# Electoral Accountability and Efficiency of Politics in the United States: A Counterfactual Analysis

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## Abstract

We consider how citizen attentiveness to public affairs shapes the character of presidential politics and policymaking. Our analytic tool is an empirically-grounded macro model of U.S. politics, one rooted in data and econometric estimates taken from the second half of the 20th century. We conduct stochastic simulation experiments to determine how varying attentiveness affects electoral accountability and the efficiency of dynamic representation. Qualitatively, attentiveness yields greater accountability and efficiency. However, the quantitative estimates indicate that the effect of altering citizen attentiveness may be more modest rather than dramatic.

For some time political science has been interested in quality of attention that the public gives to the policy-making process. At least since the 1960s (see, most importantly, Converse 1964), it has been apparent that ordinary citizens posses only modest interest in and knowledge about politics and policy. This public indifference has been much studied and commented upon with a good deal of worry about the extent to which public apathy makes the democratic electoral connection weaker than it should be. Simply put, the common view is that because citizens care so little about public affairs, their ability to govern politicians' policy-making is severely attenuated.

Over the years, political scientists have been able to test the critical linkages between what people want and politicians do. Going back several decades, studies have explored the linkages between constituency preferences and the representative's behavior (for example, Miller and Stokes 1963 for the US, Converse and Pierce, 1986 for France) More recently, the three of us have examined the dynamics that link changes in public preferences with changes in public policy, finding indeed that politicians attend to changes in public sentiment and alter public policies accordingly—and that the public notices the connection. (Although rarely change their behavior relative to each other( Poole and Rosenthal 1991 and Asher and Weisberg 1978). However at the macro level we observe a dynamic connection.[1] This link between public preferences and public policy exists despite the public's general indifference to policy questions (Delli Carpini and Keeter, 1996).

But knowing that such a connection exists merely leads on to further questions. Given the current level of public political attentiveness, how constrained are politicians when they go about their business? Are they given great latitude or are they tightly bound by the public's preferences? And then, if the public were more attentive, or less attentive, what would be the consequences? Would an increase in public attentiveness, say a doubling, make it noticeably more difficult for politicians to pursue their own agendas or would it constitute only a miniscule change in the system? That is, how strongly is *electoral accountability* a function of public attentiveness?

Further, we want to know more about the effectiveness of the dynamic representation system. When the political system responds to public demands for public policy, how well does it do in serving the public? Is the representation sluggish? Does it overshoot and cycle? To what extent does public attentiveness affect the *efficiency of dynamic representation*?

These are questions easy to ask and difficult to answer. They call for a sort of experimentation that requires counterfactuals. They ask how an alternative state of affairs compares with the current observed state. In one deep sense, the answers are unknowable. And yet, we may begin to obtain some sense of the result by exploring the way that hypothetical politicians and electorates might operate were they slightly different than the ones that we see and know. Such a project calls for a methodology that allows exploration of counterfactuals while at the same time keeping one's feet firmly grounded in an observed reality.

Here we propose such experimentation by means of computer simulation. We follow in the footsteps of macro econometric modelers who develop empirical representations of the macro economy and then explore counterfactuals. These exercises, termed policy experiments in the macro econometric context, allow scientists to manipulate an understood (though sometimes complicated) reality to see what might happen under various alternative scenarios. Typically, a macro economist might estimate a multi-equation representation of a national economy and then test the consequences of a change in the tax rate or the bank reserve requirements or some such "policy" change. (This is pretty standard fare. See, for example, Fair 1994 or Whitley 1994.)

In this article we use a macro political model that we have already developed to explore the consequences of slightly different types of politicians and publics that "might" exist in worlds similar to the one that we observe. As our policy experiment, we see what would happen if the public were more (or less) attentive to matters of public policy. The experimental results, discussed below, suggest that further attentiveness might improve the connection between public preferences and public policy, but that the improvement would likely be modest. Such inferences are, of course, based in the preliminary empirical macro political model and are subject to considerable doubt. However, the interesting aspect of the answers to our theoretical question is not the magnitudes that we eventually estimate but the fact that they can be estimated at all.

## A Model of American Politics

Many years ago when we set out on our lengthy program of macro research on American politics we briefly considered encapsulating all the knowledge thereby gained into a single model in which multiple equations connected all the pieces through causal theories. That consideration was brief because we quickly concluded that the task was beyond us, perhaps beyond anyone.

Big models have a history in macro-economics, a checkered one to be sure, and it seemed natural to think we might do the same for political science. But our discipline turns out to be more difficult than mere economics, one of the key problems being that our key concepts move on massively different time scales.

After over a decade of pursuing empirical relationships piece by piece, having abandoned the goal of a unified model, we were quite astonished when we reconsidered the big model issue to see that all our pieces fit together as if planned. And while the mathematics of multiple equation systems that run on differing clocks still eludes us, it quickly became clear that such a system could be modeled computationally. We put together such a model, a primitive tinker-toy version of a unified theory, in Chapter 10 of *The Macro Polity* (Erikson, MacKuen, and Stimson

2002). Here we report on further developments, on what we have learned about system behavior in the intervening two years since that model was completed.

One of the things we have learned is that no audience can accommodate the complexity of exposition of a model with so many parts. So here we will direct focus to one little subsystem, one which addresses central issues in our understanding of democracy.[2]

**Macro Assumptions**

We begin, following the design of macroeconomics, with a unitary actor assumption. Not wholly unconventional, it will nonetheless seem a strange move for an article on public opinion. We treat every aspect of American politics as if it were a unitary actor moving over time. Thus, instead of voters with differing individual preferences for government policy, we have a single electorate which moves its preferences back and forth from left to right over time.

Instead of a U.S. Senate consisting of individual Democrats and Republicans, we have a single Senate which shifts the proportions of its partisan complexion following elections. Instead of an electorate comprised of individual Democrats and Republicans, our unitary electorate consists of a proportion Democratic (Macropartisanship), which changes in response to "its" experiences with economic outcomes and evaluations of presidential performance.

We then ask how changes in any of these aggregates impinge on changes in any of the others. We build a structure from our macro theories which tells us which actors influence which others. The structure consists of theory conjoined with estimated parameters. Theory tells us which possible structural associations will be assumed to be zeros. Conventional dynamic regression modeling provides the estimates for those assumed not to be zero. To faithfully represent both our theory and our empirical claims, the theory and parameters are drawn from our work, from reported regressions in *The Macro Polity.* We desire no novelty, insofar as that is possible in such an exercise, because we want the system model not to stand alone, but to be rooted in the whole body of our work.

Virtually everything in our theoretical structure is endogenous, a result of movement in something else further back in our causal web. Thus there can be no beginning or ending point to the model; it is a system, not sets of isolated relationships. As we will soon see, it is quite a circular system, a model in which variables cause other variables and then receive the impetus back again at later times.

This is not particularly novel as a statistical estimation problem. If one wishes to model say the effect of presidential approval on presidential election outcomes, it is easily and commonly done. But of course presidential elections determine winners and, therefore, necessarily influence *subsequent* presidential approval. We ignore that when we estimate parameters in conventional analyses. We have a known presidential approval series and known presidential outcomes series, both fixed by history. But when one puts together a system novel questions emerge. We now need to deal with dynamic issues such as how approval causally impinges on future values of itself through its effect on elections. This should not be confused with mere autocorrelation, a nuisance problem in the error term. This is causal endogeneity in its full blown form.

Because everything we will say depends upon some minimal understanding of the structure of our model, we will present an abbreviated and simplified version of it. Then, because the complexities of its various flows overwhelm a simple presentation, we will turn our focus to a subsystem which will actually be manipulated and observed in the analyses to come.

**The Full Structure**

The abbreviated structure is pictured in Figure 1. In such a mutually endogenous system, there is no exogenous starting point. So to bring a little structure to the presentation, we will present it as if our model of representation of public opinion into policy action were the core. We will number our causal assertions, so that the reader can keep score, (although this abbreviated version leaves out a lot.)

Figure 1 here

We begin with public opinion (Public Policy Mood), a series that represents the basic left-right dimension of American politics. (1) Opinion affects election outcomes, liberalism helping Democrats and the reverse. (2) Election outcomes also affect policy activity. Policy activity is the day to day action of government, votes in Congress, presidential acts, and Supreme Court decisions. It is policy-making, something like the first difference of national policy, which is itself cumulative over time.

Activity has a contingent character; (3) it might lead to policy when coordinated with other branch activities, but it often does not. The president makes a proposal or one or the other house of Congress passes some bill and then, nothing; without coordinated action it has no consequence. We have multiple indicators of policy activity. A typical one is, for example, what proportion of all votes in the House are won by the liberal side each year.

(4) Public Mood also affects policy activity directly. This is our rational expectations story of American politics. We believe that politicians anticipate the role of public opinion in future elections and act in the present on that knowledge. Put in the negative, they do not wait until they lose an election to pick up the message that public opinion has changed.

(5) Policy activity sometimes produces policy. We pass activity through a filter which emulates the aggregate impact of the constitutional requirements for law-making. The filter translates activity into policy not additively, but—to represent the need for concurrent majorities across branches—as a multiplicative function of the liberalism or conservatism across (elected) branches and with a delay that represents the delay induced by multi-branch checks and veto-points.[3]

(6) Policy feeds back to Mood negatively. Why? Without parties, our election-seeking politicians would offer a blend of positions that collectively optimize the fit to public preferences, producing no negative feedback. But parties respond not just to the median voter, but also to their personal ideological values and to their electoral bases, which tend to have views

more extreme than the norm. The consequence is that policy in the hands of one party produces outcomes that are different from the policy preferences of the median voter.

In this system the party in power eventually goes too far, moving in the direction of public demand, but going further than the public wishes. They always overshoot. In consequence, the public is dissatisfied with the incumbent party and tends to shift its preferences away from the incumbents' stance. This borrows from and has much in common with Wlezien's (1995) thermostatic model of public opinion.

(7) Elections and party control lead to distinctive economic policies. Each party tends to please its electoral base, Democrats advocating low unemployment at the cost of high inflation, Republicans the reverse. This fits with the theory and findings of Hibbs (1977 1987) and of Alesina and Rosenthal (1995) and is handsomely supported by historical economic performance data.

This is outside *our* theoretical system, but is a necessary aspect of closing the loop in our model. (8) Economic outcomes cause Mood. High unemployment produces liberalism, high inflation conservatism. This is a natural complement to the party policy tendencies just presented. The consequence is another feedback loop where each party's typical policies end up producing support for the opposite party. (9) Democrats reduce unemployment (and increase inflation), producing conservatism and support for Republicans. Republicans do the opposite. Thus, regular cycles of party control is an implied feature of the model.

Economic Outcomes combine to produce another outcome, (10) disposable income, which has consequences for reelection of the party in control of the White House. (11) Economic Outcomes, this time measuring the net goodness or badness of the times, also affect approval of the incumbent president. This is the more conventional political economy story.

(12) These same outcomes also affect Macropartisanship, the proportions of Democrats and Republicans in our unitary electorate. There is also an economic effect that is indirect, through approval of the incumbent president.

(13) Parties choose platforms and this, in combination with (14) the moving position of the median voter, produces proximity differences between the two parties. We treat the platform choices as exogenous, although we don't particularly believe that they are. If we were forced to model this phenomenon, for which we have just 12 cases for each party, the model would have parties moving away from the median voter after sustained successes and back towards the median after election failures. This represents the interplay of electoral pragmatism on the one hand and the need to satisfy the ideological preferences of the party base of activists on the other.

Presidential approval affects elections for both (15) president and (16) Congress, depending upon party control of the White House. (17) Macropartisanship affects elections of all kinds in the expected direction. (18) Party proximities affect presidential election outcomes in the expected Downsian fashion, the party closer to the median voter gains votes.

*Implementation*: The model consists of a set of equations, one for each concept. The equations are formally difference equations, predictions of time t values from (usually) lagged values of the causal terms on the right hand side. The parameters of these models are estimated by dynamic regressions.

Although the distinction is not built in to the model, we can bring some intellectual order to the full model by considering it to be the joining of two subsystems, one of which has to do with the performance of the party in power, one with preferences, proposals, and action on policy-making.

**Performance**

Most of what is written about political economy is about the role of government performance, and specifically economic performance, as an influence on citizen attitudes and evaluations. In this model parties follow different economic policies, estimated from historical outcomes data, which sets up feedback when voters encounter the effects of those policies. Good economic performance produces presidential approval and feeds into Macropartisanship for the president's party. Both approval and Macropartisanship influence subsequent election outcomes for House, Senate, and presidency. Some of those effects, for example approval, have relatively quick equilibration. Macropartisanship does not equilibrate at all. It permanently encodes everything that happens in performance (and other things), carrying their message into the distant future.

Since both parties seek good economic performance, there is no inherent cycling of party control in the performance model. But a macroeconomy which experiences business cycles is likely to induce party cycling, exposing long-term incumbents to the urge for "time for a change" during economic downturns. The performance story ties outcomes to future elections, but does so without much element of democratic choice. Success is rewarded and failure punished. But there is no recognition that citizens might have different and incompatible preferences in these theories. Those elements appear in the policy side of our model.

**Policy**

All citizens prefer good outcomes to bad ones, the essence of the performance system. But a deeper look at outcomes will see that natural differences of preference lie under the surface. The (relative) poor are strongly influenced by employment outcomes and benefit from inflation (although they do not generally know that they do). Thus they have preferences for low employment and should be willing to trade off high levels of inflation in order to get favorable employment and growth levels. The (relatively) rich are threatened by inflation and relatively immune to the effects of slow growth and high unemployment. They should be extremely sensitive to inflation and willing to trade off high unemployment in order to protect the value of their wealth.

From this we deduce a macro relationship: high unemployment will produce Mood liberalism, understood to mean a demand for greater government activity in the economic sphere. High inflation similarly produces conservatism, a demand for reduced government involvement. Thus economic outcomes are not merely good or bad, as in the performance side of the model. They are also differential in producing support for liberal or conservative government. A good economy always helps incumbents, ceteris paribus. But an economy that features low inflation and relatively high unemployment, will tilt toward liberalism and the Democrats, regardless of incumbency. The opposite combination produces conservatism.

Here we have inherent party cycling. Democrats and liberals, given power, tend to produce outcomes that generate conservatism and elect Republicans. Conservatives and Republicans, given power, tend produce outcomes that generate liberalism and elect Democrats. Both parties in this system sow the seeds of their own demise.

There is a second, and for democratic theory, more fundamental source of cycling in the policy side of the model. In this system preferences influence elections of all kinds. Elections determine party control. Because parties respond only partially to the demands of the (moderate) median voter (and partially to their own preferences for policy, reinforced by the similar preferences of the party base, enforced through primary elections), they overshoot the preferences of the electorate. An electorate that wants government to be a little bit more liberal, for example, gives party control to the Democrats. Democrats in government then do what they see to be the right thing and produce outcomes that are a lot more liberal than the status quo. The moderate electorate then reacts by becoming relatively conservative in response to the excess—more than it demanded, that is—of liberalism. The loop closes when the buildup of response to policy excess becomes great enough to elect the opposite party. So here again, the fundamental logic is that parties sow the seeds of their own demise. Given the opportunity to govern, they seize it and, in so doing, create conditions unfavorable to their prospect of remaining in office.

This policy cycling loop depends critically upon two parameters, (1) how willing partisans in control are to weigh their policy preferences above the public's and (2) how strongly the electorate reacts to changing policy.. We can imagine a party that chooses electoral expedience over its policy program and tries hard to hew to the moderate preferences of the

median voter. If so, the inherent cycling should break down, the party remaining in office for a lengthy period (all the while unsatisfied, because it is ignoring its policy goals).[4] And we can imagine an electorate that reacts more or less sharply to policy change than the one we observe. In the analysis to come, we go beyond imagining and tweak these two critical parameters to observe how the system responds. We ask what can be learned about a model democracy by observing how its dynamics responds to some key facts of the political life.

## The Simulation Experiments

We now use this macro model simulation as an analytic technique to explore counterfactuals. We want to know more about the public's ability to control policymaking through the electoral process and then to see the consequences for the character of public policy. We want to explore the issues of electoral accountability and then the efficiency of dynamic representation. Finally, we speculate about secondary effects—associated with rational politicians' adapting to changes in the public's attentiveness.

### Electoral Accountability

At an elementary level, we posit the politician as having to make a tradeoff between pursuing public policy goals and satisfying the public's policy demands. A typical Republican member of Congress or president will likely pursue conservative policies both because active political supporters (activists, bankrollers, colleagues) demand conservatism as well as because this is the "right thing to do." Yet, the desire for conservative policies will be tempered by the realization that the electoral constituency will tolerate only so much conservatism before the marginal voters (those who determine winners and losers in elections) shift away from the Republican to an alternative Democratic candidate.[5]

The question before us is whether politicians' pursuing policy goals has a serious electoral consequence or not. And then we ask whether this consequence is affected by the extent to which citizens pay attention and are sensitive to the sorts of policies that government makes.

For simplicity, we shall focus on the presidency. The president *is* something like a single actor with a clear-cut electoral future. The House and Senate, while conceived as single macro actors, clearly incorporate a more complicated political calculus than the presidency. And more generally, it is probably easier for the reader to imagine president's making a strategic choice. (Although the connections between policy and the electoral consequences are different for the House and Senate than for the president, the same sorts of logic should apply.)[6]

### Stochastic Simulations

To escape the quirks of history, to rerun the latter half of the 20th Century exactly as it was, we turn to a form of stochastic simulation. Because there is not enough variation in the observed historical world (ten presidential elections and two major exogenous cycles in policy mood), we want to explore many "alternative histories" that are characteristically similar to the twentieth century but not exactly the same.

A standard tactic is to introduce stochastic disturbances, drawn from a distribution similar to that of the observations. (Again, see Fair 1994 or Whitley 1994.) This produces a plausible alternative history, one that could have happened (because the random disturbance is of the same magnitude on average as actual events which disrupt politics) but did not. For example, in each presidential election we introduce a disturbance (going in either the Democratic or Republican direction) from a distribution with a mean of zero and a standard deviation of 4.53 points.[7] This means that the Republicans will no longer have a built-in advantage for the 1984 election -- Ronald Reagan's sunny personality will no longer be assigned to correspond with that year's election result. And similarly, the 1964 outcome will no longer depend on the specifics of LBJ-Goldwater matchup.[8]

We use these stochastic disturbances in only part of the equations. We keep the historical disturbances (that is, we retain history) in the economy, macropartisanship, and mood[9] but randomize the here crucial theoretical variables of policy-making and election outcomes. Thus, we construct a hybrid form of stochastic simulation in which the political economic world resembles the 20th century but in which policy-making and elections are driven by the macro model and the normal dose of chance.

In addition, to further escape the peculiarities of history, we randomize the beginning of the series. In effect, we start 1957 with a new president, House, and Senate as though the 1956 election were simply determined by chance.[10] Of course, the outcomes of any combination of theoretical parameters will still depend on the disturbances -- now drawn probabilistically. So to obtain estimates of the parameters' effects, we replicate each simulation many times (here 1000 times) and then take the average outcome.

**Public Responsiveness to Policy Change**

Now we wish to learn about the American political system by counterfactual analyses, by experimental manipulation of particular components of the system to see how other components respond. For our first manipulation, observe the simplified model of opinion, elections, and policy in Figure 2a. Focusing only on the presidency, this portion of the system model implies that public opinion drives election outcomes, that election outcomes lead to policy change, and that policy change feeds back to later public opinion. It is this last component, the dashed line indicating feedback from policy to opinion that we will manipulate.

Figure 2a here

We have parameters for the underlying equations estimated from historical data. We wish to systematically change one of them, the negative feedback of opinion to previous policy, to examine how American politics would be different if the public were more or less responsive than the real public of our estimates. We begin with a parameter value, -0.17, estimated from Twentieth century experience. Our question is how public responsiveness matters for American political outcomes. Our procedure for answering the question is to change this parameter systematically, multiplying it by values as small as zero (i.e., the public does not respond to policy change at all) or as large as 4 (the simulated public is four times more responsive to policy change than the actual one). We try out 21 different multipliers such as 0.0, 0.2, 0.3, 0.6, 0.8, 1.0, 1.2, 1.4, … 4.0, estimating 1,000 alternative histories for each, to explore the impact of

contracting or expanding this particular parameter. We shall observe how the changed public opinion produces subsequent losses for the president's party in the next presidential election.

We see the advantages of this methodology by looking at Figure 3 which displays the effects of changes in public policy attentiveness on the policy component of the presidential vote. Focus first on the point estimate associated with an attentiveness of 1.0 (the 20th century's observed level). The associated cost of policy-making for the incumbent president is estimated to be -1.13 points (the typical president, by acting in an historical fashion, loses a bit more than one percent of the vote for policy reasons). This estimate is the average outcome when the macro model of US politics from 1957-1996 is simulated 1,000 times. Each simulation is different: each starts 1957 with a different president and party strength in Congress and for the next forty years each experiences distinctive shocks to law-making, presidential approval, and election outcomes. Sometimes the Republicans dominate the 1960s and sometimes the Democrats. Sometimes a "Great Society" appears in the 1960s and sometimes not. And so on. Only by averaging these alternative histories can we obtain a sense of the systemic component of the political system.

Figure 3 here

Looking again at Figure 3 we can see the effect of changing hypothetical levels of public attentiveness. For example, were the public to react only 40 percent as much to policy as it does now, the typical president would lose only 0.30 percent of the vote.[11] Or if the public were twice as attentive, the impact is -1.61 percent. (Again, each of these data points on the graph represents the average of 1,000 alternative histories associated with each different level of public attentiveness.) And it is clear that increases in attentiveness are directly related to an increased cost for the incumbent's pursuing a policy agenda.

A more attentive public thus produces greater electoral accountability. However, this yield in accountability diminishes as the public moves beyond about 2 to 2 1/2 times its current level of attentiveness. And the elbow in the curve seems to occur at about 1.5 times the current level. While we should not place too much faith in the precision of these estimates, it does appear that the payoff for watchfulness may not extend much more beyond the current level—doubling the effort produces a positive outcome but much beyond that and the effort seems hardly worthwhile.

Figure 2b here

Now we consider the same causal system, but instead let presidents be more (or less) ambitious in the policies they propose and enact. Figure 2b is the same causal system as the earlier 2a, except that the dashed line is now between elections and subsequent policy change, the piece of the system that we will manipulate.

When we now examine the stochastic simulations that vary the extent to which presidents pursue their own policy agendas, we see that a clear relationship obtains. Examining Figure 4, we see that presidents who produce their own desired policies pay an electoral penalty. The curve is steep and almost linear in the relevant range. Holding the public's attentiveness constant, the current level of presidential policymaking produces a -1.13 point penalty. Cutting

that policy production in half virtually wipes out the electoral cost, while doubling the policy production more than doubles the penalty to -2.74 points. The electoral cost seems to mount when presidents increase their policy successes until a level about triple the current state at which point everything starts to taper off. In all, the system of electoral accountability does provide strong incentives for presidents to temper their policy aggressiveness and to pay attention to the public's preferences.

Figure 4 here

Thus we have seen two facets of policy making and policy attentiveness. Publics who pay more attention produce a greater presidential vote loss from current levels in overshooting public preferences in policy, but not a great deal more. And presidents who push too far pay an ever greater cost for doing so. These effects are of sufficient magnitude that they could have altered the outcomes of several presidential contests.

**The Efficiency of Dynamic Representation**

We now know that presidents (and other politicians) face an electoral consequence when they produce the sorts of policies that their supporters (and their own personal principles) demand. The clear implication is that this electoral accountability should affect the quality of dynamic representation.

We focus here on *efficiency*, a concept derived from the economics of markets in the rational expectations perspective. For a measure of dynamic representation, consider the movement of Policy Mood over time. We know that politicians care about reelection and that they make efforts to satisfy the policy demands of the public. When they are effective, they immediately read public dissatisfaction and quickly adjust the course of public policy to fit the public's preferences. Were the governance system perfectly effective -- say *efficient* -- then we would expect the match between policy and preferences to be exact. Politicians would give the public exactly what it wanted and no more and no less. Because we take our opinion construct, Policy Mood, to be relativistic -- not preferences for liberal or conservative policies in an absolute sense, but rather liberal or conservative relative to the status quo -- an efficient government would produce a constant Mood. Policies in this hypothetical world would never be too liberal or too conservative for the median voter, leaving those who demand more always in balance with those calling for less.[12]

However, the preference-policy linkage is imperfect. As we know from empirical observation (Erikson, MacKuen and Stimson 2002), the link between preferences and policy depends not only on politicians rationally anticipating future public retribution but also (and critically) on politicians pursuing their own political agendas. When the public calls for more liberal policy they elect Democrats who produce everything that the public wants *and more*. The consequence is overshooting, with Democrats producing more liberalism than the sentiment that got them elected and Republicans producing more conservatism than the policy corrections that the public originally demanded. All things being equal, this overshooting phenomenon leads to cycles in government with policy being too liberal and then too conservative. Thermostatic Policy Mood, then, is cyclic as well—the fluctuations from a liberal to a conservative Mood

reflecting the wobbling representation system as it overshoots and then self-corrects time and again.

Thus we may compare the "ideal" system's performance (a flat line in Mood) with the "inefficient" system's performance (characterized by fluctuations) to assess the system's normative quality. A convenient measure is the standard deviation of Mood as it changes over time. When the system is absolutely efficient, then the standard deviation of Mood will be zero. When it is inefficient, the standard deviation will grow. And the number makes some intuitive sense: From the standard deviation of Mood we know (loosely speaking) what percent of the public is typically dissatisfied with the government's policy outputs.[13]

Theoretically, we expect that system efficiency will be affected by the extent to which the public attends to public policy. When attention is low, then presidents may pursue their own goals for long periods of time without the public noticing and exacting electoral retribution. And similarly, when attention is high we expect greater system efficiency as presidents who determinedly produce principled policies will find their office occupied by the opposite party soon enough.

The simulation experiments confirm our expectations. Figure 5 shows system *inefficiency* as a function of public sensitivity to policy and the relationship is straightforward. The current level of attentiveness (1.0 on the horizontal axis) yields a standard deviation in Mood of about 4.5 points. Were the public only 40 percent as sensitive, the system would be about twice as inefficient -- yielding a standard deviation of 8.90 points. And were the public twice as sensitive, the score would decline to 2.74. Again, this relationship is not linear -- the benefits of increased attention beyond about 2 or 2.5 seem pretty small while in the region near the historical level the effects are fairly large. In fact, were the public much less attentive, the consequences become severe: policy would reflect long runs of party control and larger and larger portions of the public would find itself being dissatisfied with what was going on.

Figure 5 here

To complete the picture, now consider how the president's pursuit of policy affects system performance. (Remember, the efficiency of representation is not part of the president's calculations.) Figure 6 shows a more gentle curve where representation efficiency is only mildly related to policy aggressiveness. Of course at the farther reaches, where the president produces 3 or 4 times the current level of policy, we see rather decisive differences—nearly doubling the current levels of inefficiency. However, in the region between 0 and 2 the effects are modest.

Figure 6 here

So we see that both public attentiveness and policy pursuit are related to the efficiency of dynamic representation. As the public is indifferent to policymaking and as presidents actively pursue their own agendas, we see wilder and wilder cycles of Mood that indicate the sorts of behavior that we might call system failures. And when the public becomes more attentive and presidents more tempered in their pursuits, the system is more efficient, with smaller delays and less overshooting.

Of the two components, public attentiveness seems the more important. In the simulations the effects of increasing public attentiveness are decidedly more substantial than those of changing presidential aggressiveness.

**Secondary Effects: Rational Expectations in Presidential Strategies**

We have been asking how presidents make policy choices and how publics respond to them as if the world were fixed. Presidents, for example, decide on a policy gamble knowing actual levels of public responsiveness. In a rational expectations perspective, the world would not be fixed. Actors would change their expectations of other actors and that would alter their behavior. So we need to think too about secondary effects, altered behaviors of either presidents or public *given* alterations in the other.

Were the public to be more or less attentive, we might expect professional politicians (and surely presidents) to modify their strategic behavior to take this change into account. A more attentive public, with consequently stronger electoral accountability, should lead presidents to temper their policy pursuits. And less attentive publics, who threaten less in terms of electoral retribution, should allow presidents to produce stronger policy outcomes to suit their supporters and their own principled views.

We can start to put the pieces together by looking at Figure 7 which shows the electoral accountability curves for the current public's level of policy sensitivity and for a hypothetical public that is twice as sensitive (dashed line). The second curve is below and to the left of the first. For most levels of presidential policy pursuit the level of electoral retribution is consistently stronger. For presidents characterized by the observed standard of policymaking (1.0 on the horizontal scale), electoral accountability rises from the current public's –1.13 to the attentive public's –1.53. We know this result from Figure 3.

Figure 7 here

Next consider the president's reactions. If the president wants to maintain the current reelection chances, then the president must reduce policy outputs so that the lower curve rises to a point level with the original position. If the public becomes more attentive, presidents move from position *A* (the current position) to position *B* (with its policy pursuit factor of about 0.80). Thus, rational presidents who care about reelection will modify their policy pursuits to accommodate a more attentive public. And a more moderate set of presidents produces a more efficient system of dynamic representation—all this working just as theory might expect.

However, the quantitative estimates of this secondary impact are rather modest. Turn to Figure 8 which shows the relationship between presidential policy aggressiveness and system efficiency. The effect of an increasingly attentive public can be seen by comparing position *A* (the current position) and position *C* (that associated with the more attentive public and a strategic presidency). The system is more efficient. However note that most of that movement (on the vertical axis) is associated directly with public sensitivity (the movement from position *A* to position *B*) rather than the effect of the strategic presidency (the shift from *B* to *C*).

Figure 8 here

## The "Costs" of a Responsive Public

Among those who comment on democracy there is little doubt that a responsive public is a *good* public. We want people to pay attention. We want them to express their views at the polls. We want government thereby controlled.

Our macro political policy experiments do support the belief that public attentiveness can play a key role in electoral accountability and in the efficiency of dynamic representation. Importantly, attentive publics effectively discipline policymakers -- they are quick to penalize governments that pursue principled policymaking contrary to the public's own preferences. In thus sharpening electoral accountability, attentive publics also enhance dynamic representation's efficiency in two ways. First, they will be quicker to throw out of office political administrations that enact streams of either liberal or conservative policies -- less attentive publics better tolerate principled policy regimes which inevitably lead to overshoots and subsequent reactions. And second, the threat of electoral retribution will induce strategic behavior on the part of politicians in the form of more modest policy innovations. The result produces more moderate swings of policymaking.

This pattern is surely consistent with standard beliefs about the beneficial effects of a citizenry that is more engaged and more active in politics. However, what we have seen in these little experiments also gives us some pause about these normative views.

What we see from the modeling exercise is that attentiveness cannot happen in isolation, that if it is increased, then something else will have to change. That something else in this system is policy innovation. The size of public reaction trades off against the size of policy changes. Either one limits the other. We can have limited reaction, allowing occasionally large changes. But if we push up responsiveness, a president faces a tougher choice between doing something and being reelected. Within the limits of the assumptions of this model, a more responsive public entails either a rotating door presidency or one which never changes policies away from the golden mean.

Modeling system behavior forces one to attend to such issues. Systems have the nice property of denying ceteris paribus, an assumption that is intellectually convenient but often untrue. When all things are connected, as they are in the real world and in our model of it, you cannot change one thing and hold all else the same. Changes propagate through a system of relationships, producing often quite surprising knowledge of connections.

While it is hard to know how much policy change is desirable, most students of government would regard the current level as far from excessive. A dynamic society with a dynamic economy requires a government that is willing to rethink policies. If we impose on this government a citizenry which rewards inaction and punishes innovation, it is not obvious that we have done a good thing. In the current system a Lyndon Johnson can move domestic policy to the left and hope to be reelected (and, absent the Vietnam controversy, few doubt that he would have been). A Ronald Reagan can move it rightward and be rewarded at the polls. A more responsive public would "cure" these excesses.

The question then is how much does increased attentiveness affect the temporizing of policymakers. The advantage of our simulation exercises is that we can produce empirically grounded quantitative estimates of effects. The political strategic reaction to a doubling of attentiveness, shown in Figure 7, suggests that presidents who wish to avoid an increased electoral penalty will cut their policy thrust by about 20 percent. The effect of doubling public attentiveness, then, is a moderate reduction in the extent to which presidents can pursue principled policy innovations.

In all, this modeling exercise is more suggestive than decisive. The analytic technique certainly moves beyond the range of "normal" political science and thus requires a good deal of perfecting before we can begin to trust our inferences. Our representation of the macro political system is relatively complex for political science (having 17 equations) but exceedingly sparse when compared with the modern macroeconometric models used in economics. And our data imperfections and our limited ability to estimate parameters caution about putting too much faith in the precision of the numbers. Perhaps our effort might (charitably) be similar to Tingbergen's early (1939) efforts to model the macro economy. We surely have some of the model right but just as surely have parts of it simplified beyond recognition and some parts just plain wrong. Nevertheless, the nature of our experiments suggest that further work along these lines might be productive.

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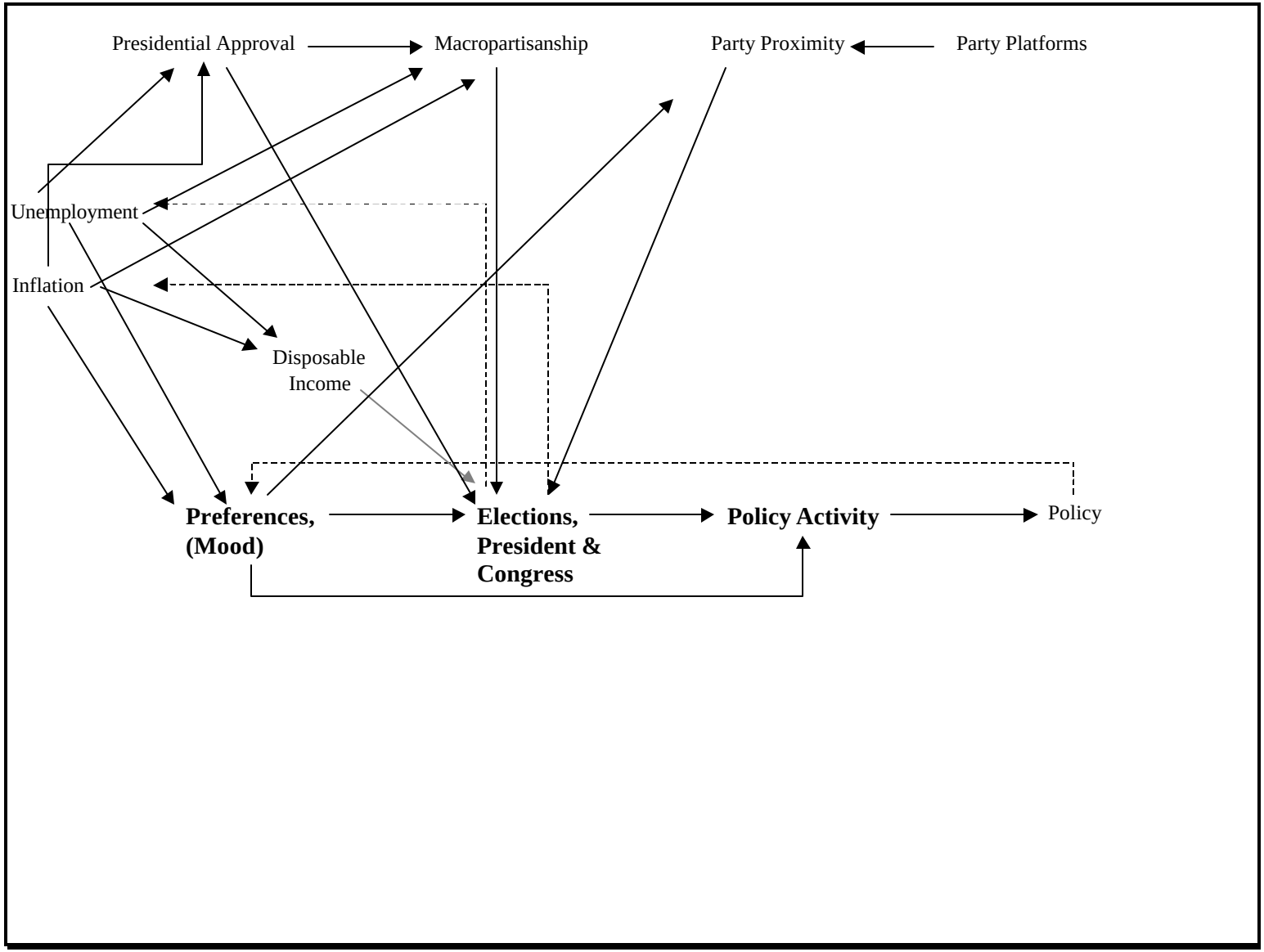
Presidential Approval
Macropartisanship
Party Proximity
Party Platforms
Unemployment
Inflation
Disposable Income
Preferences, (Mood)
Elections, President & Congress
Policy Activity
Policy

Figure 1.  A Macro Model of American Politics

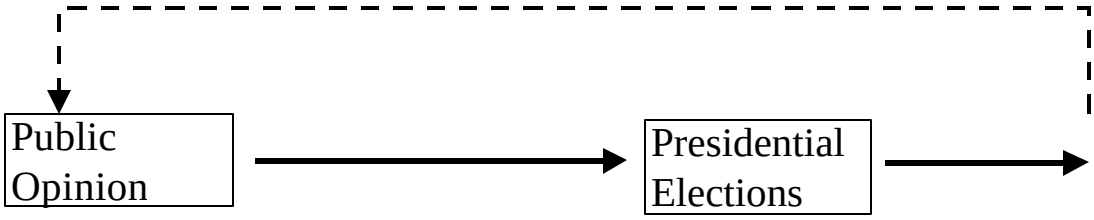


Figure 2a. A Simplified Model of Opinion, Elections, and Policy: Public Responsiveness to Policy Change

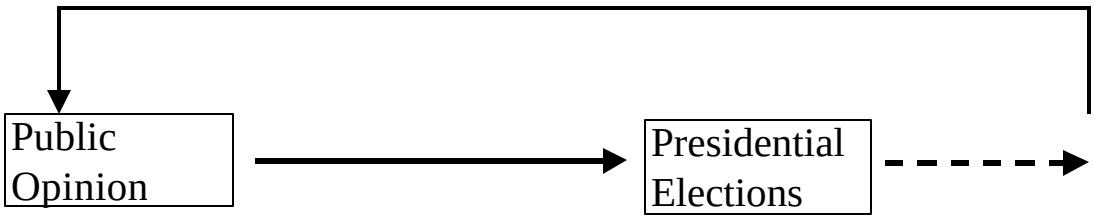


Figure 2b. A Simplified Model of Opinion, Elections, and Policy: Presidential Policy Change

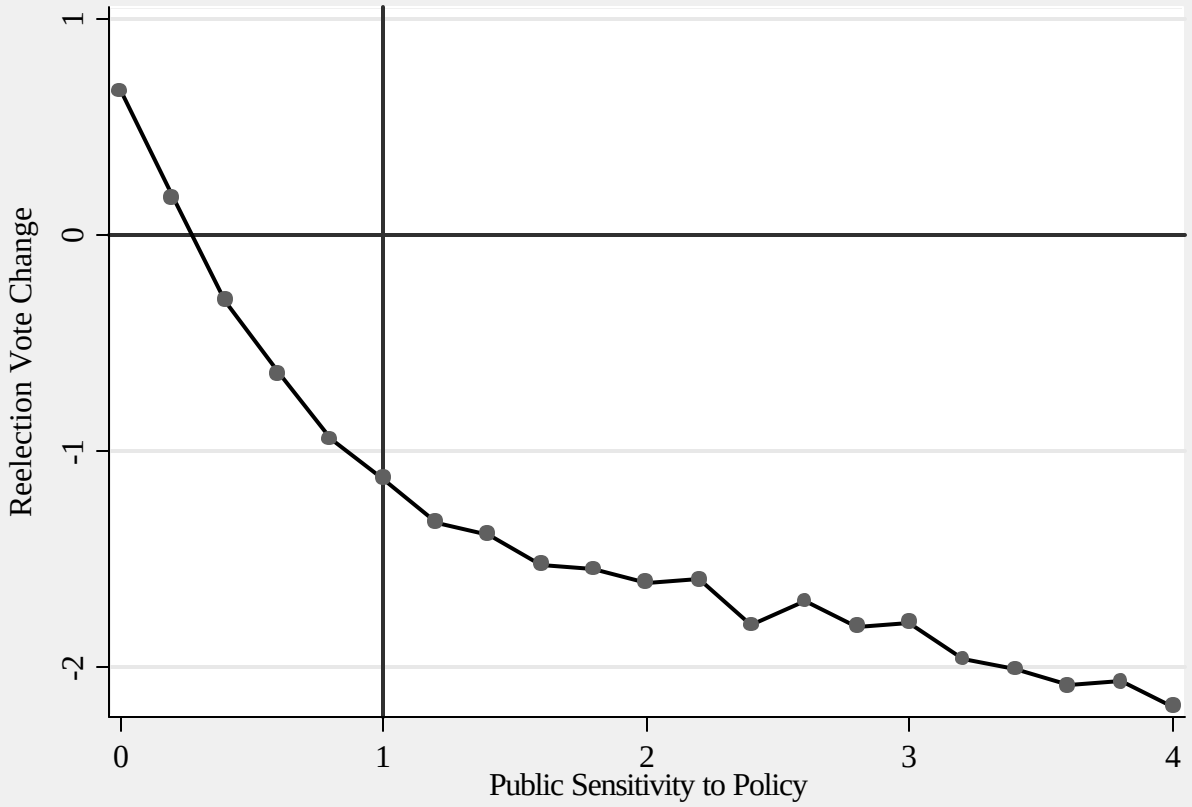


Figure 3. The Effect of Public Responsiveness to Policy on Presidential Vote Losses

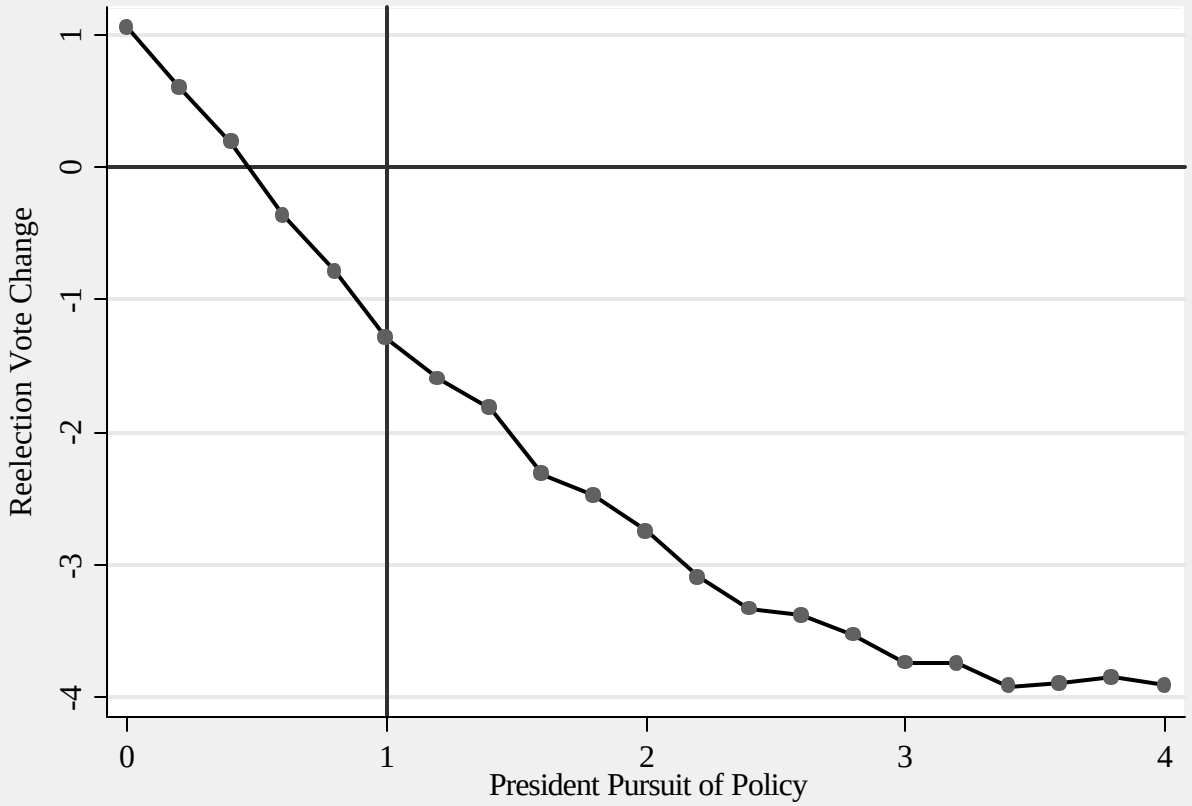


Figure 4. The Effects of Presidential Policy Aggressiveness on Electoral Accountability

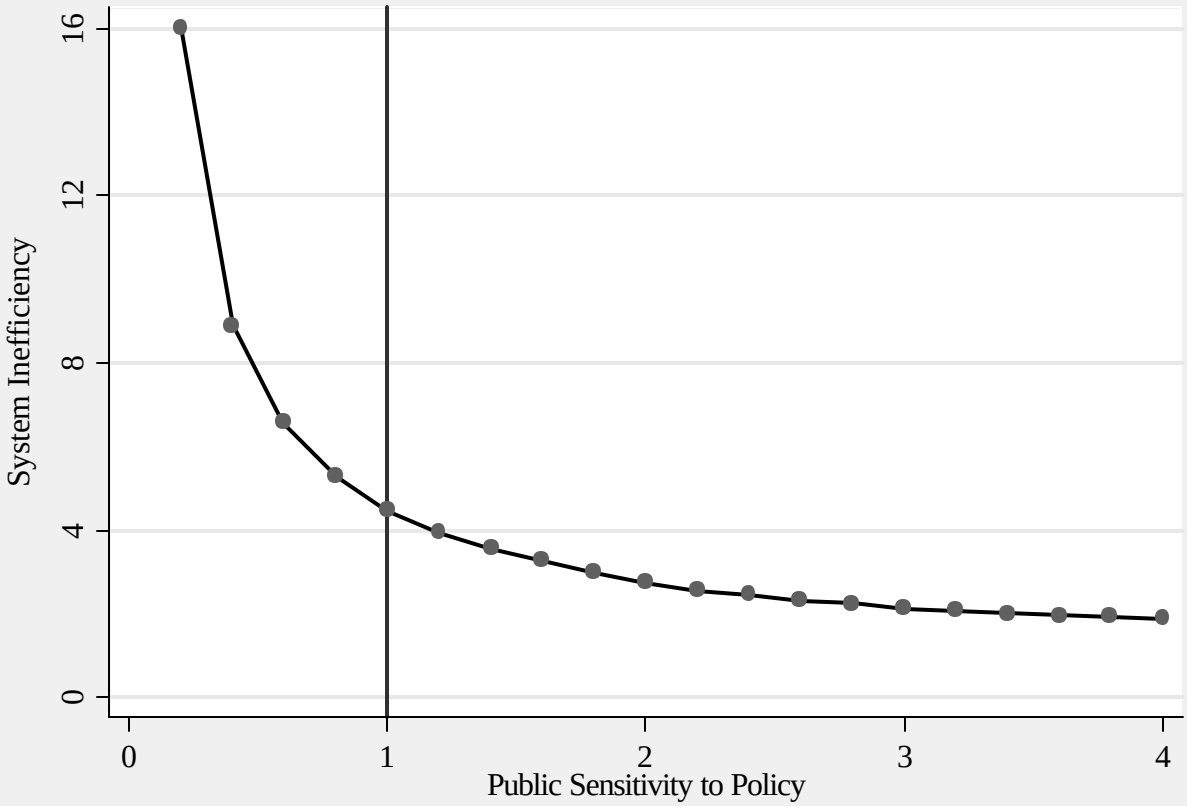

Figure 5. The Effects of Public Attentiveness on Dynamic Representation Efficiency

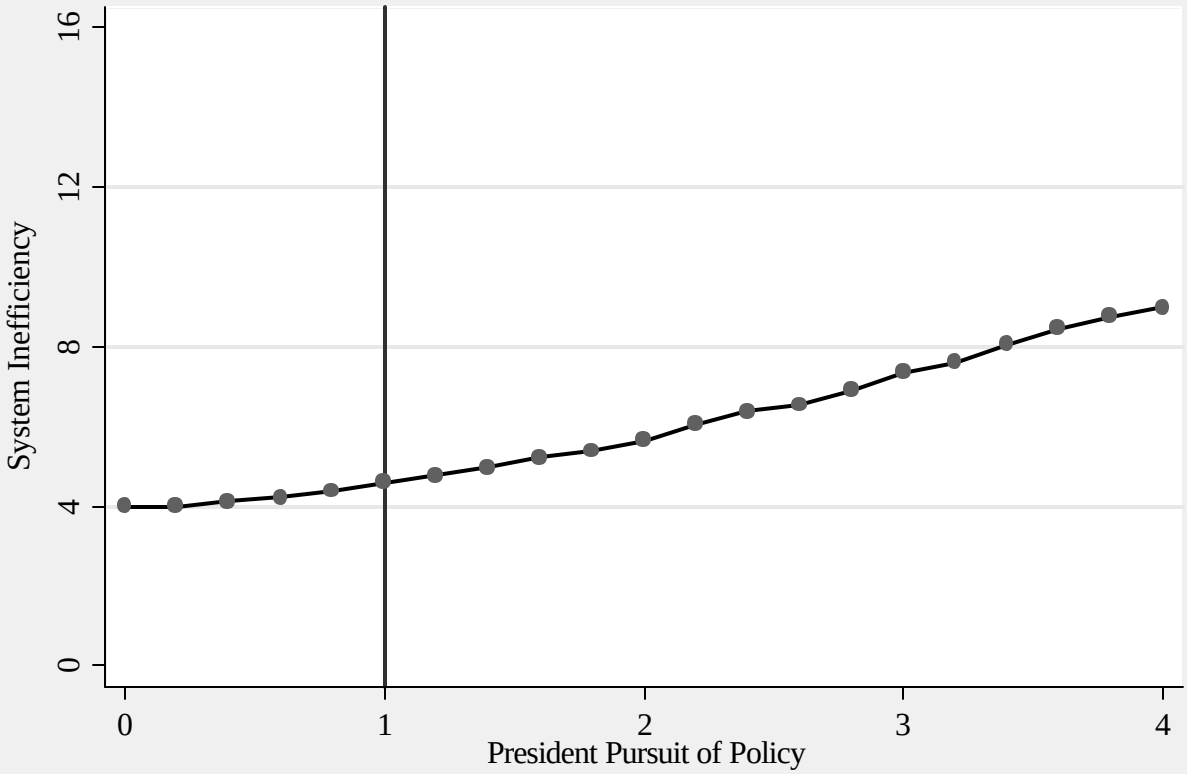


Figure 6. The Effects of Presidential Policy Aggressiveness on Dynamic Representation Efficiency

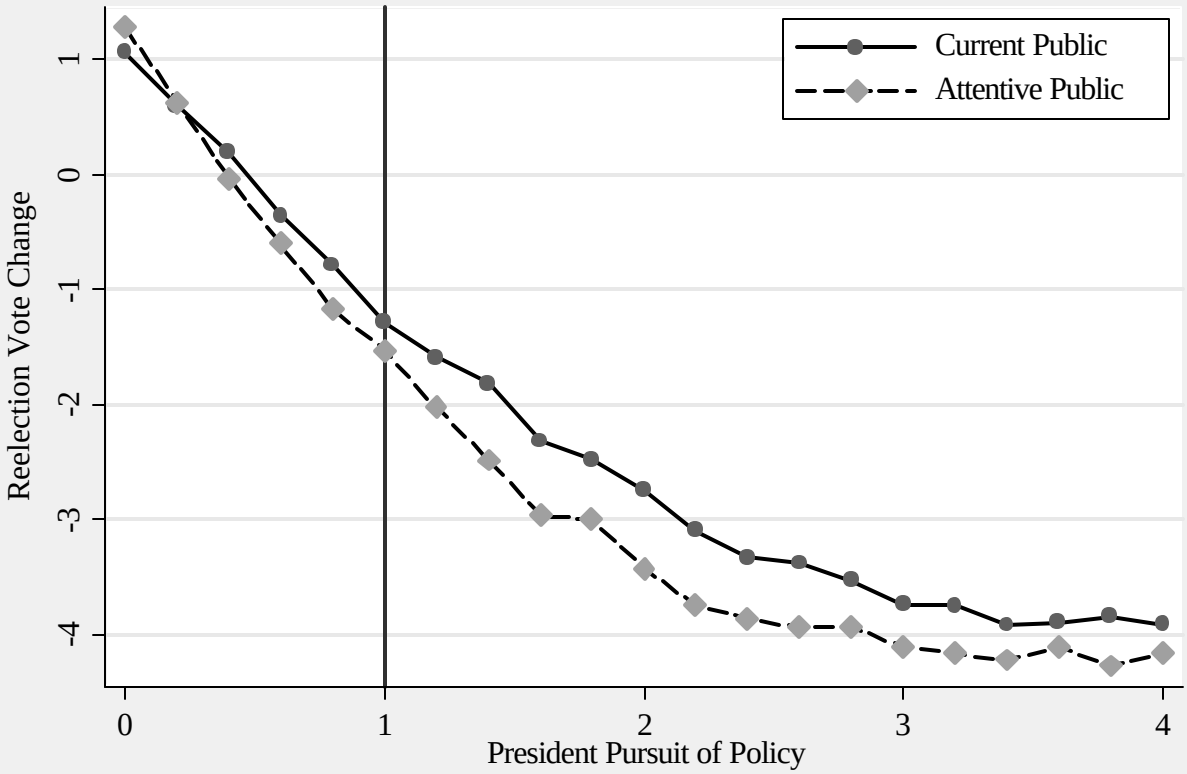


Figure 7. The Effects of Presidential Policy Aggressiveness on Electoral Accountability for Two Levels of Public Attentiveness

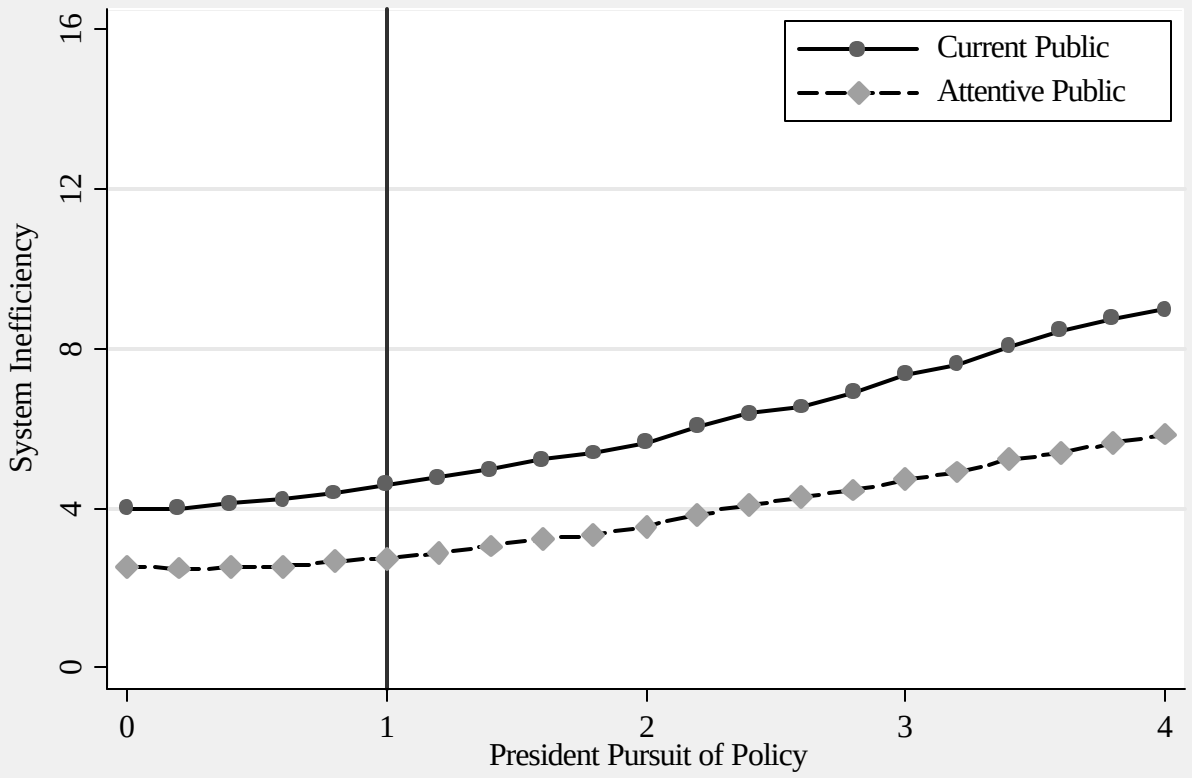


Figure 8. The Effects of Presidential Policy Aggressiveness on Dynamic Representation Efficiency for Two Levels of Public Attentiveness

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[1] See, for example, Stimson, MacKuen and Erikson 1995 and Erikson, MacKuen and Stimson 2002, as well as Page and Shapiro 1992, Bartels 1991, and Brady and Sinclair 1984.

[2] But be warned, just because we will only perturb and write about a small piece of the full model, in the model as in the real world, everything in the system is affected by a change to any one component.

[3] We will bypass this linkage to simplify analyses below, letting the causes of policy activity act directly on policy.

[4] This looks a bit like the modern Republicans, who produce white hot rhetoric over contentious social issues in election campaigns, but then do not actually follow through with attempts to implement the program. A Republican Party that actually banned abortion or enforced prayer in school might have a pretty short duration in office.

[5] Of course, many members of the House of Representatives face their most serious challenge not from the general electorate but from their primary electorate—and the electoral pull to the middle may not work in the same way. However, for the macro political results these members representing extreme districts will matter less than the marginal members of Congress who ultimately determine the winners and losers on the House floor. (This is, of course, an interestingly complicated matter.)

[6] Our simplifying focus on the president also ignores subtleties in political context. The impact of presidential strategies will depend on the decisions made by the House and Senate—which may be of a different party and political philosophy than the president. In the most straightforward case, presidents faced by an

opposition Congress may relentlessly push their own agenda knowing that the impact on public opinion will be muted by Congressional opposition.

[7] This is the distribution of the disturbances that we estimated in our statistical work. See Erikson, MacKuen and Stimson 2002.

[8] Not only are the election outcomes "randomized" but so are the spurts of public policy-making. The Great Society program of 1965 is modeled only to the extent to which the incumbent regime seeks liberalism and the extent to which the public then demanded liberal policies. We do not *artificially* produce the historical spurt of the Great Society nor the conservative flurry of the Reagan Revolution or the Republican Contract with America. To be sure, these phenomena do appear in many of the simulations—but they are not built-in.

[9] Keeping the economic cycles makes good sense—these business-cycle movements have characteristic patterns not subject to the sorts of policymaking that we model. The history of macropartisanship is important to retain for a different reason. Macropartisanship is an integrated variable--it cumulates history--and thus serves a critical role in keeping the system on track. The parameters and structure in our macro model do not necessarily keep it in bounds--so we keep the historical disturbances that do. Finally, the policy component of the vote is partly determined by the party platforms which are exogenous to our macro model (in its current state). In order to keep the unknown, but suspected, correspondence between the long movements in mood and the party platforms, we keep the historical "disturbances" in mood. We also retain the Vietnam War as an exogenous event.

[10] This is, of course, not so far from historical reality. The election of 1960 was a coin toss. And the control of congress was in doubt as late as the Fall of 1954.

[11] Note that an entirely inattentive public produces a positive gain (0.66 points) for the incumbent. Finding a small positive number suggests that the incumbency advantage of the presidency is slightly stronger than we have heretofore estimated. But matters may be more complicated.

[12] Our scaling methods would produce a constant value of 50, the neutral point between relative liberalism (higher) and conservatism (lower). That Mood would evince no movement because there would be no public dissatisfaction calls to mind the classic story of the small child who remained absolutely silent from birth. The worried parents consulted all sorts of medical professionals to no avail. Much to their delight, at age five the boy suddenly and eloquently complained that his dinner was cold. After much demonstration of relief, the parents asked their child why he had been silent so long to which the boy replied the "So far, everything was just fine."

[13] For example, say the standard deviation is 4 points. Then "typically" there exists a plurality of 8 percent (say 54 to 46) in favor of policy change because the current government has overshot the "median voter" or because it has not yet made the correction called for in the last election. By this reasoning, about half of the time the public's dissatisfaction is no more than 4 points away from optimum.