located.

In order to interpret the results of the model in the American context, this analysis does include a few key assumptions with regard to player locations and identities. With respect to the agenda-setter, I assume that agenda control rests in political parties, much in the same

[2]The specific issue area is here redacted due to IRB agreements to preserve the anonymity of interviewees.

way as Cox and McCubbins (2005). That is to say, I assume that AS is located around the median of whichever party holds agenda control in Congress. In modern politics, this means that AS is likely to be located fairly far away from the center of the political spectrum. With respect to the receiver, as noted above, the model does not include separate pivots for the filibuster or president, etc. Rather, as Krehbiel (1998) suggests, a single actor in a unidimensional spatial setting is ultimately 'pivotal' in determining whether a change to the status quo occurs or not—meaning that the identity of this pivot depends upon the location of the status quo and AS. Because the pivotal actor is the veto player lying farthest away from the agenda-setter in the direction of the status quo, I define the identity of the receiver in the following way: if the AS is a Republican, R is the veto player located farthest to the left, and if AS is a Democrat, R is the veto player located the farthest to the right. For example, if Republicans control the House, Senate and President, but Democrats control the filibuster pivot, then the receiver is located at the Senate filibuster pivot.

This setup implies two key features or assumptions about the players in the model (as it applies to the U.S. case). First, the setup presupposes that the agenda-setter and the receiver never share an ideal point. This is a weak assumption. In order for such an assumption to be violated, the House, Senate, filibuster pivot, and president would have to possess identical policy preferences. Beyond this assumption, however, the setup also implies that the agenda-setter can never be "crossed" by the receiver, if/when the receiver moves in the direction of the agenda-setter. Suppose that the above power distribution holds: that AS is located at the median of Republican legislators, and that R is controlled by Democrats and is located at the filibuster pivot in the Senate. The "no cross" assumption, then, implies that, should Republicans make gains in the upcoming election and fully capture the Senate, the receiver will nevertheless remain to the left of AS. In this case, this would mean that the Republican filibuster pivot (or the president—whoever is more liberal) is assumed to be located to the left of the Republican party median. In contemporary politics, such an assumption is fairly realistic, particularly as parties have become more polarized.

A final key assumption I make about players mirrors an assumption made by Buisseret and Bernhardt (2017) in their recent paper. That is, for simplicity, I render the agenda-setter in this model to be the lone "dynamically sophicated" agent. In other words, when

deciding on whether to accept or reject a proposal made by AS, the receiver considers *only* her contemporaneous options: she compares the current status quo to the offer made by AS and selects the policy closest to her. The agenda-setter, on the other hand, has a more difficult task: she must first consider where she believes the new agenda-setter and receiver are located, before she makes her offer in Round 1. What kind of offer will the new receiver be willing to accept, should AS choose to hold back? What kind of offer will a different agenda-setter make, given different possible locations for the receiver? Are these new changes likely to draw policy closer to AS or further away? These sorts of dynamic considerations will drive differences between current models of policy change the one presented in this paper. Indeed, not only will such considerations influence where AS locates her Round 1 offer, but also whether or not she will make an offer at all.

Results: How Electoral Prospects Influence Policy Change In Four Common Power Transitions

Given that the equilibrium of this game varies considerably with regard to status quo location, location of AS, R, AS', and R', and the probabilities of particular shifts in AS and R, I demonstrate how this model's dynamism influences policy change in the following way. First, I detail four common electoral transitions that occur in American politics and delineate how much and what kind of policy change should be expected. Second, I compare these results to results from a traditional static (or in this model's parlance, perfectly uncompetitive) model, ultimately finding conditions under which electoral considerations can both dampen and accelerate policy change. Finally, I examine how polarization—more specifically, the divergence in preferences between Republicans and Democrats—influence the policy change dynamics encountered in each of the four scenaries.

Scenarios 1 and 2: AS Maintains Agenda Control and Makes Gains with Reciever

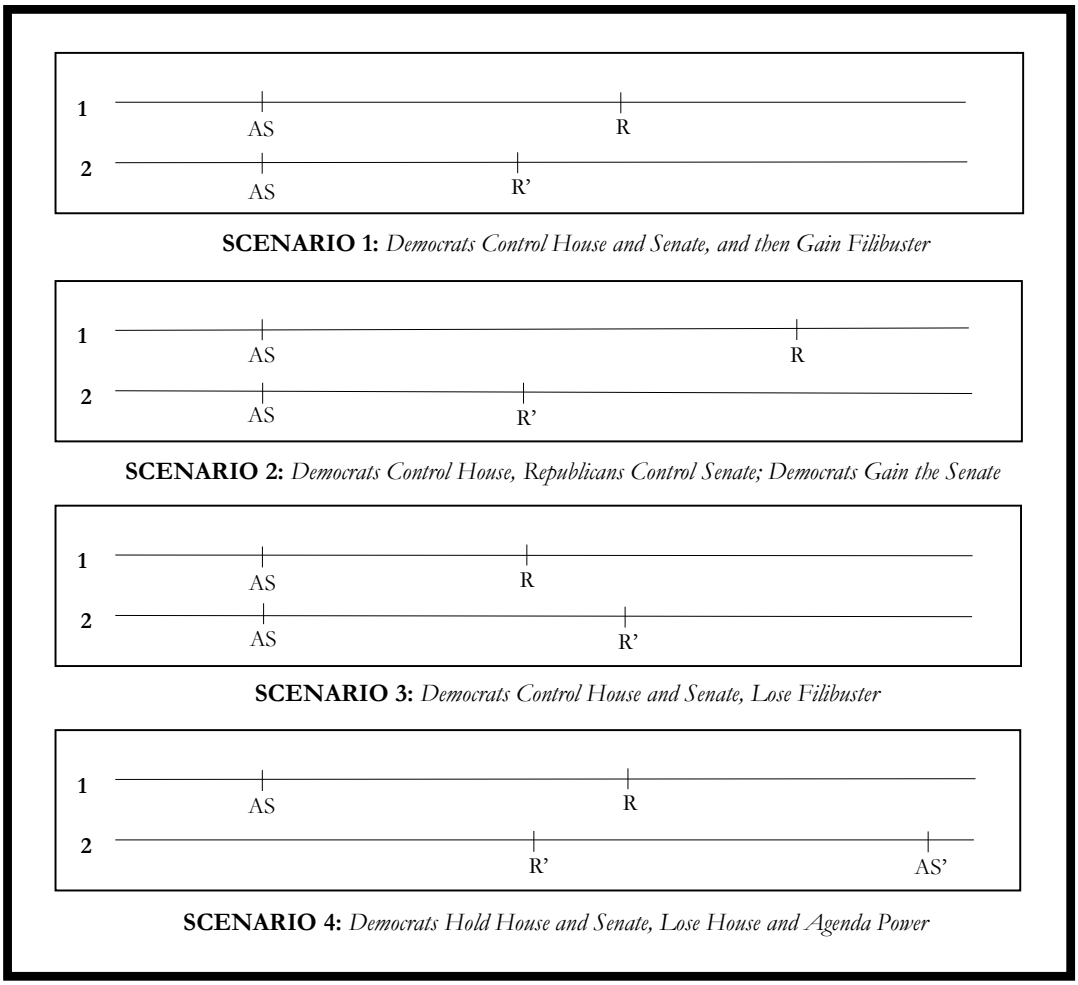
In the first set of scenarios, AS is expected to maintain agenda control and experience a closer receiver following the upcoming election. Here, I assume that AS is a Democrat and is therefore located on the left of the political spectrum, though the results presented below are not specific to a Democrat holding agenda-setting power. Moreover, I eliminate the president from the present analysis, for ease of interpretation. Doing so does not alter the intuition behind the model's results, and the president can be fully incorporated in empirical tests of the model.

In Scenario 1, Democrats hold the majority in both the House and Senate, while Republicans maintain control of the filibuster pivot. As a result, the identity of the receiver in this case, according to the criteria laid out above, is the Republican filibuster pivot. However, the upcoming election is expected to be a positive one for the Democrats. Indeed, in addition to retaining their majorities in the House and Senate, Democrats are expected to pick up a few seats in the Senate—generating the possibility that Democrats could also control the filibuster pivot. In the parlance of the model, then, Democrats stand to capture control of the receiver, ensuring the player moves closer to AS. This sort of dynamic has occurred on multiple occasions throughout the 20th Centry, including in 1946 and 1976, when Democrats held Senate majorities and had a chance at capturing the pfilibuster pivot as well. Figure 2 depicts this two-period dynamic.[3] As denoted in Figure 2, should the filibuster pivot shift occur, players in the game have a reasonably reliable about where the new receiver, R' would be located.

How does this possibility of change of control influence AS's actions in the "present" round? Consider how AS ought to act if the probability of Democrats capturing R is equal to 1 ($\Pr(R' = R_D) = r_D = 1$). In this scenario, AS must backward induct from the second round, in order to determine where policy would move, should she opt not to offer a policy

[3]As Figure 2 depicts, AS's rentention of agenda control is depicted as the persistence of AS in the second round. That is, the location of AS in the second round is equivalent to that in the first round. In reality, this is unlikely to be the case. If, for example, Democrats make enough electoral gains to win the filibuster pivot, the median of the party in government is likely to shift leftward. Instead, AS is held in place here, for ease of exposition.

Figure 2: Common Power Distribution and Electoral Change Scenarios



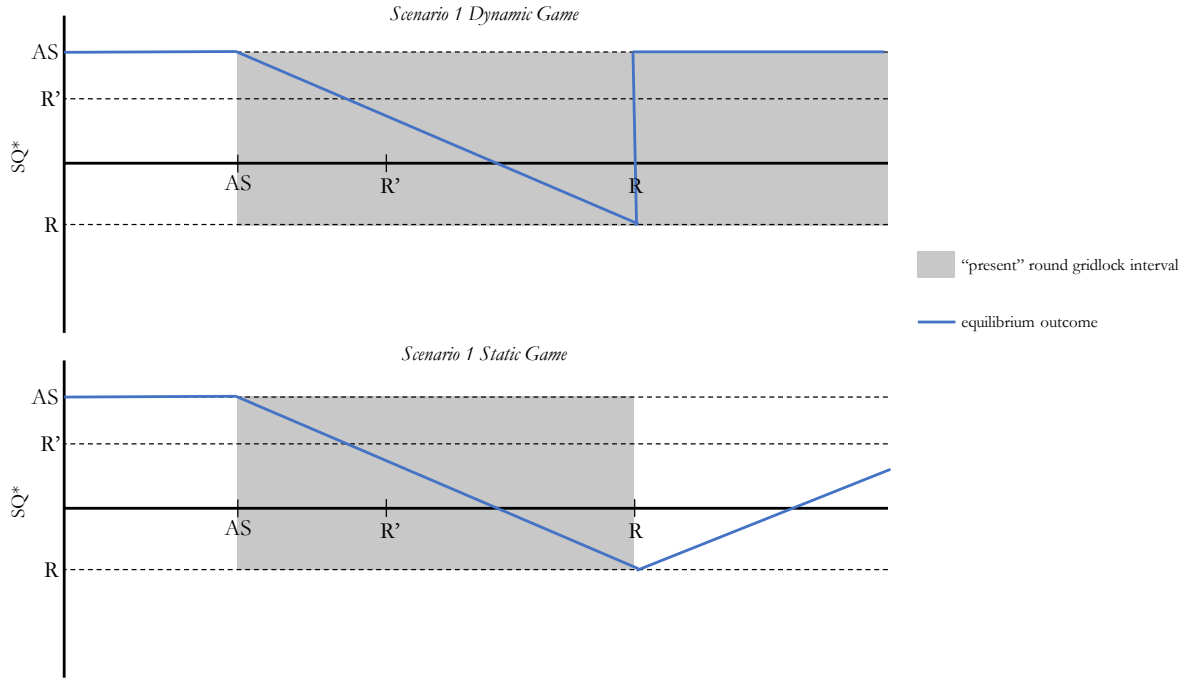
alternative in the present round. Consider first a status quo policy lying far to the left of AS. For such status quo policies, AS can offer an alternative policy located at her ideal point, because such an alternative is a net improvement for the Republican receiver. Because AS can do no better in the second round by holding back, she instead should always propose her ideal point in the first round for any status quo policy.

This dynamic changes for status quo policies lying at AS and rightward. Indeed, if the status quo lies close but to the right of AS, the Democratic AS may desire to move the status quo but cannot do so: the Republican R will reject any movement away from her ideal point. Moreover, for all policies located between AS and R', SQ will persist through both rounds, as neither the first-round or second-round agenda-setter will be able to make improvements upon the status quo. AS will be unable also to move status quo policies between R and R' in her direction, so her best response is simply to allow the status quo to persist.

But what happens for policies lying to the right of R? Here, AS faces an interesting incentive. Policies lying to the right of R are moveable in the first round: R will accept any proposal at least as good as the status quo. In other words, AS can successfully make any offer $SQ' \geq SQ - 2|SQ - R|$. But how does this result compare with the how policy would change in the second round? For such status quo policies, SQ is even less desirable for R' than it is for R. Consequently, AS can extract more policy concessions to the left in the second round than the first. Indeed, it is easy to see that, for status quo policies to the left of R, $SQ - 2|SQ - R'| < SQ - 2|SQ - R|$. Given that this is the case,AS faces an incentive to *hold back from offering a policy alternative* when the status quo is to the right of R, even though she can improve upon the status quo in the first round by making an offer. This dynamic is not limitless, however. Indeed, eventually a status quo policy is so far to the right that $AS \geq SQ - 2|SQ - R|$—i.e., that AS's ideal point lies within the leftward reflection of SQ over R. Under such conditions, AS can propose and obtain her ideal point in the first round, rather than having to wait until the second round. This means that for any weak preference of present gains over future ones—including for any possibility that Democrats won't actually capture the filibuster pivot—AS should propose her ideal point in the first round, which R will accept. Figure 3 summarizes these results.

How does this compare with the static case? Figure 3 compares the results of the simple

Figure 3: Common Power Distribution and Electoral Change Scenarios



static case with the dynamic scenario described here. Under the static case, the range within which policy change does not occur is straightforward: policy change does not occur for status quo policies lying between AS and R. As Figure 3 plainly depicts, policy change occurs even less frequently in the dynamic case than in the static case.[4] Indeed, when the agenda-setter is thinking about future gains, she is willing to forgo policy change in the present round for a larger number of status quo policies, located to the right of R. This disparity between the dynamic and static case diminishes, of course, as the probability of an R shift decreases. Indeed, as the probability of a shift decreases, the expected location of the Round 2 receiver converges to the original location of the receiver.

Finally, with regard to polarization, note that policy change decreases in both the dynamic and static cases, as a result of the parties growing apart. However, polarization may

[4]If one were to total the policy change that occurs in both rounds, one could argue that a larger number of status quo policies are changed in the dynamic rather than the static case. However, the point of rendering the policy change process dynamic is to examine how this change influences *present* policymaking efforts. Indeed, once the Round 2 configuration ultimately becomes the Round 1 configuration, the new AS will again have to consider what the policymaking environment will look like after the upcoming election. Thus, the game as designed underscores what policy change should look like if every Congress considers the location of today's players as well as the possible location of players after the next election.

have an even greater effect in the dynamic case. The reason for this result is that the amount of holding out that AS does in the first round is proportional to the expected distance between R and R'. Indeed, as this distance increases, the total range of rightward status quos better moved in the second round increases. Polarization increases the distance between R and R'. If Republicans and Democrats are far apart from one another, then a shift from a Republican-held filibuster pivot to a Democratic-held one is substantial. If the parties are close together, this shift is far less meaningful. If the parties overlap, such a shift may not even benefit Democrats at all.

These results regarding policy change and polarization hold for any scenario under which AS remains the same and makes some kind of gains with the receiver. Thus, Scenario 2 results in the same kind of dynamic as Scenario 1. In Scenario 2, Democrats hold the House and filibuster pivot, while Republicans hold the Senate. If one assumes that agenda-setting power lies with the House majority in this case, AS is located at the Democratic majority median in the House, and R is located at the Republican-controlled floor median in the Senate. Under this scenario, Democrats are expected to gain the Senate, but not capture the filibuster. Although the player identities differ from Scenario 1, the same dynamic occurs in Scenario 2 as in Scenario 1. That is, because a Republican filibuster pivot is likely to be closer to AS than is the 50th Republican vote, AS faces a more favorable environment in Round 2 than in the present. Consequently, for a certain set of status quo policies to the right of R, AS will hold back from offering policy reform.

Scenario 3: AS Maintains Control, but Loses Ground with Receiver

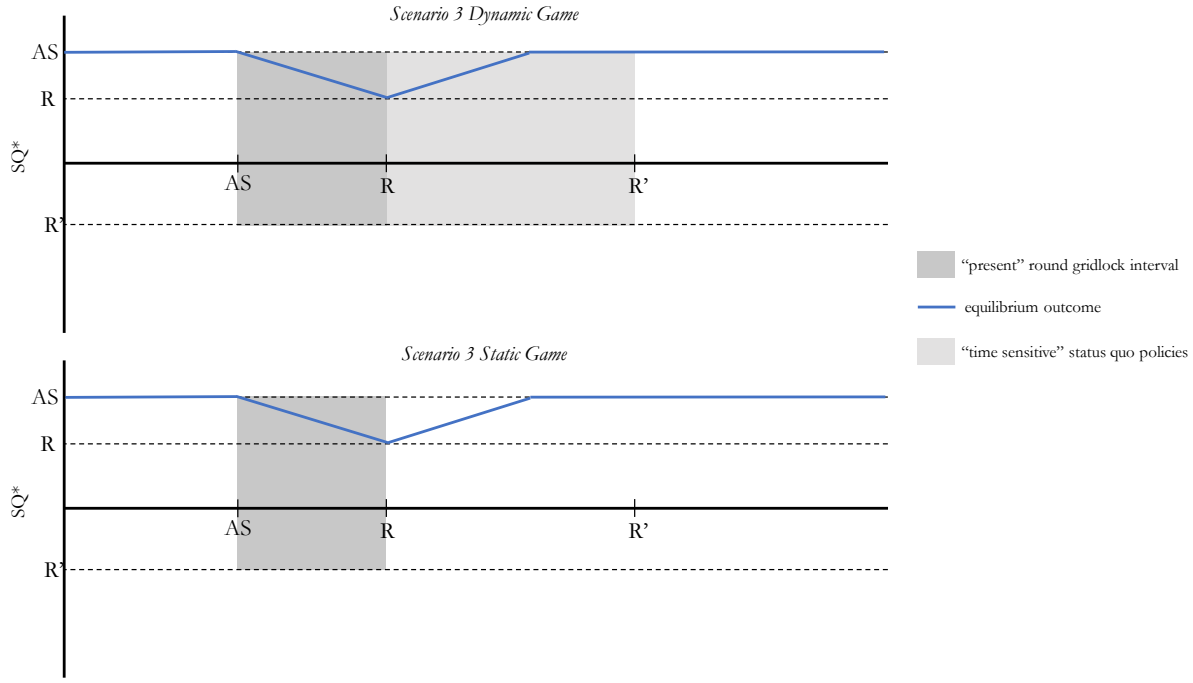
Unlike Scenarios 1 and 2, the Democratic AS loses ground in Scenario 3. Here, Democrats hold complete control of Congress in the present round: they control the House majority, Senate majority, and the filibuster pivot. However, following the election they are expected to experience minor losses in the Senate—enough so that losing the filibuster pivot is a possibility. An example of this sort of scenario occured early in 2009-2010, when Democrats had previously made large gains in the 2008 election but were expected to make routine losses in the 2010 midterm election (potential losses that grew, of course, with the passacge of the Patient Protection and Affordable Care Act—bumping the latter portion of 2009-10

into Scenario 4, described below). As a result of these expected losses, the location of R may shift rightward, from the Democratic filibuster pivot in the first round to the Republican filibuster pivot in the second round. As before, I assume that the location of the potential Republican filibuster pivot is well known to players in the game.

How does this potential shift influence the strategic calculus made by AS in the present? Consider first the scenario wherein the rightward shift of R is guaranteed to occur ($\Pr(R' = R_D) = r_R = 1$). Here again, as in Scenarios 1 and 2, status quo policies lying to the left of the agenda-setter are moveable to AS's ideal point in the first round: R will accept any movement of these status quo policies to the right. Similarlly, policies located between AS and R are immoveable, regardless of the location of R—meaning that the status quo remains in place within this range. But what about status quo policies lying to the right of R? In Scenarios 1 and 2, AS opted to hold back from policy change. But unlike in Scenarios 1 and 2, AS should no longer hold back on these status quos. In fact, one might argue that AS should accelerate her policymaking efforts on a subset of these status quos. Following the election, status quo policies lying between R and R' become immoveable. Therefore, if AS wants to lock in policy gains in this area, she needs to propose changes now. Furthermore, for policies lying to the right of R', AS also faces an incentive (albeit a slightly smaller one) to accelerate policy change, because $SQ-2|SQ-R'| > SQ-2|SQ-R|$. That is, R' is far less exploitable when AS tries moving rightwing policies by reflecting them over R's ideal point. This dynamic, of course, is limited by the ability of AS to achieve her ideal point in the first round for extreme rightwing status quo policies. Indeed, when $(SQ - R) \geq (R - AS)$, R will accept an offer = AS, because such an offer is now an improvement on the status quo. Because AS cannot improve upon this outcome, she makes the offer and the game ends. When $\Pr(R' = R_D) = r_R$ is not equal to one, this "acceleration" region shrinks.

Figure 4 summarizes these results and compares them to the static case. For the present-round static case, nothing has changed: status quo policies lying between AS and R will remain unchanged. Strictly speaking, rendering the game dynamic did not increase or decrease the number of moveable status quo policies in equilibrium. However, one might argue that the game's dynamism accelerates policymaking in a different way (or, at very least, focuses it): that is, because AS knows that policies between R and R' may become immoveable

Figure 4: Common Power Distribution and Electoral Change Scenarios



in the immediate future, she make exert additional effort in moving these policies. Whether or not this results in more policy change overall depends on how scarce agenda space is, but the model's dynamism at very least suggests where AS is likely to focus her policymaking efforts.

Polarization also does not technically influence policy change more or less in the dynamic versus the static case. In both cases, polarization should be negatively associated with policy change, as it drives the two parties apart—therefore increasing the size of the gridlock interval. However, insofar as polarization widens the $R \rightarrow R'$ shift, polarization may accentuate the sort of acceleration/focus explained above. Indeed, polarization may increase the total number of moveable present-round policies that are immoveable in the second the round.

Scenario 4: AS Loses Agenda Control but Maintains Control of Receiver

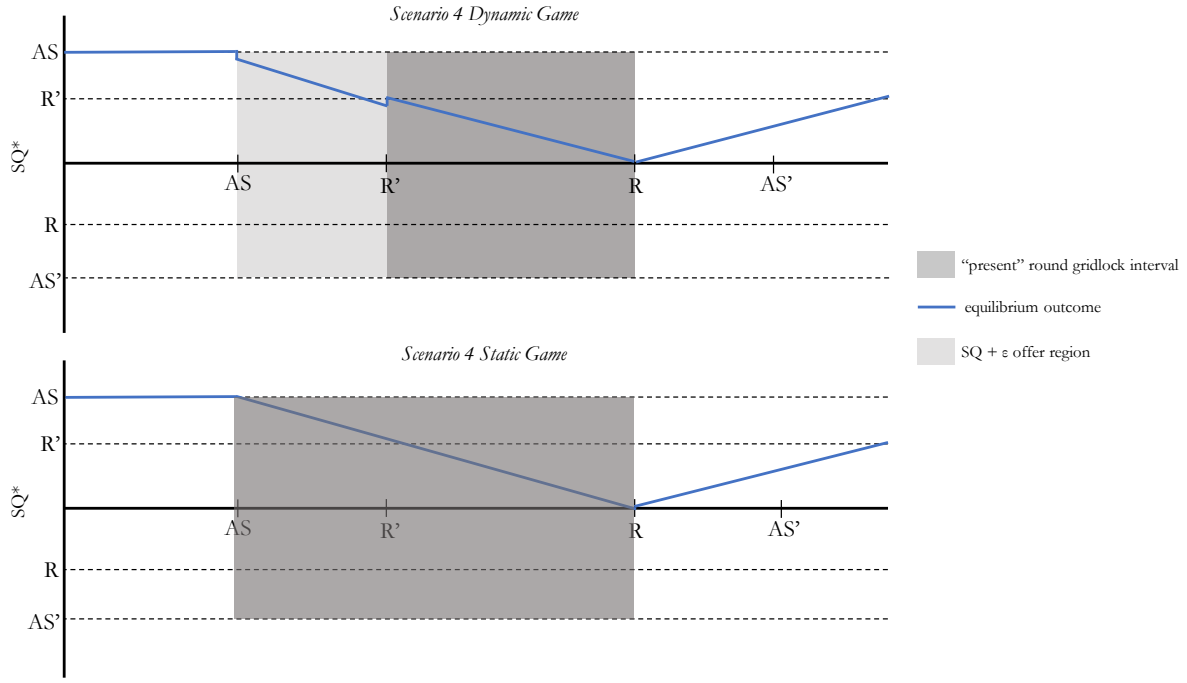
In the fourth and final scenario, Democrats begin in a favorable position: they control the House and Senate majorities (and therefore hold control of AS) and lack control only of

the filibuster pivot. In the upcoming election, however, Democrats face the possibility of a drastic loss: they stand to lose control of both the House and the Senate, retaining only the filibuster pivot. Consequently, AS falls to Republican control, while the Democratic filibuster pivot takes on the Receiver identity. Here again, I assume that the likely locations of AS and R, should the anticipated electoral changes occur, are well known to all players in the game.

This shift differs from the previous scenarios in two regards: first, R and AS both move, and second, agenda-control changes changes. How do such major changes affect the policy-making dynamic? As with the previous scenarios, it is instructive to first assume that the anticipated electoral changes will occur with probability 1, and then examine different kinds of status quo policy locations. Thus, consider first the status quo polices lying to the left of AS. In spite of the potential for coming changes, AS's dominant strategy for these status quo policies remains unchanged from previous scenarios. Indeed, AS can achieve her ideal point in the first round, because R accepts any rightward movement in these status quo policies. Because AS cannot improve upon this result, she will always offer AS in the first round for status quo policies lying to her left.

For slightly more conservative status quo policies, however, an interesting dynamic begins to emerge. Consider what might happen if status quo policies lying between AS and R' are allowed to persist into Round 2. For these status quos, AS' may exploit the Democratic filibuster pivot and move policy rightward by $2|SQ - R'|$. This result is much worse for AS than the status quo. How, then can AS respond? Recall that *any* new policy change in Round 1 ends the game for that particular status quo. Given this feature of the game, AS can protect against rightward movements of status quo policies in this range by offering to R $SQ^* = SQ + \epsilon$. In other words, by offering a policy that is nearly identical but slight rightward of SQ, AS may entice R to accept a change that is better for AS than what would occur in the second round. While this strategy may seem at first unrealistic, a practical application of this sort of dynamic may occur when a majority party chooses to reauthorize a program without making major changes to the program's structure. Indeed, instead of allowing to the next Congress to take the reauthorization, the current agenda-setter can lock in, say, 5 more years of the current program structure and policies.

Figure 5: Common Power Distribution and Electoral Change Scenarios



This incentive for AS to make epsilon-more-conservative offers disappears for status quo policies lying between R' and R. Indeed, whereas policies lying between AS and R' were vulnerable to rightward movements by AS', policies lying between R' and R are located within the Round 2 gridlock interval. No offer AS could make in the present round would improve upon these status quo policies, so policy change does no occur within this interval. For status quo policies lying to the right of R, AS faces an incentive structure similar to that in Scenario 3. Indeed, given that status quo policies to the right of R will be either immoveable ($R < AS'$) or moved to AS', AS should accelerate her reform of status quo policies to the right of R, out of concern for poor Round 2 outcomes if no new policy is adopted. Figure 5 depicts these dynamics.

What role do electoral probabilities play in this scenario? Unlike Scenarios 1-3, such probabilities complicate the AS's strategic calculus considerably, at least for some status quos. First, for status quo policies to the left of AS and to the right of R, the dynamic does not change considerably: AS can always benefit by moving those policies in the first round. However, for policies lying between AS and R', AS's calculus becomes much more complicated. One reason for this complication lies in the fact that, for some combinations

of probabilities Pr(Rep. control Senate) = Pr(R) and Pr(Rep. control AS) = Pr(AS'_R), AS can do better than than $SQ - \epsilon$. Consider, for example, cases wherein Democrats hold on to agenda power. Under such conditions, AS can expect an outcome better than $SQ - \epsilon$. First, if nothing changes (i.e., if the identity of the receiver remains with the Republican filibuster pivot), then the game will end with $SQ* = SQ$, because AS can do no better than SQ in either the first or second round. Second, if Republicans do capture the Senate (and therefore alter the identity of R), status quo policies within this range will now be located inside the Round 2 gridlock interval. That is, because a Republican Senate in this scenario would shift R rightward from the Democratic filibuster pivot to the Republican Senate floor median, the resulting configuration would strongly resemble Scenario 3. Under this scenario, a policy lying between AS and R is immoveable: thus, if Democrats hold on to agenda power but lose the Senate, the resulting SQ^* will simply be SQ.

Further complicating the calculus made by AS, consider next the outcomes that could occur if the Republicans do in fact capture AS. As noted earlier, if Republicans capture AS and also win the Senate, AS shifts to AS' and R moves to R'_{DF}, the Democratic filibuster pivot. However, if Republicans capture AS but do *not* capture the Senate, R moves to the median legislator of the Senate—a Democrat (R'_{DM})—instead of moving to R'_{DF}. If R'_{DM} lies closer to AS than does R'_{DF}, the region for which AS makes the $SQ + \epsilon$ offer shrinks to (AS,R'_{DM}), or (AS,R'_{DF}) if the opposite holds. *A priori*, it is impossible to know for sure whether R'_{DM} or R'_{DF} will lie closer to AS, as this result depends upon which current Democratic legislators *could* lose, if Republicans *were* to take the Senate. Regardless, the possibility that Republicans carry AS but not the Senate implies an outcome that, at most, shrinks the $SQ + \epsilon$ offer region, and at very least, does not grow it.

Taken together, Scenario 4 leads to a dynamic whereby policy change may, at the least, occur the same amount as in the static case (when the probability that Republicans capture AS is relatively low), and at the most occur more than the static case by $AS - R'$. However, even though policy change can occur more in the dynamic case than in the static case, an important caveat to this observation is that this added policy change comes in the form of small, ϵ departures from the status quo. From an empirical perspective, such small changes would likely not count as "major" status quo movements in data sets such as Mayhew's

"Sweep 1" laws. With regard to polarization, insofar as polarization implies not only a widening of the gap between political parties but also an increase in cohesiveness of the parties, one could argue that partisan polarization decreases this "small change" range. Indeed, polarization decreases policy change overall in this Scenario (by widening the gap between R' and R), but an increase in partisan cohesion might mean that the Democratic filibuster pivot and Senate floor median are quite close to the present-round AS.

Empirical Tests: A Preview

Although the structure of this dynamic model of policy change is quite simple, it captures a variety of key features of the policymaking process that static models do not. These features include the possibility of holding out and opting against policy change in the present and allowing agenda-setters to anticipate and adjust to potential electoral changes. Moreover, the model applies a common observation about policy change in American politics: that once Congress engages in policy change in a particular area, it is unlikely to address this particular policy area again in the near future. This sort of dynamic may help to explain why some policy advocates and other political actors so strongly resist compromise legislation, but it is absent from current models of policy change. My model incorporates this observation and traces its effects on policy change in a series of common electoral scenarios.

Beyond these features and the theoretical insights into policymaking offered by the model, the application of the model also suggests a variety empirical tests, each of which future papers will execute. I outline these tests here, as a means of elucidating how this model of policy change connects to actual policymaking in Congress.

A Congress-Level Test of Dynamic Policymaking

First, the model is well-suited for a traditional, Congress-level test of policy change predictions. Indeed, by generating policy change predictions (like those found in Figures 3-5) for each modern Congress, one may test directly the overall predictions made by the model. The empirical strategy for doing so is straightforward: first measure each Congress's gridlock interval according to the dynamic model, and then regress overall policy change on the size

of these intervals. Doing so implies a few key measurement challenges, however. More specifically, beyond the measurement of overall policy change in a given Congress,[5] such a test also requires measures for actors' ideal points and measures of electoral probabilities. For the former, traditional DW-NOMINATE scores may not suffice: indeed, DW-NOMINATE scores rely upon an implied static spatial model in scoring roll call votes, while my model is dynamic in nature. Therefore, it is unclear how the preferences measured using DW-NOMINATE map onto the strategic evironment faced by actors in my model. Other scores not relying on roll call votes, such as Adam Bonica's cf-scores (2014) are better suited for this purpose.

To measure electoral probabilities, I make use of available election market data, as a variety of studies (Berg et al. 2008; Erikson and Wlezien 2012) have suggested these sources to provide the most accurate predictions about how parties will fare come Election Day. A primary source of these data is the Iowa Election Study (IES). IES assigns a probability of partisan control to the House, Senate and presidency, making it a useful measurement for the purposes of the test outlined above. However, IES data are available for only a small time span (1994 to present). Thus, additional data are needed for measurement of partisan control probabilities. In a separate paper, I use a new machine-learning process, LASSOPlus (Ratkovic and Tingley 2017), to fit a model of the IES data and then generate predicted probabilities for pre-1994 years using those predictive models. These models leverage a variety of data that party leaders may rely on to assess their party's electoral prospects—and that might be predictive of the IES data. Such data include historical poll data (such as presidential job approval, congressional job approval, and generic congressional vote), macro-level election data (such as the number of seats defended by the majority, the total number of marginal states and districts up for reelection, and whether the upcoming election is mid-term or presidential), and finally, periodic economic data, such as unemployment rate and consumer sentiment. Both have been tied in the past to perceived reelection rates (e.g., Stigler 1973) and likely influence party leaders' own perceptions of their party's electoral prospects in the upcoming election. Taken together, these variables and the fine-

[5]My study uses Tobin and Grant's (2008) Legislative Productivity Index, although many other measures exist, including those offered by Mayhew (1991) and Clinton and Lapinksi (2006)

tuned empirical methodology used to model IES data allow for accurate measurement of contemporaneous electoral expectations from 1945 to present day.

Using these data, one may directly test whether the dynamic model makes accurate predictions about the level of policy change a Congress should face. Once completed, such tests also allow for direct comparison between the predictive quality of the dynamic model, compared to previous models of policy change.

Using Reauthorizations as a Bill-Level Test of Dynamic Policymaking

An additional means of testing the dynamic model is at the bill level: given a particular status quo policy, does policy change occur when the model predicts it will? One means of executing this sort of test is through the study of bill reauthorizations. In the federal government, hundreds of laws are purposely sunsetted by the enacting legislature. That is, the funding and/or design of a program is intentionally set to reappear on the congressional agenda after a specific number of years has elapsed since initial passage. Despite the fact that Congress sets specific "due dates" for itself on various laws, it very often fails to meet those deadlines. Indeed, it is not uncommon for Congress to fail to reauthorize whole pieces of legislation. To date, few studies have examined why, for example, No Child Left Behind reauthorization came eight years late—or why, say, the recent Farm Bill came right on time. Since 1974, the Congressional Budget Office has maintained record of these sunsetted bills, tracking which bills are up for reauthorization during each Congress, and how many bills currently have expired authorizations.

Because of the level of detail provided in these data, they provide an excellent opportunity to test the predictions of the model. First, because one may merge enacting-legislature data with roll-call and legislature ideology data, reauthorizations allow for the estimation of status quo location of the bill up for reauthorization.[6] In addition to this advantage, Congress has the option of reappropriating funds for a policy without changing its authorization, through

[6]While several methodologies exist (e.g., Woon 2008, Peress 2013) for measuring such locations, I will use scores developed in a separate paper (Crosson, Furnas, and Lorenz 2017) that uses interest-group position-taking to measure bill proposal and status quo policy location.

continuing resolution. In other words, Congress can choose whether to maintain the status quo (or something very close to it) or change it in some way—the same sort of choice faced by the agenda-setter in the theoretical model. In this way, one can measure policy change quite directly: conditional on a policy coming due for reauthorization, did Congress choose to move forward and reauthorize? Or, did it reappropriate without reauthorizing?[7] This feature allows these data to discriminate in an important way between different policy initiatives, instead of assuming an equally favorable or unfavorable status quo policy over all bills.

Estimating a model of reauthorization provides a number of benefits not available to a Congress-level study. First, it offers a larger sample size than just one data point per Congress, as many bills come up for authorization each year. Additionally, it is able to leverage differences in the location of the status quo policies associated with each reauthorization, thereby altering the strategic considerations made by the agenda-setter especially. Finally, reauthorizations arise at different points in the legislative calendar. Some bills are up for reauthorization in even years, whereas others are up in odd years. Consequently, given that electoral fortunes may shift from year to year, payoffs associated with holding back also change, again allowing for differing predictions within a single Congress.

While Congress-level and reauthorizations-level studies of policy change offer two environments within which to test the predictions of the model, the dynamic model outline in this paper implies a wide vareity of additional potential tests. These include point estimate tests for the location of passed legislation, comparative statics on key electoral probabilities, and an examination of whether or not majority agenda-setters actually engage in the kind of "$SQ + \epsilon$" offer-making predicted by the model. These possibilities notwithstanding, the outlined Congress-level and reauthorizations-level will go a long way to establish or call into question the dynamic model's ability to accurately predict policy change.

[7]It is important to note that, if Congress fails to both reappropriate and reauthorize, then this counts as a change in the status quo—not a preservation of the status quo. It is unclear, however, where this new "policy" would be located in policy space—or how often this even occurs. For the time being, my strategy will be to assume that a decision to completely allow a program to fold—that is, to not reauthorize or reappropriate—will revert the status quo back to its location before the original policy had ever been adopted.

Implications and Conclusions

Congress's electoral history has varied considerably in terms of competitiveness. Indeed, Congress has expereinced prolonged eras of partisan dominance (e.g., Democrats for much of the 20th Century) and intense competition over control of congressional majorities (e.g., the mid 1990s to present day). In spite of these dramatic differences over time, current models of policy change do not consider how electoral competition might influence the strategic environment within which policy change occurs. While recent scholarship has begun to consider the ramifications of electoral competition for congressional politics, this study is among the first to consider how electoral competition should be expected to influence overall levels of policy change. According to this paper's findings, electoral competition—defined as the possibility that one or more actors could be captured by the out-party—accelerates policy change under some conditions and stymies it under others. When the agenda-setter is set to make gains after the upcoming election, it holds back from offering advantageous policy alternatives—a phenomenon that would not occur if electoral change change were not possible. Similarly, if the agenda-setter stands to lose ground, it may accelerate policy change.

These results offer plausible and testable new hypotheses to scholars interested in policy change dynamics in Congress. However, the framework presented here can extend beyond the congressional policymaking literature. Indeed, the framework is applicable to any legislative context wtih an agenda-setter and ultimate veto player. Regardless of the application setting, this paper provides a simple framework for incorporating a vital but previously under-studied component of the policymaking process: macro-level electoral competition.

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