

An Experimental Study of Electoral Incentives and Institutional Choice

Jonathan Woon*
University of Pittsburgh

February 9, 2014[†]

Abstract

I investigate the extent to which reputational incentives affect policy choices in the context of a controlled laboratory experiment. Delegating decisions to informed elected officials has the potential to improve public welfare. But if there is a possibility that elected officials' interests diverge from those of the public, elections will often be insufficient to induce their proper alignment. In theory, asymmetric information and outcome unobservability undermine electoral delegation by creating reputational incentives for politicians to pander. Under the right conditions, it may be preferable to remove such incentives by removing accountability altogether. The data suggest that subjects playing the role of politicians fail to take advantage of their reputational incentives even though voters indeed create the predicted electoral incentives, albeit in a weaker form than predicted by the theory. When given the choice of institutions, subjects prefer to retain electoral accountability or to make decisions themselves through direct democracy, even though both institutions yield lower expected payoffs than delegation to unaccountable agents. Similar results obtain when subjects play the game in an economic or abstract context rather than a political context.

*Associate Professor, Department of Political Science, and Faculty, Pittsburgh Experimental Economics Laboratory, woon@pitt.edu

[†]The University of Pittsburgh's Central Research Development Fund Small Grant Program and the College of Arts and Science's Summer Research Fellowship are gratefully acknowledged for providing funds for this research.

“Your representative owes you not his industry only, but his judgment; and he betrays, instead of serving you, if he sacrifices it to your opinion.” (Edmund Burke)

“When occasions present themselves, in which the interests of the people are at variance with their inclinations, it is the duty of the persons whom they have appointed to be the guardians of those interests.” (Alexander Hamilton)

To what extent should government officials follow the wishes and opinions of the people? The responsiveness of politicians to constituency opinion is typically considered to be a hallmark of a healthy democracy (e.g., Bartels 1991, Erikson, MacKuen and Stimson 2002, Miller and Stokes 1963, Page and Shapiro 1983). Yet citizens know little about politics, so they also surely lack the knowledge to carefully evaluate the various proposals put forth to solve complicated policy problems. If citizens recognize that officials possess superior policy expertise—knowledge of the relationship between policies and outcomes—then it is beneficial to confer policy-making authority to the experts. Democratic delegation can be informationally efficient. But if citizens also recognize that the motives of those experts may be at odds with their own, then it may instead be detrimental to entrust policy decisions to opposing interests. Thus, there exists a fundamental tension between promoting the efficient use of policy expertise and ensuring the alignment of interests between citizens and their representatives. This is the familiar contrast between the “trustee” and “delegate” models of representation.

Elections have the potential to solve, or at least limit, the agency problem inherent in democratic delegation. They allow voters to *select* politicians whom they believe share their interests (Banks and Sundaram 1993, Besley 2005, Fearon 1999), and in case selection is imperfect, elections also provide a mechanism for holding politicians *accountable* (Ferejohn 1986). Under the right conditions, when voters correctly judge the quality of outcomes and attribute responsibility for them, voters can create strong electoral incentives that induce politicians to act in voters’ interests (Fiorina 1981, Key 1966, Kramer 1971).¹

¹See Woon (2012) for an experiment finding that accountability-based retrospective voting behavior dominates the selection considerations implied by rational choice theory.

Recent empirical studies, however, show that voters fall short of this ideal, as they are prone to a variety of systematic judgmental errors in evaluating outcomes (Achen and Bartels 2004, Bartels 2009, Healy and Malhotra 2009, Healy, Malhotra and Mo 2010, Huber, Hill and Lenz 2012). But even if voters were fully “rational,” the consequences of many policies are not immediately observable, either because implementation is delayed or because the evidence is ambiguous and difficult to evaluate.

The unobservability of policy consequences combined with voter uncertainty about politicians’ true motives create *reputational incentives*. Because voters cannot judge the quality of outcomes, they can only use policy choices to draw inferences about motives. Optimal, forward-looking behavior involves relying on such inferences to make voting decisions. This, in turn, leads politicians to consider the effects of their choices on their reputations—what voters believe about them—and to choose popular policies at the expense of the public good. Indeed, a substantial body of theoretical work demonstrates that reputational incentives for position-taking, posturing, and pandering undermine policymaking under a variety of different conditions (Canes-Wrone, Herron and Shotts 2001, Canes-Wrone and Shotts 2007, Fox 2007, Fox and Shotts 2009, Groseclose and McCarty 2001, Maskin and Tirole 2004, Stasavage 2004).²

I conduct an incentivized laboratory experiment to test whether reputational incentives undermine democratic delegation. Do voters in the experiment make rational inferences and reward politicians for choosing “popular” policies? If so, do politicians exploit this tendency and choose policies that ensure their re-election at the expense of the voter’s welfare? In addition to investigating these basic questions about the interaction between voters and politicians, I also explore questions about institutional choice and the effects of political context. Formal analysis implies that when reputational incentives undermine policymaking, rational individuals would prefer to cede their ability to sanction the official, thereby increasing informational efficiency by removing the distortionary incentives.

²Other formal and experimental analyses of electoral agency and electoral competition in which voter learning and reputational incentives play important roles include Ashworth (2005), Ashworth and Bueno de Mesquita (2008), Gordon, Huber and Landa (2007), Landa (2010), and Patty and Weber (2007).

By instantiating the model (i.e., game form and preferences) in the laboratory, we can be sure that subjects are playing the game as it is analyzed by theorists. Quantities that cannot be observed in natural settings, such as the an incumbent’s type and information, can be observed. Thus, the experiment permits direct tests of *strategic behavior*. Of course, laboratory “politicians” are very different from real world politicians, so the inferences that we can draw from laboratory data cannot be about elite behavior per se but instead concern the way in which ordinary individuals perceive their reputational incentives, the strategic nature of the interaction between political principals and agents, and the costs and benefits of alternative institutional arrangements.

I find mixed support for the theoretical predictions. Voters re-elect politicians who choose popular policies more often than politicians who choose unpopular ones, which is consistent with the basic prediction of equilibrium theory. However, they also exhibit a pro-incumbent bias, which provides weaker incentives for politicians to pander than theory predicts. Most laboratory politicians appear to ignore their reputational incentives, preferring instead to choose actions based on their induced policy interests even though such behavior yields lower expected payoffs (and greater variance). Nevertheless, I find that a few seemingly sophisticated subjects do take advantage of their electoral incentives. Overall, the results suggest that voter confusion can sometimes be beneficial, as most voters do not succumb to the kinds of delegate traps that hyper-rational voters would.

In terms of institutional choice, fewer voters are willing to cede the right to punish politicians than the theory predicts, even if doing so would generally yield better policy decisions. Many voters prefer to retain representative democracy or to remove agency problems by switching to direct democracy, both of which are suboptimal institutions. The results suggest that citizens may ignore the instrumental costs and benefits of particular institutional choices, instead relying on their familiarity or general beliefs about key features of democratic institutions.

Theory and Hypotheses

Game theoretic models of electoral agency specify the conditions under which reputational incentives lead politicians to take actions that enhance their electoral prospects at the expense of voter welfare—behavior that is typically referred to as “pandering.” These models assume that voters face two kinds of uncertainty. They are uncertain about which policies are beneficial, and they are uncertain whether politicians share their preferences. In contrast, politicians are better informed about policy and know their own preferences. Maskin and Tirole (2004) construct a simple model that captures both of these features, and they analyze the model to derive voters’ preferences for electoral democracy versus alternative political institutions. I implement a version of their model as the basis for my experimental analysis. The model nicely captures an environment in which it is impossible for voters to hold politicians accountable for outcomes and can instead only use policy choices to infer politicians’ congruence.

Representative Democracy

The *Representative Democracy Game* is a sequential game of incomplete information played by an *incumbent* politician and a *voter*. The basic sequence of actions is that the incumbent first chooses one of two possible *policies*, $p \in \{A, B\}$. The voter then observes only p and chooses to *vote* for the incumbent or a *challenger*. Denote the voter’s action by $v \in \{I, C\}$. The challenger is not a strategic player; its role in the model is to provide the Voter with a meaningful electoral choice.

When making her choice, the incumbent has two pieces of private information. First, she knows the *state of the world*. This is information that affects both players’ policy preferences. Denote the state of the world by $\omega \in \{A, B\}$, and let α represent the ex ante probability that $\omega = A$. Also assume that $\omega = A$ is ex ante more likely, so $\alpha > \frac{1}{2}$. Second, the incumbent knows her own “type” (whether or not she shares the voter’s policy preferences).

She is either *congruent* or *noncongruent*. Let $T_I \in \{C, N\}$ denote the incumbent's type and assume that the incumbent is ex ante more likely to be congruent than noncongruent, $\pi = \Pr(T_I = C) > \frac{1}{2}$. The challenger also has a type, $T_C \in \{C, N\}$, that has the same distribution but is independent of the incumbent's type; this information is also unknown to the voter. While incumbents and challengers are ex ante identical, the game is structured so that the incumbent's choice of p potentially *signals* her type, thereby inducing a preference for or against the incumbent.

Voters' payoffs from the game consist of a policy component and an election component. For the policy component, voters always prefer that the policy matches the state of the world ($p = \omega$) and receive a payoff of $x > 0$ if it does and 0 otherwise. We can therefore think of $p = \omega$ as a "correct" policy (from the voter's point of view). For the election component, voters always prefer to elect a congruent politician, but it does not matter whether the congruent politician is the incumbent or challenger. Formally, let T_2 denote the type of the politician that the voter elects; if the voter re-elects the incumbent, then $T_2 = T_I$, and if the voter elects the challenger, $T_2 = T_C$. Note that since T_I and T_C are not observed, the voter's decision is made under conditions of uncertainty and therefore depend crucially on his *beliefs* (the probability that $T_I = C$). The voter receives an election payoff of $x > 0$ if $T_2 = C$ and 0 otherwise. Thus, the best possible outcome for the voter is for the policy to match the state ($p = \omega$) and for the elected politician to be congruent ($T_2 = C$), in which case the payoff is $2x$. The worst possible outcome is for the policy to not match the state and for the elected politician to be noncongruent ($p \neq \omega$ and $T_2 = N$), which yields a payoff of 0. Any other outcome yields an intermediate payoff of x .

Congruent incumbents, like voters, prefer that the policy matches the state and receive a policy payoff of $y > 0$ if $p = \omega$. Noncongruent incumbents have diametrically opposed preferences and receive $y > 0$ only if the policy does not match the state, $p \neq \omega$. We can think of $p = \omega$ as a congruent incumbent's preferred policy and $p \neq \omega$ as a noncongruent incumbent's preferred policy. If the incumbent does not obtain his or her preferred policy

outcome, the policy payoff is 0. Both types of incumbent prefer to be re-elected and receive an additional election payoff of $z > 0$ if they are ($v = I$), and 0 otherwise. In the experimental setup, I assume that $z > y$ so that the incumbent's electoral motivation outweighs the policy motivation. The best possible outcome for the incumbent is to choose her preferred policy and to be re-elected, which gives a payoff of $y + z$. The second best outcome is to choose the less preferred policy but to be re-elected, which gives a payoff of z . The third best outcome is for the incumbent to choose her preferred policy, which gives a payoff of y . The worst outcome is to choose the less preferred policy and to be voted out of office, yielding a payoff of 0.

The standard solution concept for a signaling game such as the Representative Democracy Game is perfect Bayesian equilibrium. In a perfect Bayesian equilibrium, the voter's beliefs and best response depend on the incumbent's strategy. Likewise, the incumbent's strategy must be mutually consistent with what she anticipates the voter's strategy to be. Actions and beliefs are therefore determined endogenously by the strategic interaction between voters and incumbents. Before describing the equilibrium predictions, it is useful to understand what is *not* an equilibrium of this game—that is, what kind of behavior game theory rules out as being consistent with rational behavior given the structure and incentives of the situation.

We can first rule out the possibility that incumbents act as trustees in the way that Burke or Hamilton would exhort them to do. Suppose that incumbents choose to match the policy to the state, regardless of their type. If so, voters will not learn anything about the incumbent's type from observing p . In game theoretic terms, Bayes' Rule implies that voters' posterior beliefs are identical to their prior beliefs. As a result, voters are indifferent between the incumbent and challenger and any strategy can be considered a best response.

Now consider any generic strategy for the voter where ρ_A denotes the probability of re-electing the incumbent if $\omega = A$ and ρ_B denotes the probability of re-electing the incumbent if $\omega = B$. No matter what the voter does, noncongruent incumbents will have an incentive

to choose a policy that is contrary to what is in the voter's best interest for at least one state of the world. To see this, suppose that the probability of re-electing the incumbent does not depend on the policy choice, $\rho_A = \rho_B$; in this case, p does not affect the incumbent's electoral payoff and noncongruent incumbents will always choose $p \neq \omega$. If, instead, politicians are rewarded for choosing A so that $\rho_A > \rho_B$, then noncongruent incumbents will receive a higher expected payoff of $y + z\rho_A > z\rho_B$ for choosing the "wrong" policy for the voter when the state is $\omega = B$. Similarly, if politicians are rewarded for choosing B , then noncongruent incumbents will choose the "wrong" policy when the state is $\omega = A$. The intuition here is that because voters can only condition re-election on policy choices, he cannot prevent a noncongruent incumbent from following her own policy interests.

We can also rule out an equilibrium in which incumbents pursue their own policy interests without regard to re-election. To see this, suppose that incumbents do choose policies only in line with their own interests so that regardless of the state, congruent incumbents always choose $p = \omega$ and noncongruent incumbents always choose $p \neq \omega$. In this case, a Bayesian voter can learn something about the incumbent's type from observing the policy choice p . Specifically, such a voter reasons that because state A is ex ante more likely, an incumbent choosing $p = A$ is more likely to be congruent than an unknown challenger.³ Conversely, an incumbent choosing $p = B$ is more likely to be noncongruent than the challenger.⁴ Therefore, if incumbents only pursue their private interests, then the voter's best response is to re-elect the incumbent if and only if $p = A$. But because incumbents care more about re-election than their policy goals (the assumption that $z > y$), they will deviate and choose $p = A$ to guarantee re-election regardless of their type or the true state of the world. Game theoretic reasoning therefore implies that this situation involves a kind of "delegate trap." When politicians pursue their own policy goals, it reveals something about their type, but then voters reward politicians for pandering and electorally motivated politicians oblige.

³Formally, Bayes' Rule implies $\Pr(T_I = C|p = A) = \frac{\alpha\pi}{\alpha\pi + (1-\alpha)(1-\pi)}$, and $\alpha > \frac{1}{2}$ implies that the posterior belief is greater than π .

⁴The posterior belief is $\Pr(T_I = C|p = A) = \frac{(1-\alpha)\pi}{(1-\alpha)\pi + \alpha(1-\pi)}$, which is less than π when $\alpha > \frac{1}{2}$.

Such pandering behavior is, in fact, supported in an equilibrium of the Representative Democracy Game. That is, it is mutually consistent for the voter to re-elect the incumbent only for choosing $p = A$ (regardless of the state) and for incumbents to always choose $p = A$ regardless of their state or type. This is a “pandering” equilibrium because the incumbent only chooses what the voter believes to be the ex ante better policy. And it is informationally wasteful because incumbents ignore their superior information about the state of the world. As the foregoing analysis demonstrates, voters cannot commit to anything but a policy accountability strategy. This suggests the following strong form of an equilibrium hypothesis.

Hypothesis 1 *In the Representative Democracy Game, voters will hold incumbents accountable for their policy choices and re-elect the incumbent if and only if $p = A$; incumbents will pander and will always choose $p = A$.*

Even if subjects fail to play their equilibrium strategies as a whole, strategically sophisticated subjects may choose optimal actions given that others play less than optimally.⁵ Such sophistication may take one of two forms. Some voters might draw the correct conclusions about the incumbent’s type from the policy choice. Alternatively, some incumbents may recognize their incentive to pander. Thus, two weaker hypotheses can be formulated based on the best response analysis articulated above.

Hypothesis 2 *If incumbents choose p according to their policy goals, then voters are more likely to re-elect politician for choosing $p = A$ than they are for $p = B$.*

Hypothesis 3 *If voters are sufficiently more likely to re-elect politicians for choosing $p = A$ than for $p = B$, then incumbents will pander and are more likely to choose $p = A$ than $p = B$ regardless of their type or state of the world.*

⁵In the experimental and behavioral game theory literature, such non-equilibrium reasoning is encapsulated by “level K ” or “cognitive hierarchy” models (e.g., Nagel 1995, Camerer, Ho and Chong 2004)

Institutional Choice

In addition to showing how pandering occurs in equilibrium under representative democracy, Maskin and Tirole (2004) analyze the conditions under which the voter would be better off under one of two alternative political institutions: judicial power or direct democracy.⁶ Comparing institutions involves comparing the voter's expected payoffs, or equivalently, the probability that the voter's preferred policy is chosen before and after the election.⁷ In the Representative Democracy Game, the incumbent chooses $p = A$ before the election, which correctly matches the state with probability α , and only congruent incumbents choose $p = \omega$ after the election, which occurs with probability π . Thus, the voter's expected payoff from the Representative Democracy Game is $(\alpha + \pi)x$.

The *Judicial Power Game* is identical to the Representative Democracy Game except that any possibility of electoral accountability is completely removed. The politician can be thought of as a judge (or appointed bureaucrat) who cannot be voted out of office. In this game, there are two periods of policy-making in which the politician chooses policy. Because there are no electoral incentives, politicians follow their own policy preferences. Thus, congruent politicians match $p = \omega$ while noncongruent politicians choose $p \neq \omega$. The probability that the politician chooses the voter's preferred policy in each period is π (the probability that the politician is congruent), so the voter's expected payoff from judicial power is $2\pi x$.

In the *Direct Democracy Game*, there are no politicians. Instead, voters choose policy directly (also in each of two periods) although they remain uncertain about which policy is best. Because the voter knows only that $\Pr(\omega = A) = \alpha > \frac{1}{2}$, the optimal policy is $p = A$.

⁶See Alesina and Tabellini (2007) for another model comparing accountable versus unaccountable policymakers.

⁷This requires a slight modification to the interpretation of the model, although the mathematics remain unchanged. Instead of thinking of the voter as having separate policy and electoral payoffs, we can think of the electoral payoffs as representing the policy payoffs generated by the politician in her second term. Suppose also that the politician is term-limited and therefore chooses policy after the election according to her own policy preferences. It then follows that electing a congruent politician will yield a payoff of x in the second period (because preferences are aligned and the policy will match the state) while electing a noncongruent politician will yield a payoff of 0 (because the policy will not match the state).

Since the probability that $p = A$ is the correct policy is α , the voter's expected payoff is $2\alpha x$.

Note that although the voter's ranking of the three institutions depends on the relative values of π and α , Representative Democracy is never the optimal institution. Indeed, if $\pi > \alpha$ (which it is in the experiment), then Judicial Power is the best institution and Direct Democracy is the worst. This is because the voter gains more from ensuring that congruent politicians utilize their policy expertise to serve the voter's best interests than they do from preventing noncongruent politicians from using that expertise against them. In contrast, if $\alpha > \pi$, Direct Democracy is the best institution and Judicial Power is the worst because voters gain more from preventing noncongruent incumbents from exploiting their expertise than they do by encouraging congruent ones to choose good policies. In both cases, Representative Democracy is second-best.⁸

Hypothesis 4 *If voters are allowed to choose political institutions and $\pi > \alpha$, expected pay-off maximizing voters will never choose Representative Democracy. They will prefer Judicial Power over Representative Democracy, and prefer Representative Democracy over Direct Democracy.*

Experimental Procedures

I conducted eight experimental sessions at the Pittsburgh Experimental Economics Laboratory. Each session lasted under two hours and involved 12 to 18 subjects. A total of 110 subjects participated, and each subject participated in only one session.⁹ The subjects were primarily undergraduates at the University of Pittsburgh and were recruited through the lab's website. At the beginning of each session, subjects gave informed consent following the University of Pittsburgh IRB's standard procedures. Subjects interacted anonymously through networked computers using a program written in z-tree (Fischbacher 2007), and at

⁸Of course, voters are completely indifferent between all three institutions in the knife-edge case where $\pi = \alpha$.

⁹One of the sessions with 18 subjects was interrupted by a campus-wide bomb threat before the full session was completed. The data up to that point are unaffected and remain in the analysis.

the immediate conclusion of each session, subjects were paid privately in cash. No deception was used in the experiment.

Each session consisted of two parts. In Part 1, subjects played 30 rounds of the Representative Democracy game (15 in the role of the politician and 15 in the role of the voter). Prior to every round, subjects were anonymously and randomly matched into pairs consisting of one politician and one voter. Random rematching is a standard procedure for minimizing potential repeated game effects, thus ensuring that each round is viewed as an independent play of the game. Different subjects switched roles every 5 rounds to decrease the probability that any pair of subjects would be matched together in a given round.

The instructions and terminology used to describe the game involved a modicum of descriptive, but neutral, political context in order to investigate subjects' decision-making about political representation rather their ability to think in an abstract strategic environment. The players were labeled "politician" and "voter," and the politician types were labeled "matching" (for congruent) and "opposed" (for noncongruent). However, the game itself was never described as the Representative Democracy game, only as the "decision-making task." Each subject had a written copy of the instructions, which were read aloud to induce public knowledge. Subjects also took a quiz to check and increase their comprehension of the game.

Each round and pair of subjects involved an independent realization of the state variable and politician types, where the parameters were $\alpha = 0.6$ and $\pi = 0.8$. Thus, consistent with the theoretical analysis, ω was more likely to be A than B and politicians were more likely to be congruent than noncongruent. All payoffs for the Representative Democracy game were denominated in points. For all sessions, a "good" outcome for the voter (from either policy or the election) was worth $x = 100$. Politicians' payoff values varied by condition, but in both conditions the payoff from re-election outweighed the payoff from choosing the preferred policy (ensuring $z > y$). There were five sessions of the "25/175 Condition" in which the electoral payoff was 7 times greater than the policy payoff (the

incumbent’s preferred policy was worth $y = 25$ and re-election was worth $z = 175$) and three sessions of a “50/150 Condition” in which the electoral payoff was 3 times greater than the policy payoff ($y = 50$ and $z = 150$).¹⁰ Six rounds of the Representative Democracy game were randomly chosen to count for payment, with points converted to cash at the rate of \$1 per 100 points.

The instructions for Part 2, which was designed to elicit an institutional choice, were distributed and read aloud after the conclusion of Part 1 (so as not to bias behavior in Part 1). Part 2 consisted of 5 additional rounds: 2 additional rounds of Representative Democracy (one as a politician and one as a voter), 2 rounds of Judicial Power (one as a politician and one as a voter), and 1 round of Direct Democracy. Importantly, the instructions never referred to the institutions by these names but instead simply as different sets of “Rules.” In Rule 1 (Representative Democracy), the “politician chooses policy subject to re-election.” In Rule 2 (Judicial Power), the “politician chooses policy without facing re-election.” And in Rule 3 (Direct Democracy), the “voter chooses policy directly.” In addition to the 6 rounds from Part 1, one round from Part 2 was randomly selected for payment. The parameters for each version of the game were identical to Part 1 ($\alpha = 0.6, \pi = 0.8, x = 100, y \in \{25, 50\}$, and $z = 200 - y$). Note that in terms of institutional choice, $\pi > \alpha$ implies that expected payoff maximizing voters will prefer Rule 2 (Judicial Power) to Rule 1 (Representative Democracy) and will least prefer Rule 3 (Direct Democracy).

To elicit an institutional choice, subjects were given an opportunity to choose one of the Rules to count for “guaranteed bonus points” before they played any rounds of Part 2. More specifically, subjects were guaranteed to earn 5 times the number of points from the round they played as a voter that used the rule of their choice. That is, if the subject chose Rule 2 and earned 200 points as a Voter when the game was played with Rule 2, then the subject earned 1000 points (\$10) in addition to any points earned in the randomly selected round. Part 2 was designed this way to avoid selection effects. In other words, a subject’s

¹⁰The higher electoral payoff condition was used to ensure that pandering would be a best response to the *observed* voting behavior from the “50/150 Condition” sessions, which were run first.

choice of institutions did not affect which game they played, as they knew they would play each role for each Rule. The high multiplier for the bonus points ensured that this choice would be quite salient since they knew this choice was worth much more than any single round of the game. Immediately after choosing an institution, subjects were also asked to provide a written explanation of how they made their choice before they actually played the 5 rounds in Part 2.¹¹ While experimental economists typically eschew non-choice data, responses to open-ended questions may provide additional insight into subjects' thought processes in the spirit of "think aloud protocols" used by cognitive psychologists (e.g., Ericsson and Simon 1998). In addition to the open-ended rule explanation, subjects also completed a short questionnaire at the conclusion of the experiment. Part of this questionnaire asked subjects to explain how they made their decisions in Part 1 of the experiment.

Results

As stated in the stronger form of Hypothesis 1 and in the weaker form of Hypothesis 2, game theoretic analysis predicts that voters in the experiment will hold politicians accountable for their policy choices by re-electing the incumbent if and only if they choose $p = A$. Table 1 presents data for observed voting behavior from the experiment and shows that voters indeed used a conditional voting strategy. They were much more likely to re-elect the incumbent if he or she chose A than B by 87% to 55% across both conditions (with no difference between parameterizations). However, they also exhibited a strong pro-incumbent bias. Rather than throwing out incumbents who chose policy B , voters re-elected them half of the time. Thus, there appears to be support for the qualitative (directional) prediction of Hypothesis 2 but no support for the magnitude of the difference predicted by Hypothesis 1.

Voters appear to provide reputational incentives, but they are weaker than the theory predicts. Are these incentives strong enough to satisfy the conditions for Hypothesis 3—

¹¹Subjects were not informed that they would be providing a written explanation before they made their choice so that the prospect of justifying their choice would not influence the choice itself.

Table 1: Voting behavior in the Representative Democracy Game

Treatment	Percentage of Votes for Incumbent	
	$p = A$	$p = B$
50/150 Condition	86% (347)	56% (223)
25/175 Condition	87% (678)	55% (393)
Pooled	87% (1,025)	55% (616)
p -value (χ^2 test)	0.48	0.93

Note: N in parentheses

to induce politicians to pander? When the electoral payoff is 150, the expected value of pandering (choosing policy A when the state is B) and facing a 0.86 chance of re-election is 129. The electoral payoff of choosing the correct policy instead, which gives a congruent incumbent her policy payoff of 50 for sure plus a 0.56 chance of re-election, is 134. Thus, in the 50/150 Condition of the experiment, observed voting behavior does not produce sufficiently strong reputational incentives for politicians to pander. In the 25/175 Condition, however, the incentives are sufficiently strong, as the expected value of pandering ($0.86 \times 175 = 150.5$) exceeds the expected value of pursuing policy ($0.56 \times 175 + 25 = 123$).¹² If subjects are sophisticated enough to best respond to observed voting behavior, Hypothesis 3 predicts that they will pander in the 25/175 Condition but not in the 50/150 Condition.

Table 2 shows the frequency with which incumbents chose policy A by type and state of the world. If incumbents pander, we would expect to see all of these frequencies near 100%, but this is not the case. Incumbents' behavior is plainly inconsistent with the

¹²The preference for pandering should hold even for risk averse subjects since the variance of the outcome associated with pandering is greater than the variance associated with pursuing policy. The intuition is that for binary outcomes, probabilities closer to 0 or 1 involve lower variance, and choosing to pursue policy lowers the probability of the high payoff from 0.86 to 0.56 (even though the lower payoff increases for the latter gamble).

Table 2: Policy choices in the Representative Democracy Game

Treatment	Percentage of Policy Choices where $p = A$			
	Congruent		Noncongruent	
	$\omega = A$	$\omega = B$	$\omega = A$	$\omega = B$
50/150 Condition	92% (277)	20% (181)	25% (65)	87% (47)
25/175 Condition	98% (511)	18% (338)	28% (137)	94% (84)
Pooled	96% (788)	19% (520)	27% (202)	92% (131)
p -value (χ^2 test)	< 0.01	0.77	0.64	0.18

Note: N in parentheses

unconditional pandering strategy stated in Hypotheses 1 and 3. The data suggest instead that laboratory politicians primarily pursued their own policy interests at the expense of any potential electoral gains, with no differences as a function of the magnitude of the electoral payoff. Across both conditions, incumbents matched the policy to the state in 90% of the 1,177 rounds in which they were congruent and chose policies opposite the state of the world in 80% of the 333 rounds in which they were noncongruent. In the aggregate, the data suggest that we can soundly reject the qualitative and the quantitative predictions concerning incumbents' policy choices stated in Hypotheses 1 and 3.

The data also reveal an asymmetry in policy choices across the four possible combinations of information that incumbents possess. When the incumbent's type and information dictate a policy preference for A , they choose policy A in 95% of such cases (96% for congruent types when $\omega = A$ and 92% for noncongruent types when $\omega = B$). These figures suggest that subjects in the role of the incumbent politician make errors or mistakes at a rate of about 5%. If they make mistakes at the same rate when their policy preference is for B , then we should see that they choose $p = A$ only about 5% of those cases as well. But incumbents

choose policy A more often than this line of reasoning suggests, at a rate instead between 19 – 27%. It is possible that this represents a modest degree of pandering, either because subjects learn to pander by the end of the experiment or because some subjects pander more than others.

To investigate whether subjects learn to adapt their behavior with more experience, I divide the data into the early, middle, and late rounds of Part 1. Figure 1 summarizes the changes in subjects' behavior across these three periods for each role, condition, and information set. The figure reveals no evidence of learning in the 50/150 Condition for voters or incumbents, with the one exception that noncongruent politicians are more likely to pursue their policy interests in later rounds than in the early rounds. In contrast, there is some evidence of learning in the 25/175 Condition. As subjects gain more experience, they are more likely to pursue re-election and choose policy A when their policy interests prescribe otherwise. This holds for congruent incumbents, who choose policy A in 11% of early periods and 25% of late periods, as well as noncongruent incumbents, whose corresponding figures are 15% of early periods and 36% in late periods. There is a similar pattern of gradual adaptation for voters in the 25/175 Condition. They re-elect incumbents who choose policy B in 63% of early periods, which then drops to 47% in the late periods. Subjects appear to adjust their behavior over time in the direction of the equilibrium predictions, but the culmination of this learning process by the end of the experiment remains far from rational strategic play.

In addition to masking learning effects, the aggregate results reported above may conceal the possibility that there is between-subject heterogeneity. To investigate this, I computed two measures of strategic behavior for each subject. For the rounds in which the subject played the incumbent's role, I computed the proportion of choices consistent with pandering ($p = A$) out of the opportunities for pandering (congruent types when $\omega = B$ and noncongruent types when $\omega = A$). The corresponding measure for voting behavior is the proportion of rounds a subject voted against the incumbent when the policy was B .

Figure 1: Behavior over time in the Representative Democracy Game

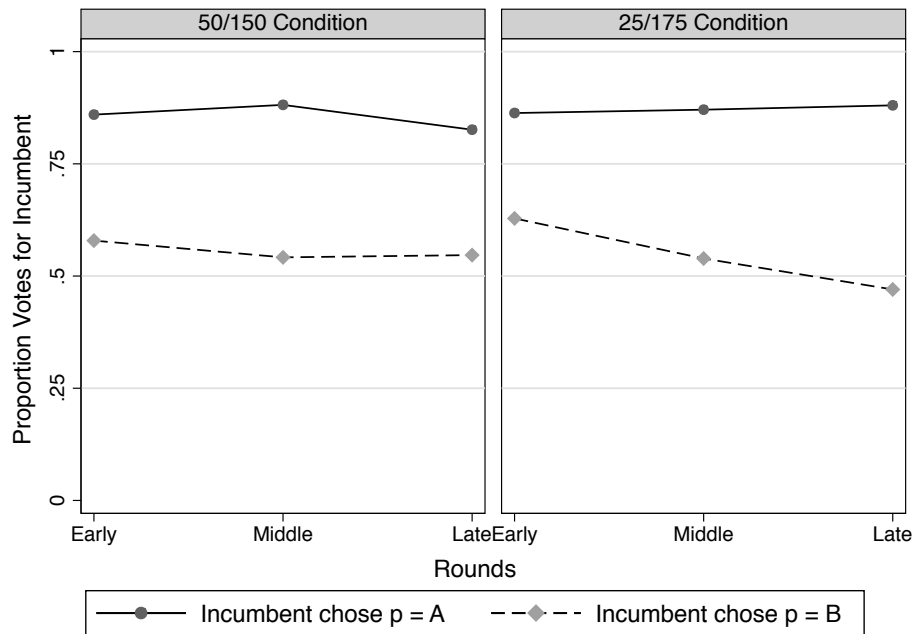
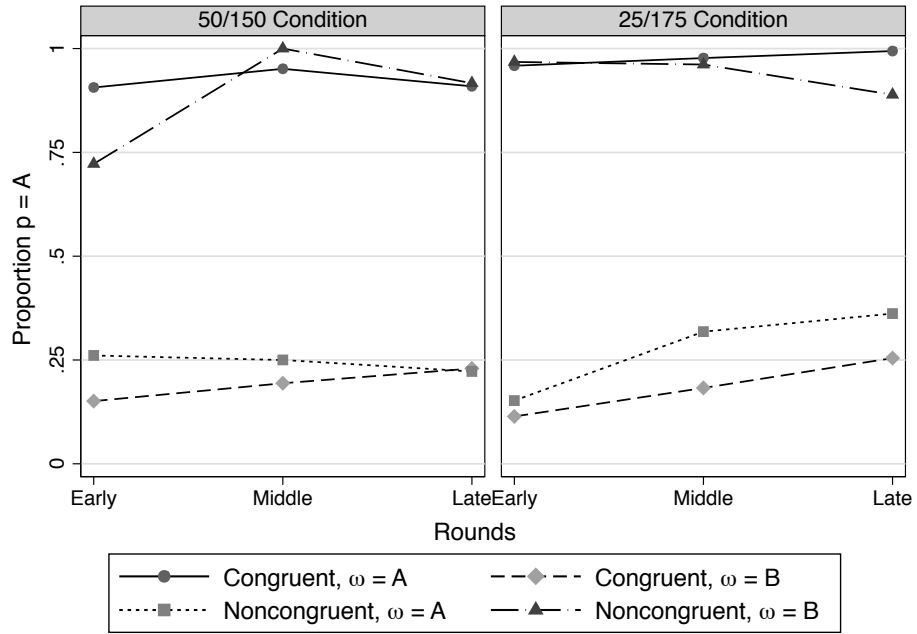
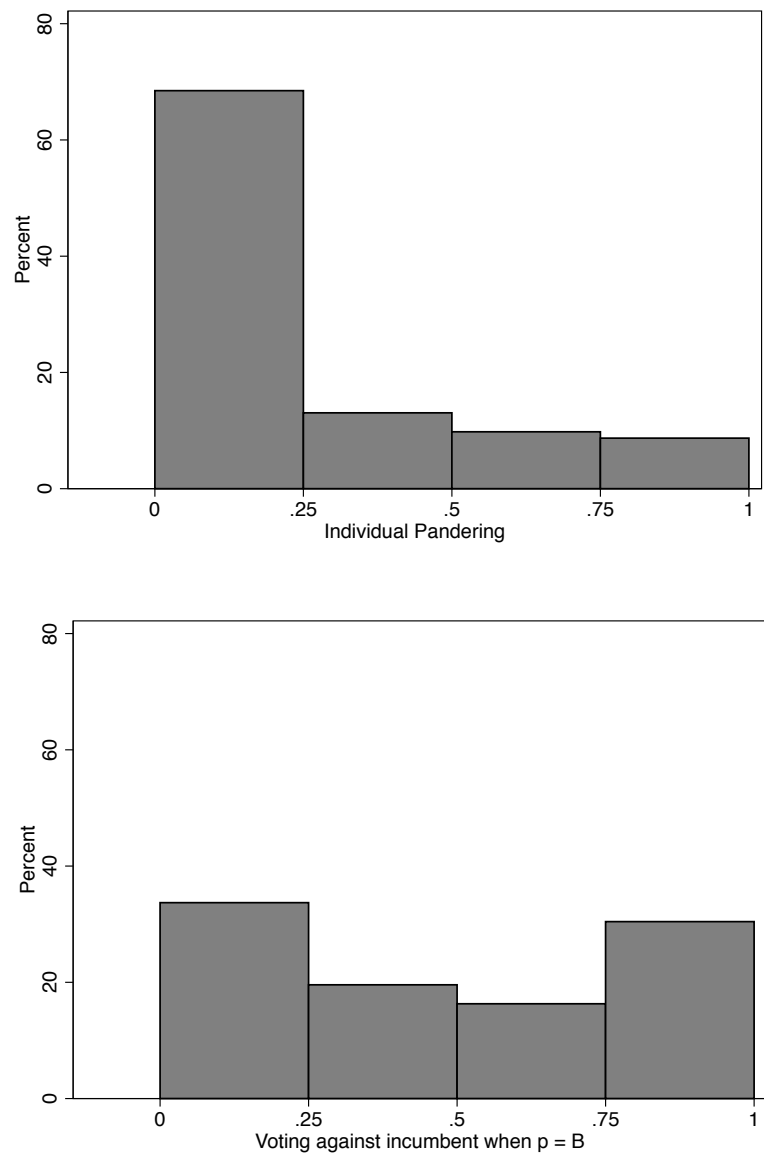


Figure 2 presents the distribution of subjects' strategic sophistication for each role. The upper part of the figure shows that most subjects indeed refrained from pandering: 59% of subjects never pandered. Only 18% of subjects engaged in policy pandering at least half of the time, and of these subjects, only two of them did so at every possible opportunity. Thus, there is little heterogeneity between subjects in terms of their propensities to engage in pandering. Most did not do it at all, and only a very few engaged in it with great frequency.

The lower part of Figure 2 shows a great deal of heterogeneity in voting patterns. Subjects were roughly split between those who usually voted for the incumbent (53%) and those who voted against them (47%). At the extremes, about 23% of subjects always re-elected the incumbent when $p = B$ while 17% of subjects always voted them out of office. Incumbents who chose policy B were re-elected half the time not because individual subjects randomly voted but because of half of them voted in a manner consistent with strategically rational play and half did not.

The responses that subjects gave to the open-ended survey question asking them to describe their decision process provide some additional insights into their behavior. Most subjects gave brief responses, many of which are vague or muddled. For example, some subjects stated reasons along the lines of "to make the most money" or "I used the probabilities to make decisions," and some subjects described rather than explained their behavior. Such responses suggest that many subjects either could not articulate their reasoning process or did not engage in much reasoning at all. This is not too surprising given the novelty and complexity of the game they played. Nevertheless, it was possible to identify patterns in the responses and to place them into a handful of categories. The modal types of responses involved maximizing individual payoffs (28%) or using probabilities to make their decisions (26%). While these responses suggest that many subjects attempted to be selfish utility-maximizing agents, a few subjects (5%) stated reasons that were more pro-social (e.g., "I tried to make sure that everyone would benefit most from my decisions"). Some subjects interpreted the structure of the policy payoffs as a "rule" to be followed (17%). A very small

Figure 2: Heterogeneity in subjects' strategic behavior



number of subjects did articulate reasons for their decisions consistent with game theoretic logic: 8% recognized that choosing policy *A* would get them re-elected while 5% realized that incumbents who chose *A* were more likely to be congruent. These subjects indeed exhibited more sophisticated behavior than others, as their average pandering rate was 48% (compared to 15% for other subjects) and the average rate of voting out incumbents who chose policy *B* was 80% (compared 41%).

Turning now to the results for institutional choice from Part 2 of the experiment, recall that Hypothesis 4 states that expected utility-maximizing subjects will rank Judicial Power over Representative Democracy and Representative Democracy over Direct Democracy. These rankings presume equilibrium behavior within each game, but subjects clearly do not play their equilibrium strategies. Based on their actual behavior, their institutional preferences should nevertheless be the same. This is because voters still benefit from eliminating the incentives for a few politicians to pander, so Judicial Power remains better than Representative Democracy. Similarly, Direct Democracy should still be the least preferred institution because voters lose the informational advantages of delegating to policy experts.

Table 3 suggests that there is no overwhelming preference for any one institution. Judicial Power turns out to be the least preferred in the 50/150 Condition; it fares better in the 25/175 Condition, as half of the subjects choose it over the alternatives. In both conditions, however, there remains a substantial preference for both Representative Democracy and Direct Democracy; each one is chosen by almost 40% of subjects in the 50/150 Condition and by about 25% of subjects in the 25/175 Condition. When pooling the two conditions, Judicial Power does slightly better, but it is by no means a clear favorite. These results suggest that institutional choice may be driven less by the instrumental calculation of expected costs and benefits than by other factors.

The open-ended explanations subjects gave for their rule choices can shed some light on what these other factors may be. As with the explanations of behavior in the Representative Democracy Game, many of the written explanations that subjects gave about their

Table 3: Institutional choice

Treatment	Institutional Choice			N
	Judicial Power	Rep. Democracy	Direct Democracy	
50/150 Condition	24%	39%	37%	38
25/175 Condition	50%	24%	26%	54
Pooled	39%	30%	30%	92

Note: p -value = 0.04 for Pearson's χ^2 test

rule choices were vague or confused. Thus, such responses must be interpreted cautiously, but nevertheless provide a useful supplement to the kind of purely choice data favored by experimentalists in the economics tradition.

Table 4 shows the results of a simple content analysis of the explanations given for each choice of institution. The first noticeable pattern is that many subjects claim to justify their choice in terms of utility or payoff maximization (61% of explanations for Judicial Power, 32% for Representative Democracy, and 43% for Direct Democracy). The fact that very few subjects admit to being confused or to being motivated by fairness or altruism as concerns also suggests that subjects *attempt* to maximize their own utility, even though they are largely confused about how to do so.

The second noticeable pattern is that each rule appears to correspond to a primary justification. Subjects who chose Judicial Power recognized and were concerned with removing electoral incentives. They gave explanations like the following:

- “If a politician does not face re-election, he has no incentive to ‘pander’ to voters and thus gains maximum ‘utils’ (or whatever term you would like to use to describe satisfaction in his/her decision-making) by voting based off of his/her principles. If I, acting as the politician, vote with my values under this system, I am guaranteed the

Table 4: Content analysis of rule explanations

Explanation	Judicial Power	Rep. Democracy	Direct Democracy
Remove electoral incentives	36%	11%	0%
Familiarity or previous success	0%	68%	0%
Easier to understand	3%	11%	7%
Control outcome or make own choice	3%	4%	54%
Utility maximization	61%	32%	43%
Fairness	6%	0%	0%
Confused	6%	4%	4%
Avoid risk	6%	4%	0%

Notes: Cells give the percentage of responses for each rule that fit the explanation. Classifications are not mutually exclusive, so frequencies will not add to 100%.

maximum payout of 200 points.”

- “Because it is the easiest one to predict since there is no reelection. Reelection supplies the biggest reward hence once that is taken off the table the intentions are more clear.”
- “I chose this rule because politicians probably choose policies based on public opinion and less on personal feelings. This rule allows the politician to choose the policy without facing a re-election, so they can choose based on their own opinion rather than subject to a voter’s choice.”
- “Seems to be the time when the politician will be most honest”

Interestingly, these were different subjects from the ones who described themselves as using a pandering strategy in the Representative Democracy Game, as they rarely pandered themselves (only two of them pandered more than 75% of the time).

Those who chose Representative Democracy tended to cite their familiarity with the institution as the reason for their choice. Over two-thirds of the explanations given for

choosing Representative Democracy (Rule 1) were similar to the following:

- “This has the most predictable outcome, it would seem to me. Therefore I have the largest chance of being able to gain as many points possible, given that I know the system, and thus the largest bonus.”
- “I found Rule 1 to be the most straightforward, and since I did fairly well in Part 1 and am comfortable with the workings, I chose Rule 1.”
- “I did fairly well with this rule in Part 1 and think that it is more likely that I will continue to succeed earning the maximum amount with this rule than with the other new rules.”
- “I chose rule one since I was most comfortable with the previous rules and feel a good odds of getting the max pay off with the same rules as we just used.”

A few subjects (11% of those choosing Representative Democracy) also cited their ability to understand this rule given that they had just used it as a reason for choosing it. These explanations suggest a kind of status quo bias or “satisficing” as a decision rule rather than optimization (Simon 1955). If such reasoning about political institutions is at all reflective of real-world political reasoning, then it might help to explain the persistence of sub-optimal institutions.

Over half (54%) of subjects who chose Direct Democracy tended to give reasons pertaining to having the most control over outcomes in the sense that their policy payoffs would not depend on another player (the politician). Some subjects thought this would be a better way of removing the politician’s incentives for pandering than Judicial Power, couching their reasons in terms of the incumbent’s incentive to lie. Examples of such justifications also suggest that subjects believed having direct control would lead to higher payoffs:

- “Most dependent on myself. In part one, there’s a chance what I select will give me zero points, in part 2, the politician has more of an incentive to lie in order to accrue points. This is the best chance (though perhaps not statistically) to earn maximum money.”
- “Round 3 gives the voter the most power to decide policies, so it seems to be the round that will most likely earn the most money for the voter”

- “Rule 3 is the only rule in which the voter has direct control (although random) control over the outcome. Under Rule 1, the politician has all of the decision making, leaving my bonus points up to him. Under Rule 2, the voter cannot even punish the politician for his choice.”

These explanations are consistent with a kind of popular appeal of direct democracy. It is possible that subjects recognize the agency problem posed by the Representative Democracy Game, but they are reluctant to delegate because they place a higher value on direct control than informational efficiency.

Context Effects

In the electoral accountability game, laboratory voters provide weak incentives for politicians to pander and laboratory politicians fail to exploit these tendencies to maximize expected payoffs. Because subjects played a game with exactly the same structure as that analyzed by Maskin and Tirole (2004), we might infer that the behavioral assumptions underlying equilibrium theory (expected payoff maximization, Bayesian inference, mutual consistency of players’ strategies) do a poor job characterizing real human behavior in even these simplified political environments. But an alternative explanation is that the inconsistencies were caused by the use of political framing in the experiment’s instructions. The argument is that when political context is used, it primes subjects to rely on whatever knowledge and beliefs about politics they bring from outside the laboratory. More specifically, the concern is that their political knowledge crowds out any incentives induced by the reward structure of the experiment. To some extent, such crowding out is desirable because one should view the intent of the experiment as an investigation of political reasoning rather than a test of abstract strategic thinking.

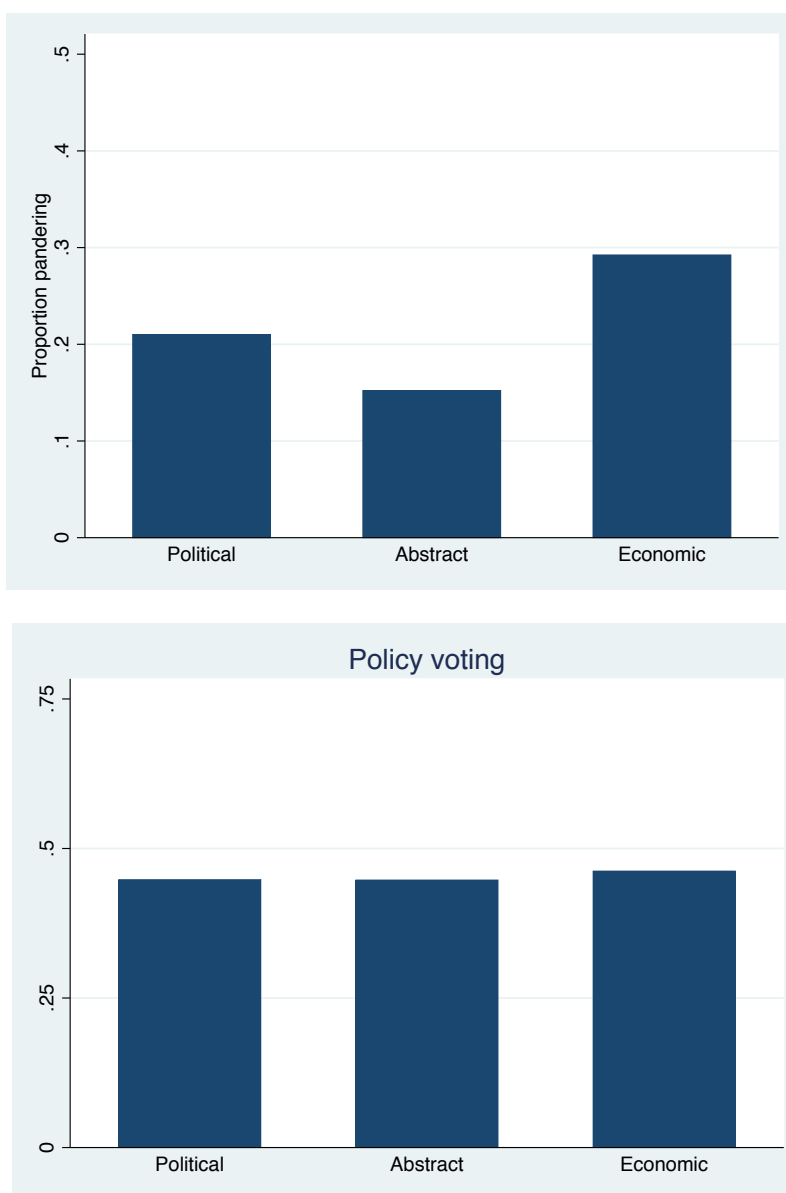
To test whether political context might have affected behavior, I conducted two additional treatments in which I varied the framing of the instructions. In the *Economic Context* treatment, the rules, instructions, and procedures were identical to the 25/175 Condition

except that the incumbent was called the “worker,” the voter was called the “manager,” the challenger was called the “applicant,” the policy choice was called the “action choice,” and the election was called the “retention decision.” In the *Abstract Context* treatment, these terms were replaced by “Player 1,” “Player 2,” “Computer,” “Action 1,” and “Action 2.” I conducted four sessions of the Abstract Context treatment with 54 subjects and three sessions of the Economic Context treatment with 48 subjects.

Figure 3 compares the overall level of equilibrium-consistent behavior in the three different contextual frames (political, abstract, and economic).¹³ While the lower panel shows no differences in voting behavior, the upper panel shows that there are differences in the policy choices between the contexts, but not in the way that the above argument about framing suggests. The most “pandering” occurs in the Economic Context (29%), and the least occurs in the Abstract Context (15%). (These differences are statistically significant.) These results suggest that context seems to enhance rather than inhibit or crowd out strategic thinking. Indeed, the economic context might also increase subjects’ willingness to act selfishly or opportunistically. In contrast, removing any kind of substantive context reduces the frequency of strategic behavior. Meaningful context therefore seems to allow subjects to reason about their actions in ways that they might do in natural settings, while abstract context simply confuses them. This finding is consistent with the psychology literature on logical reasoning that finds that people are better at reasoning about logical rules when they are framed as social rules or permissions (e.g., Cosmides and Tooby 1992, Ortmann and Gigerenzer 2000) rather than abstract logical tasks (Wason 1968).

¹³I include only data from the 25/175 Condition since the payoffs are different in the 50/150 Condition. By “equilibrium-consistent” I mean policy *A* for Matching/State B or Opposed/State A incumbents and voting for the Challenger when the policy is *B* for voters.

Figure 3: Context, pandering, and policy accountability



Conclusion

I found that choices in the Representative Democracy Game fell well short of the standards of strategic rationality assumed by game theoretic analysis. Voters generated weaker incentives than predicted by equilibrium theory, and laboratory politicians consistently ignored their electoral incentives. What lessons can we draw from this kind of study? Of course, it would be silly to conclude that “politicians don’t pander” since subjects playing the role of politicians in the laboratory are no doubt quite different from real-world politicians. Instead, we gain some insight into the way that ordinary humans think (or don’t think) in social situations that share key features with electoral politics.

A handful of subjects recognized their reputational incentives and exploited them, but the vast majority did not. In other words, very few subjects exhibited any form of strategic sophistication. This has several possible implications for the study of politics. First, the failure of strategic rationality in a highly simplified electoral environment calls into question the behavioral assumptions of formal models of pandering in elections. These models often rely on highly sophisticated Bayesian inference and voting behavior to identify various pathologies of democratic politics. In addition, instead of weighing the instrumental costs and benefits (or the policy consequences) of political institutions, the experimental results are consistent with citizens who evaluate institutions based on their general beliefs about various features of these institutions (e.g., Hibbing and Theiss-Morse 2002).

The fact that a few subjects did recognize their reputational incentives also suggests that political sophistication involves more than awareness, knowledge of facts, or the coherence of attitudes, but the ability to recognize and reason about strategic interaction. That such recognition is the exception rather than the rule suggests that citizens and voters in the real world may also be too credulous if they fail to notice subtle incentives for pandering and therefore fail to detect opportunistic behavior in all but the most egregious circumstances.

References

- Achen, Christopher H. and Larry M. Bartels. 2004. "Blind Retrospection: Electoral Responses to Drought, Flu, and Shark Attacks." Working Paper, Princeton University.
- Alesina, Alberto and Guido Tabellini. 2007. "Bureaucrats or Politicians? Part I: A Single Policy Task." *The American Economic Review* 97(1):169–179.
- Ashworth, Scott. 2005. "Reputational Dynamics and Political Careers." *Journal of Law, Economics, and Organization* 21(2):441.
- Ashworth, Scott and Ethan Bueno de Mesquita. 2008. "Electoral Selection, Strategic Challenger Entry, and the Incumbency Advantage." *The Journal of Politics* 70(04):1006–1025.
- Banks, Jeffrey S. and Rangarajan K. Sundaram. 1993. Adverse Selection and Moral Hazard in a Repeated Elections Model. In *Political Economy: Institutions, Competition, and Representation: Proceedings of the Seventh International Symposium in Economic Theory and Econometrics*. Cambridge University Press.
- Bartels, Larry M. 1991. "Constituency Opinion and Congressional Policy Making: The Reagan Defense Buildup." *American Political Science Review* 85(2):457–474.
- Bartels, Larry M. 2009. *Unequal Democracy: The Political Economy of the New Gilded Age*. Princeton University Press.
- Besley, Timothy. 2005. "Political Selection." *Journal of Economic Perspectives* 19(3):43–60.
- Camerer, Colin F., Teck-Hua Ho and Juin-Kuan Chong. 2004. "A Cognitive Hierarchy Model of Games." *Quarterly Journal of Economics* 119(3):861–898.
- Canes-Wrone, Brandice and Kenneth W. Shotts. 2007. "When Do Elections Encourage Ideological Rigidity?" *American Political Science Review* 101(2):273–88.
- Canes-Wrone, Brandice, Michael C. Herron and Kenneth W. Shotts. 2001. "Leadership and Pandering: A Theory of Executive Policymaking." *American Journal of Political Science* 45(3):532–50.
- Cosmides, Leda and John Tooby. 1992. Cognitive Adaptations for Social Exchange. In *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, ed. J. Tooby J. Barkow, L. Cosmides. Oxford University Press pp. 163–228.
- Ericsson, K Anders and Herbert A Simon. 1998. "How to study thinking in everyday life: Contrasting think-aloud protocols with descriptions and explanations of thinking." *Mind, Culture, and Activity* 5(3):178–186.
- Erikson, Robert S, Michael B MacKuen and James A Stimson. 2002. *The Macro Polity*. Cambridge University Press.

- Fearon, James D. 1999. Electoral Accountability and the Control of Politicians: Selecting Good Types versus Sanctioning Poor Performance. In *Democracy, Accountability, and Representation*, ed. A. Przeworski, S.C. Stokes and B. Manin. Cambridge University Press.
- Ferejohn, John. 1986. "Incumbent Performance and Electoral Control." *Public Choice* 50(1):5–25.
- Fiorina, Morris A. 1981. *Retrospective Voting in American National Elections*. New Haven, Conn.: Yale University Press.
- Fischbacher, Urs. 2007. "z-Tree: Zurich Toolbox for Ready-Made Economics Experiments." *Experimental Economics* 10:171–8.
- Fox, Justin. 2007. "Government Transparency and Policymaking." *Public Choice* 131(1):23–44.
- Fox, Justin and Kenneth W. Shotts. 2009. "Delegates or Trustees? A Theory of Political Accountability." *Journal of Politics* 71(4):1225–37.
- Gordon, Sanford C., Gregory A. Huber and Dimitri Landa. 2007. "Challenger Entry and Voter Learning." *American Political Science Review* 101(02):303–320.
- Groseclose, Tim and Nolan McCarty. 2001. "The Politics of Blame: Bargaining Before an Audience." *American Journal of Political Science* 45(1):100–119.
- Healy, Andrew, Neil Malhotra and Cecilia Hyunjung Mo. 2010. "Irrelevant Events Affect Voters' Evaluation of Government Performance." *Proceedings of the National Academy of Sciences* 107(29):12804–12809.
- Healy, Andrew W. and Neil Malhotra. 2009. "Myopic Voters and Natural Disaster Policy." *American Political Science Review* 103(3):387–406.
- Hibbing, John R and Elizabeth Theiss-Morse. 2002. *Stealth Democracy: Americans' Beliefs About How Government Should Work*. Cambridge University Press.
- Huber, A, Seth J Hill and Gabriel S Lenz. 2012. "Sources of Bias in Retrospective Decision-Making: Experimental Evidence on Voters Limitations in Controlling Incumbents." *American Political Science Review* 106(4):720–41.
- Key, V.O., Jr. 1966. *The Responsible Electorate*. Belknap Press.
- Kramer, Gerald. 1971. "Short-Term Fluctuations in U.S. Voting Behavior." *American Political Science Review* 65:131–43.
- Landa, Dimitri. 2010. "Selection Incentives and Accountability Traps: A Laboratory Experiment." Paper presented at the Annual Meeting of the American Political Science Association (Washington, DC).

- Maskin, Eric and Jean Tirole. 2004. "The Politician and the Judge: Accountability in Government." *The American Economic Review* 94(4):1034–1054.
- Miller, Warren E. and Donald E. Stokes. 1963. "Consituency Influence in Congress." *American Political Science Review* 57(1):45–56.
- Nagel, Rosemarie. 1995. "Unraveling in Guessing Games: An Experimental Study." *The American Economic Review* 85(5):1313–1326.
- Ortmann, Andreas and Gerd Gigerenzer. 2000. Reasoning in economics and psychology: Why social context matters. In *Cognition, Rationality, and Institutions*. Springer pp. 131–145.
- Page, Benjamin I. and Robert Y. Shapiro. 1983. "The Effects of Public Opinion on Policy." *American Political Science Review* 77(1):175–90.
- Patty, John W. and Roberto A. Weber. 2007. "Letting the Good Times Roll: A Theory of Voter Inference and Experimental Evidence." *Public Choice* 130:293–310.
- Simon, Herbert A. 1955. "A Behavioral Model of Rational Choice." *The Quarterly Journal of Economics* 69(1):99–118.
- Stasavage, David. 2004. "Open-door or Closed-door? Transparency in Domestic and International Bargaining." *International Organization* 58(04):667–703.
- Wason, Peter C. 1968. "Reasoning about a rule." *The Quarterly Journal of Experimental Psychology* 20(3):273–281.
- Woon, Jonathan. 2012. "Democratic Accountability and Retrospective Voting: A Laboratory Experiment." *American Journal of Political Science* 56(4):913–930.

General Instructions

Introduction

This is an experiment in political decision-making. The University of Pittsburgh has provided funds for this research. If you follow the instructions closely and make appropriate decisions, you may make a considerable amount of money. In addition to the \$5 participation payment, these earnings will be paid to you, in cash, at the end of the experiment.

During the experiment, all earnings will be denominated in points, which will be converted to cash at the rate of \$1 per 100 points. The exact amount you receive will be determined during the experiment and will depend partly on your decisions, partly on the decisions of others, and partly on chance. You will be paid your earnings privately, meaning that no other participant will find out how much you earn. Each participant has a printed copy of these instructions and may refer to them at any time during the experiment.

If you have any questions during the experiment, please raise your hand and wait for an experimenter to come to you. Please do not talk, exclaim, or try to communicate with other participants during the experiment. Also, please ensure that your cell phones and personal belongings are turned off and put away. If you intentionally violate the rules, you will be asked to leave the experiment and may not be paid.

Parts, Rounds, Roles, and Matching

This experiment consists of two parts. In each part, you will make decisions in one or more rounds. **Each round is a separate decision task.**

There are two roles in the experiment. In some rounds you will act as a voter and in others you will act as a politician. At the beginning of every round, one voter is randomly matched with one politician, and it is unlikely that you will be matched with the same participant in two successive rounds.

You will not know the identity of the other participant you are matched with in any round, and your earnings for each round depend only on your action in that round and the action of the participant you are matched with in that round.

Instructions for Part I

Overview of Decision Tasks

Part I consists of 30 rounds. **At the end of the experiment, 6 of these rounds will be randomly selected for payment.**

Every round consists of a **policy stage** and an **election stage**, and the sequence of each round is as follows:

1. Before the policy stage, the computer will select three values:
 - a. The politician's type, which is either *matching* or *opposed*.
 - b. The challenger's type, which is also either *matching* or *opposed*.
 - c. A target, which is either A or B.
2. In the policy stage, the politician observes his or her type and the target and then chooses a policy, which can be either A or B.
3. In the election stage, the voter observes the policy and chooses whether to re-elect the politician or to elect the challenger. (The voter does not observe the politician's type, the challenger's type, or the target.)

Random Selection of Types and Targets

In order to select the types and targets, the computer will randomly select three numbers at the beginning of each round: one for the politician (T), one for the challenger (C), and one for the target (X). Each number will be a whole number between 1 and 100, and each number (including 1 and 100) is equally likely to be selected. The three numbers are selected independently. That is, when one number is selected, it does not affect how the other numbers are selected.

Numbers translate to types and targets as follows:

- There is an 80% chance that the politician is matching:
 - If $T \leq 80$, then the politician is *matching*.
 - If $T > 80$, then the politician is *opposed*.
- There is an 80% chance that the challenger is matching:
 - If $C \leq 80$, then the challenger is *matching*.
 - If $C > 80$, then the challenger is *opposed*.
- There is a 60% chance that the target is A:
 - If $X \leq 60$, then the target is A.
 - If $X > 60$, then the target is B.

Note also that the values of T, C, and X are randomly and independently selected at the beginning of every round. That is, the values chosen in one round do not affect the values chosen in another round.

Politician Payoffs

The number of points that politicians receive in each round is the sum of two components.

The politician's policy component depends on the politician's type T , the target X , and the politician's policy choice.

If the politician's type is *matching*, then the politician receives **25 points for choosing a policy that matches the target** (i.e., policy A if the target is A or policy B if the target is B) and **0 points if they do not match**.

If the politician's type is *opposed*, then the politician receives **25 points for choosing a policy that is opposite of the target** (i.e., policy A if the target is B or policy B if the target is A) and **0 points if they match**.

The politician's election component depends on the voter's action. Politicians receive an additional **175 points if they are re-elected by the voter**. If the voter instead elects the challenger, then the politician receives points from only the policy component.

Voter Payoffs

The number of points that voters receive in each round is also the sum of a policy component and an election component.

In terms of the voter's policy component, the voter receives **100 points if the policy matches the target and 0 points if the policy and target do not match**. (Thus, voters' policy payoffs are similar to the matching politician type's.)

The voter's election component depends on the type of politician or challenger that is elected. A voter earns **100 additional points for electing a matching type** (if a matching politician is re-elected *or* if a matching challenger is elected) and **0 additional points for electing an opposed type** (if an opposed politician is re-elected or if an opposed challenger is elected).

Instruction Questions

Before we begin the experiment, there will be a set of questions to ensure that everyone understands the instructions. **Your answers to these questions do not affect your earnings**, but please answer the questions as best you can. You may refer to your printed instructions as often as you like, and note that for your convenience, there is also a “quick reference” sheet. When you are finished with each set of questions, the computer will check your answers and you will receive feedback. We will begin the experiment when everyone has answered all of the questions.

If you have any further questions at this time, please raise your hand and the experimenter will come to you.

Quick Reference

Types and targets

- T, C, and X are independent and randomly selected whole numbers from 1 to 100. Every number from 1 to 100 is equally likely and is selected at the beginning of every round.
- Politician is *matching* if $T \leq 80$, and *opposed* otherwise.
- Challenger is *matching* if $C \leq 80$, and *opposed* otherwise.
- The target is A if $X \leq 60$, and B otherwise.

Politicians

- Politicians observe the target.
- Matching politicians receive 25 points from matching the policy to the target.
- Opposed politicians receive 25 points if the policy and target do not match.
- Both types of politician receive an additional 175 points from being re-elected.

Voters

- Voters observe the politician's policy choice
- Voters do not observe the politician's type, the challenger's type, or the target.
- Voters receive 100 points if the policy matches the target.
- Voters receive an additional 100 points if type of politician elected is matching (re-electing the politician who is matching or electing a challenger who is matching).

Instructions for Part II

There are five rounds in Part II, and the rounds are divided into three sets. Each set of rounds involves a slightly different Rule for the decision task. **In addition to the rounds from Part I, 1 round from Part II will be randomly selected for payment at the end of the experiment.**

The different rules for Part II are as follows:

Rule 1: Politician chooses policy subject to re-election. The rules of this round are exactly the same as in Part I of the experiment. You will play one round with this rule as a politician and one round as a voter.

Rule 2: Politician chooses policy without facing re-election. In this round, the politician chooses policy but there is no challenger and no election (the voter does not take an action). The voter receives the same amount of points for the policy choice and the politician's type as in Part I. The politician also receives the same amount of points for the policy choice and in addition automatically receives 175 additional points (in lieu of facing re-election). Otherwise, the rules are the same as in Part I. You will play one round with this rule as a politician and one round as a voter.

Rule 3: Voter chooses policy directly. In this round, there are two targets (Target 1 and Target 2) and the voter chooses two policies directly (Policy 1 and Policy 2). Each target is selected independently, and the voter is paid for each policy that matches the corresponding target (100 points if Policy 1 matches Target 1 and 100 additional points if Policy 2 matches Target 2). You will not find out the values of the targets until the round is over.

Bonus points. Before you play any of the rounds, you will also choose one Rule to count for guaranteed bonus points. **More specifically, you will earn 5 times the number of points from the round for the Rule you choose in which you are a voter.** Your guaranteed bonus points will be added to the points you earn from the randomly selected rounds from Part I and Part II. (Note that this choice does not affect the round that will be randomly selected from Part II.)