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Ideology Without Ideologists

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Ideology without ideologists

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Abstract

Generally, Democrats do not increase military spending, and Republicans do not raise welfare payments. Mostly, ruling politicians stick to the manifesto of their party.

The current paper provides a theoretical explanation for this phenomenon that does not assume politicians or voters to be ideologists. I explore an environment where both voters and politicians always prefer the policy that is adequate to the world state but contradicts the party manifesto over the policy that is in line with the manifesto but not adequate. I find that nevertheless, the inefficient manifesto-driven policy will often result from their interaction.

Besides, I show that a high degree of agreement between the politician in office, his party basis and the voter makes efficient, informed policy rare or even impossible. But if homogeneity of convictions *within* parties is high, swing voter behavior can solve the problem.

JEL Classification: D 72, D 78, D 82

Keywords: Information transmission, signalling, ideology, intra-party politics, political opinion

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1 Introduction

Democrats do generally not increase military spending, and Republicans do generally not raise welfare payments. In the contrary, the ruling politician, i.e. the president, predominantly keeps at his party's manifesto. As Hetherington (2001) shows, the ideological distance between the Democratic and Republican party has even steadily increased since the 95th Congress in the late seventies. In general, ideology has a considerable impact on policy even if official "party discipline" is not part of the political system. As Klingemann et al. (1994) show, policy implementations that run contrary to the party doctrine are very seldom both in the U.S. and in Europe.

It is doubtful whether this manifesto-driven way of making policy is efficient. Intuitively, one should suppose that in a complex world of changing circumstances, the policy that is optimal at a time need not necessarily be in line with the manifesto of the ruling party. Why, then, is manifesto-driven policy such prevalent in both the U.S. and European countries?

One possible explanation would of course be that either politicians or voters or even both just prefer manifesto-driven policy over any policy that runs contrary to the party manifesto. Put differently, it is possible that the agents involved into the political game are ideologists.

In one way or the other, this assumption has so far dominated the literature in political economics. Unfortunately, there is no direct empirical evidence for this assumption. Its only legitimacy consists therefore in the (admittedly rather strong) intuition that there is simply no other convincing explanation of the persistence of ideology.

But contrary to intuition, this explanation is difficult to accept for a political economist. It is the received opinion among political economists that at least in modern democracies, the median voter has no ideological or only moderately ideological preferences. Thus, the prevalence of manifesto-driven policies cannot be explained away as a submission of the ruling party to the electorate. Instead, one has to assume that the preferences of party politicians and the pivotal voter are widely different: Party politicians are ideologists, the median voter is not, and the parties submit only imperfectly to the median voter.

Although this is a standard setup of political economics, it has its problems. Every model in which the preferences of the principal and the agents differ widely is only as plausible as the assumption that the principal is unable to (costlessly) find an agent whose preferences are sufficiently aligned

with his own.

In many cases, this assumption might be easy to justify. But with regard to the standard setup in political economics, it is hard to see why of all voters only the ideologists (the “extreme” leftists and the “extreme” rightists) should be able to delegate their interests to political parties. It should be equally likely that a pragmatic party whose preferences are more aligned with those of the median voter establishes itself, especially because it would win elections with certainty.

For these reasons, it would be good to have a model that explains ideological equilibrium behavior of politicians without assuming them to be, contrary to the pivotal voter, ideologists. In the current paper, I construct such a model. I show that *ideology may be the outcome of the political process itself, although no ideologists are involved in it.*

Consider the following world. There are leftists and rightists. Leftists earn more from a welfare-maximizing leftist policy than from a welfare-maximizing rightist policy. The opposite is true of the rightists. The president gets an imperfect signal about whether the leftist or the rightist policy is welfare-maximizing. If reelection incentives are unaffected, *both leftist and rightist presidents prefer following their signal* over a blind implementation of their favorite policy. Thus, there are no ideologists. Besides, if the policy choice of the president does not transmit new information about his type (i.e. whether he is more of a leftist or more of a rightist), reelection incentives *will* be unaffected by his policy choice.

One would suppose that in such a world, the president always follows his signal in equilibrium. Intuitively, ideological shirking but not informed policy could signal something about the true type of the president. Therefore, in the non-ideological world considered the president seems to have no incentive to shirk ideologically.

The current paper shows that this intuition might be wrong. The reason is that under plausible assumptions, not ideological shirking but informed policy transmits new information about the true type of the president.

This happens when leftist presidents are better in detecting the state of the world in which a leftist policy would be welfare-maximizing, whereas rightist presidents are better in detecting the state of the world in which a rightist policy would be welfare-maximizing.

This assumption, however, is plausible enough. Rightists might have different (biased) information sources than leftists;¹ or leftists and rightists

¹If rightists and leftists prefer different television channels and read different newspa-

differ with regard to the economic theories they like, being more familiar with their favorite theories than with alternative ones.

The tension between ideological and optimal policy in a world *with* ideologists has already been studied in the literature. Especially the stream of literature that started with Cukierman's and Tommasi's 1998 paper on so-called "policy reversals" is concerned with the question under which conditions the (ideological) politician in office will act according to his signal rather than according to the manifesto of his party.²

Cowen and Sutter (1998) present similar ideas to the ones put forward by Cukierman and Tommasi (1998). They conclude that policy reversals do indeed occur whenever the incentive to signal the lack of ideological shirking is strong enough. Naturally, if the policy proposal is opposed to the party ideology, it is more easily believed to be rather information-based instead of ideology-based than if it was in accordance with the party ideology.

By contrast, I explore an environment where no politician would ever want to exhibit ideological shirking. In this environment, politicians are not tempted by ideological preferences to shirk the implementation of adequate policies. However, they will often behave in equilibrium as if they were.

Technically, my paper is related to a second stream of literature in political economics that started with Harrington (1993). There, as well as in Canes-Wrone et al. (2001), Chiu (2002), Heidhues and Lagerlöf (2003), Maskin and Tirole (2004) and Frisell (2005), politicians discard their own signals in order to act according to the public opinion about the state of the world. The prior of the principal, who in most of the above-mentioned papers is identical with the pivotal voter, predominates the private signal of the agent. Although my model is completely different from theirs, my results, like theirs, are driven by effects of a combined reputation and commitment problem.

The remainder of the paper is organized as follows. In section 2, I present the model. I derive some fundamental results in section 3. Section 4 characterizes the set of refined perfect Bayesian equilibria in pure

pers, the so-called media bias (consisting in a selective choice of information by the media) would suffice to induce an asymmetry in the signal technology of leftists and rightists. The media bias has been analyzed by Gentzkow and Shapiro (2006).

²The technical correctness of their paper is contested, though. Cukierman and Menirav (2004) give some corrections of the original paper, but Dalen et al. (2005) argue that the representation of the preferences in both above-mentioned papers is flawed.

strategies for the case where the majority of the incumbent party and the representative voter are of the same political type. Section 5 presents the case where the majority of the incumbent party is of a different political type than the voter. In section 6, I extend the model. Section 7 discusses the model and concludes. Most proofs and the definition of the equilibrium refinement are relegated to the Appendix.

2 The Model

There are two parties, one left wing party p^l and one right wing party p^c , and the representative voter V . Each party has a leader that is randomly drawn from among its members, I for the leftist party and C for the rightist party. Either I or C is the incumbent president, his party being the incumbent party. The model comprises two periods, $t \in \{0, 1\}$.

There can be two state of the worlds w , drawn by nature with equal probability at the beginning of each period: $w = l$ or $w = r$. Two different kinds of policy P are possible in each period, a left wing policy P_L and a right wing policy P_R . The policy P either matches the state of the world or fails to do so. P matches the state of the world if and only if its implementation increases welfare. Policies that match the state of the world will therefore be called *successful* policies. The left wing policy P_L is successful if and only if $w = l$, and the right wing policy P_R is successful if and only if $w = r$.

The intuition behind this assumption is as follows. An economic policy tends to be more confirmed by one economic theory than by some other. Now economic theories can usually be distinguished into those that are more favored by leftists and those that are more favored by rightists. For example, leftists are more likely to rely on Keynesian theories than rightists; and rightists are more likely to believe in the so-called neoclassical theories.

Because different economic theories describe reality differently, a given state of the world is usually not described equally well by all of them. Thus, most times there will be one theory, more likely to be favored by leftists or by rightists, that does best at least temporarily.

2.1 Political types

There are two different types, leftists and rightists. Any individual i is either a leftist or a rightist, $T^i \in \{L, R\}$. Shortly, the formal definitions of

political types are as follows:

Leftists Let individual i be of type L (a leftist). Then, her immediate payoffs from possible policies $P \in \{P_L, P_R\}$ would be:

$$\begin{aligned} U^L(P_L | w = l) &= x \in (\tfrac{1}{2}, 1), U^L(P_L | w = r) = 0 \\ U^L(P_R | w = r) &= (1 - x), U^L(P_R | w = l) = 0 \end{aligned}$$

Besides, if i gets a signal on the state of the world, there will be the following asymmetry in the signal qualities, depending on the state of the world:

$$\begin{aligned} \Pr^L\{s = l | w = l\} &= \sigma_H > \sigma_L = \Pr^L\{s = r | w = r\} \\ \sigma_L, \sigma_H &\in (\tfrac{1}{2}, 1) \end{aligned}$$

Rightists Let individual i be of type R (a rightist). Then, her immediate payoffs from possible policies $P \in \{P_L, P_R\}$ would be:

$$\begin{aligned} U^R(P_R | w = r) &= x \in (\tfrac{1}{2}, 1), U^R(P_R | w = l) = 0 \\ U^R(P_L | w = l) &= (1 - x), U^R(P_L | w = r) = 0 \end{aligned}$$

Besides, if i gets a signal on the state of the world, there will be the following asymmetry in the signal qualities, depending on the state of the world:

$$\begin{aligned} \Pr^R\{s = r | w = r\} &= \sigma_H > \sigma_L = \Pr^R\{s = l | w = l\} \\ \sigma_L, \sigma_H &\in (\tfrac{1}{2}, 1) \end{aligned}$$

Legacy Motive *For simplicity*, I add the assumption that the politicians I and C care only for policies implemented by themselves and have zero utility from policies that are the work of others. Analogously, party members care only for policies shaped by their own parties. With regard to presidents, this assumption has been already employed by Maskin and Tirole (2004) who call this kind of policy motivation a “legacy motive”; and it has also been adopted by Frisell (2005). I could give up this assumption without changing the qualitative results. (I give the reasons for this in the Conclusion of this paper.) The voter cares about any policy that is implemented.

In ordinary language, the concepts “leftist” and “rightist” have complex meanings. On the one hand, being a leftist or a rightist means believing in some ideas, theories or information sources more than in others.

On the other hand, it means to have interests and preferences, especially with regard to the distribution of income in the economy, that may differ sharply from those of people with the opposite political opinions. Both meanings are accounted for in the model.

Leftists and rightists differ in the way in which they might get or interpret information about the state of the world. The leftist is better able to find out that $w = l$ and less likely to find out that $w = r$. Exactly the opposite is true for the rightist.

Distributional interests also differ across political types. A leftist prefers a successful leftist policy $\{P, w\} = \{P_L, l\}$ over a successful rightist policy $\{P, w\} = \{P_R, r\}$, because he wants to get the higher income x . A rightist, by contrast, prefers a successful rightist policy over a successful leftist policy for exactly the same reason.

Both leftists and rightists, however, agree in strictly preferring successful policies over unsuccessful ones:

$$\{\{P_L, l\}, \{P_R, r\}\} \succ_{L,R} \{\{P_L, r\}, \{P_R, l\}\}.$$

This assumption captures the idea that politicians are not ideologists. They are rather pragmatically interested in solving the problems of the day. Therefore, this assumption contributes to the strength of the argument presented in this paper: It will be shown that even though there may not be any ideologists involved in the political process, its outcome will often be thus as would be produced by hard-core ideologists.

2.2 Parties

Neither party is completely homogeneous with regard to the political opinions of its members. Even in a left wing party, there will always be politicians that on a given issue agree more with the majority of right wing party members than their own party fellows. The analogous claim could be made about any right wing party.² To the best of my knowledge, the political heterogeneity within parties has so far been ignored in the economic literature on reelection incentives. In the current model, it is accounted for.

²For empirical evidence on factionalism (i.e. political diversity) within parties, see Reiter (2004). Strong factionalism can be explained in several ways. Firstly, there are other than political reasons for an individual's decision to join a party, like network considerations and career concerns. Secondly, political opinions as well as payoffs might change over time whereas the decision to enter a specific party, if it has been made early in life, cannot be reversed without costs in terms of career options.

Formally, a population of politicians of mass one sorts into the two parties as follows. There are $\alpha \in (0, 1)$ leftists. A share $\tau > \frac{1}{2}$ of them enters the leftist party p^I , whereas the remaining share $(1 - \tau)$ enters the rightist party p^C . Analogously, a share τ of the $(1 - \alpha)$ rightists enters the right wing party, whereas a share $(1 - \tau)$ of them becomes part of the left wing party.

Thus, the prior probability that I , the leader of the leftist party, is truly a leftist is

$$\pi_L^{I0} = \frac{\alpha \tau}{\alpha \tau + (1 - \alpha)(1 - \tau)} \quad (1)$$

Analogously, the leader of the rightist party, C , is truly a rightist with prior probability

$$\pi_R^{C0} = \frac{(1 - \alpha) \tau}{\alpha(1 - \tau) + (1 - \alpha)\tau} \quad (2)$$

Political preferences of politicians are private information, but the distributions of leftists and rightists in either party are common knowledge.

For simplicity, I assume that the representative voter's political type is commonly and perfectly known. Alternatively, one could suppose that opinion polls lead to a noisy but informative signal about the voter's type. But this assumption would only make the model more complicated without contributing much to the general idea.

2.3 Time structure and action space

At the beginning of the first period, nature draws the state of the world $w \in \{l, r\}$. Each happens with probability $\frac{1}{2}$. The incumbent president j receives a private signal s_0^j on the state of the world, while his party basis and the voter stay uninformed. Then, j has to decide which kind of policy – P_L or P_R – he wants to implement.

First-period utilities are realized. Afterwards, j 's party basis decides whether or not to confirm him in his office. I assume that this decision will be in line with the majority preferences of the party members.

If the incumbent president is confirmed by his party, he will become the party's candidate for elections, $K = j$. If he is not confirmed, a randomly drawn challenger N from his own party becomes the party's candidate, $K = N$. If $j = I$, N is a leftist with probability

$$\pi_L^{N0} = \pi_L^{I0}.$$

If $j = C$, N is a rightist with probability

$$\pi_R^{N0} = \pi_R^{C0}.$$

Elections take place at the end of the first period. Then, the voter V decides whether or nor to reelect the incumbent party. Depending on the voter's decision, the new president in the second period is either $K \in \{j, N\}$ or the leader of the challenging party p^i , with $i \neq j, i \in \{I, C\}$.

At the beginning of the second period, the state of the world w is drawn again. The elected president k receives a signal s_1^k . Then, he implements a policy P_L or P_R , utilities are realized, and the world ends.

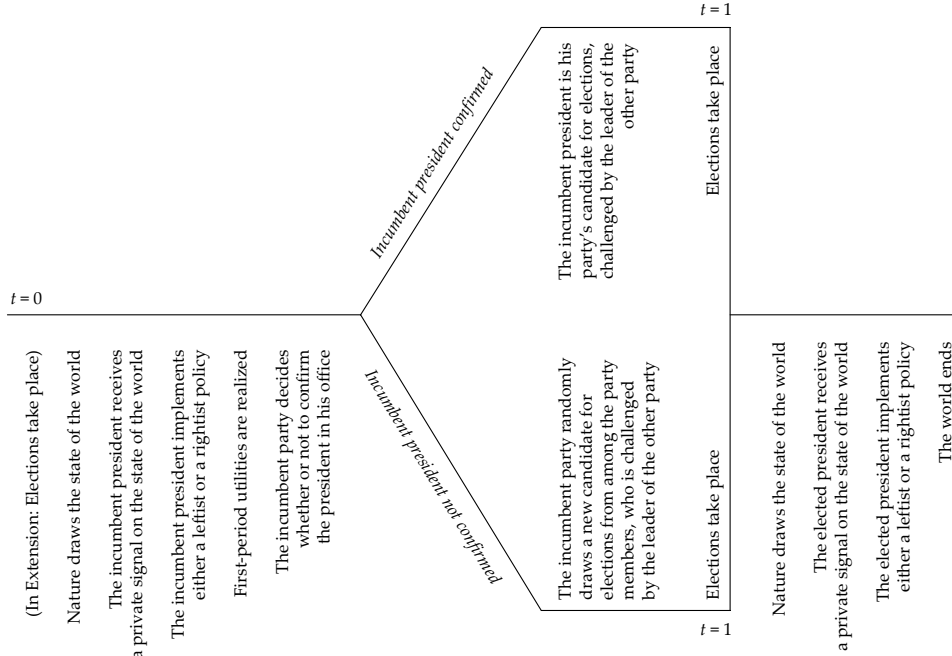


Figure 1: Timing of events and decisions

2.4 Utilities and motivations

Politicians act according to their policy motivation and their office motivation. The office motivation is due to an ego rent E that the politician in office gets from being in power. The members of his party get an ego rent e from belonging to the ruling party.

The policy motivation is supposed to be a dominant interest in successful policies. I assume that

$$EU_L^{it} (P_R | s_t^j = \hat{r}) > EU_L^{it} (P_L | s_t^j = \hat{r}) \quad (3)$$

$$EU_R^{it} (P_L | s_t^j = \hat{l}) > EU_R^{it} (P_R | s_t^j = \hat{l}) \quad (4)$$

The expression $EU_L^{it} (P_R | s_t^j = \hat{r})$ represents the expected utility of individual i , being of the leftist type L , from payoffs in period t , if in t the president j has got the signal s_t^j telling him that P_R would match the state of the world, and if the president accounts for this signal by implementing P_R . The other expressions in the above inequalities can be understood in similar ways.

For $i = j$, it follows from (3) and (4) that the president prefers acting according to his signal at any rate at least as long as the two possible policies P_L and P_R do not differ with respect to any reelection probabilities eventually associated with them. Thus, (3) and (4) also implement the assumption, meant to strengthen the argument, that politicians are not ideologists. Consider for example a president of the leftist type who receives a signal informing him that the state of the world is r . This president will be better off implementing P_R and earning $(1 - x)$ at best than gambling on the chance that the signal might be wrong, although P_L , in case of unexpected success, would give him x .

The condition that guarantees this relative importance of the signal for the president is easy to deduce. Suppose that the president j implements a policy that runs contrary to his own political type (P_R if he is a leftist or P_L if he is a rightist) but that is in line with his signal s_t^j . His immediate expected utility from the present period's outcome of his policy choice is

$$EU_{sig}^{jt} = \frac{\sigma_L}{\sigma_L + (1 - \sigma_H)} (1 - x) + E. \quad (5)$$

Suppose now, by contrast, that the president j discards his signal s_t^j in favor of the policy that suits his own political type (P_L if he is a leftist or P_R if he is a rightist). His immediate expected utility from the present period's outcome of his policy choice is now

$$EU_{nosig}^{jt} = \frac{(1 - \sigma_H)}{\sigma_L + (1 - \sigma_H)} x + E \quad (6)$$

It follows from the preference assumptions (3) and (4), that the left hand side in (5) is larger than the left hand side in (6). Thus, applying (3) and (4) to the president is equivalent to making

Assumption 1.

$$\frac{x}{1-x} < \frac{\sigma_H}{1-\sigma_L}$$

Assumption 1 can easily be understood to be a strong-signalling assumption: The signal qualities are high, that is to say σ_H and σ_L are large enough for the signal to be relied on with comparative ease, and the difference in the payoffs from successful left and right wing policies is comparatively low.

Intuitively, such a condition should guarantee that, as stated in (3) and (4), *all* individuals and not only the president would prefer the informed policy over the high-income policy. In fact, Assumption 1 is powerful enough to do the work:

Lemma 1 Suppose Assumption 1 holds. Then the voter prefers the informed policy. Presidents and party members prefer the informed policy if the reelection probability is unaffected.

Proof See Appendix.

In the following four sections, the model will be solved. Obviously, it is to be solved backwards. The equilibrium concept applying here is a refined concept of Perfect Bayesian Equilibrium. The refinement is given in the Appendix.

3 The second period

The first question is how the politician who wins elections at the beginning of the second period will act. The answer that is stated in Lemma 2 below is intuitive. In the second period, office motivation plays no role. Therefore, the considerable weight that the president gives to his information about the state of the world will fully bear on his decision.

Lemma 2 Any president in the second period will choose policy according to his signal, even if the signal favors the policy that runs contrary

to his political type. This decision will be ex ante efficient, optimal not only from his own perspective and the perspective of all other members of the two parties, but also from the point of view of the voter.

Proof Lemma 2 is directly implied by Lemma 1.

Of course, such last period effects are very seldom in reality.³ But Lemma 2 should be seen as adding to the strength of argument. The current model is designed to show that manifesto-driven, inefficient policy can be the equilibrium outcome even in a world without ideologists. With the help of Lemma 2, it can be shown that even if both the voter and the politicians expected the president to behave efficiently and non-ideologically in the future, and rightly so, it could nevertheless be impossible to implement efficient behavior in the present.

The next question is what the voter will do during elections, knowing that in the second period the elected president will efficiently act in line with his signal. According to Lemma 1, the only interest of the voter is that the policy implemented should be successful. If the signal technology were independent of the president's political type, so that in the second period all politicians, once in office, acted alike in expectations, the voter would be indifferent between all possible candidates I, N and C . For the case of indifference, I assume that the voter reelects the incumbent party.

But the signal technology depends on the type of the president. A president whose type differs from the voter's type would be worse in identifying successful policies that give the voter x than in identifying successful policies that give the voter only $(1 - x)$. This is because such a president would be more likely to detect the state of the world that suits his own type, but not the voter's type. This characteristic is implied by the definitions of political types. What follows is

Lemma 3 At the beginning of the second period, the voter will always elect the candidate whose probability of sharing the voter's political type is highest.

Proof See Appendix.

In the remaining part of the paper, I will discuss two different cases in succession. In the first case, both the voter and the majority of the incumbent party are of the leftist type, so that there is political agreement

³I thank Astrid Matthey for pressing this point.

between them. In the second case, the voter is still a leftist, but the majority of the incumbent party consists of rightists, so that a gulf of political disagreement separates the voter from this majority. The first case will be called the case of *political harmonism*; and the second case will be referred to as the case of *political disharmonism*. All results will also apply if types are reversed.

4 Equilibria under political harmonism

In the case of political harmonism, both the voter and the majority of the incumbent party are leftists. Thus, as Lemma 3 predicts, the candidate with the highest probability of being a leftist will be elected at the beginning of the second period.

Suppose that in the first period, the incumbent president I acts according to his signal s_0^I . Thus, if $s_0^I = \hat{l}$, he implements P_L ; and if $s_0^I = \hat{r}$, he implements P_R . It follows from the definition of political types that if I is a true leftist, he will be more likely to get the signal $s_0^I = \hat{l}$. If, however, he is a rightist in his heart, the signal will be more likely to be $s_0^I = \hat{r}$.

Accordingly, if I implements P_R , he will become less likely in the eyes of others, who update their beliefs according to Bayes rule, to be a true leftist. In contrast, after having chosen the left wing policy P_L , his conditional probability of being a leftist will increase.

In order to express this formally, define

$$\Pr\{T^I = L \mid w = l \wedge P = P_L\} \equiv \pi_{LSL}^I$$

$$\Pr\{T^I = L \mid w = r \wedge P = P_L\} \equiv \pi_{LUL}^I$$

$$\Pr\{T^I = L \mid w = r \wedge P = P_R\} \equiv \pi_{LSR}^I$$

$$\Pr\{T^I = L \mid w = l \wedge P = P_R\} \equiv \pi_{LUR}^I$$

Consider now a successful leftist policy choice. After this, the president is a leftist in the eyes of the others with posterior probability

$$\pi_{LSL}^I = \frac{\alpha \tau \sigma_H}{\alpha \tau \sigma_H + (1 - \alpha)(1 - \tau) \sigma_L} \quad (7)$$

If the leftist policy choice has been unsuccessful, the president is taken to be leftist with posterior probability

$$\pi_{LUL}^I = \frac{\alpha \tau (1 - \sigma_L)}{\alpha \tau (1 - \sigma_L) + (1 - \alpha) (1 - \tau) (1 - \sigma_H)} \quad (8)$$

Because $\frac{1}{2} < \sigma_L < \sigma_H < 1$, equations (7) and (8), together with (1), imply that

$$\pi_L^{I1} > \pi_L^{I0}, \text{ if } \pi_L^{I1} \in \{\pi_{LSL}^I, \pi_{LUL}^I\}. \quad (9)$$

Thus, implementing P_L always makes the president more likely in the eyes of others to be a leftist.

The way of showing that implementing P_R makes him less so is very similar. Consider first the successful implementation of P_R . After this the president is a leftist with posterior probability

$$\pi_{LSR}^I = \frac{\alpha \tau \sigma_L}{\alpha \tau \sigma_L + (1 - \alpha) (1 - \tau) \sigma_H} \quad (10)$$

After unsuccessful P_R , his posterior probability of being a leftist is

$$\pi_{LUR}^I = \frac{\alpha \tau (1 - \sigma_H)}{\alpha \tau (1 - \sigma_H) + (1 - \alpha) (1 - \tau) (1 - \sigma_L)} \quad (11)$$

It is easy to see from (10), (11) and (2), that because $\frac{1}{2} < \sigma_L < \sigma_H < 1$,

$$\pi_L^{I1} < \pi_L^{I0}, \text{ if } \pi_L^{I1} \in \{\pi_{LSR}^I, \pi_{LUR}^I\}.$$

Suppose now for the moment that there is a policy outcome $\{\bar{P}, w\}$ after that the president I is believed to be less likely to be a leftist than even C , the leader of the right wing party. This assumption is compatible with informed policy and Bayesian updating only if $\{\bar{P}, w\} \in \{\{P_R, r\}, \{P_R, l\}\}$. That becomes clear from comparing the prior probability that C is a leftist, which is $\pi_L^{C0} = (1 - \pi_R^{C0})$, with all four possible values of π_L^{I1} . Thus, it is the successful or unsuccessful rightist policy choice that, as shall be

supposed temporarily, makes the president I seem even less likely to be leftist than his challenger C .

In such a case, Lemma 3 implies that after the outcome $\{\bar{P}, w\}$ the voter will prefer C over I . If I chooses P_R , he therefore risks his office rent, even if his party confirms him in his office.

He risks nothing, however, if he chooses P_L . Firstly, Lemma 3 and (9) imply that after any outcome of an informed leftist policy choice, the voter will prefer I over C . Secondly, the leftist majority of the left wing party prefers the candidate most likely to be a leftist to rule in the second period. This follows from the definition of political types. The proof is exactly on the lines of the proof of Lemma 3 and shall therefore be skipped. What follows from this consideration and equation (9) is that I 's party fellows will prefer I over any N , whenever I implements P_L .

Consequently, the president's office motivation runs contrary to his deep interest into informed policy whenever his signal is $\hat{\tau}$.

But suppose now, by contrast, that the incumbent president I is always more likely to be a true leftist than the leader C of the right wing party. Put differently, even if I implements P_R , he is still taken to be less likely to be a rightist than C . Formally,

$$\pi_L^{I1} > \pi_L^{C0} \quad \forall \pi_L^{I1} \in \{\pi_{LSL}^I, \pi_{LUL}^I, \pi_{LSR}^I, \pi_{LUR}^I\}.$$

Here Lemma 3 implies that the voter at the beginning of the second period will prefer I over C in the presidential office regardless of I 's policy choice in the first period.

Intuitively, one should suspect that in this case, informed policy would be riskless for the president in the first period, and that office motivation could never interfere with it.

However, the contrary is true. In order to see that, suppose the president to follow his signal in choosing P_R . Although he has nothing to fear from the voter now, he is endangered by his own party. His probability of being a leftist decreases in the eyes of his party fellows. In their opinion, he is now less likely to be a leftist than any newcomer N from among them. Formally, $\pi_L^{I1} < \pi_L^{I0} = \pi_L^{N0}$.

Again, the leftist majority of the left wing party prefers the candidate who is most likely to be a leftist to rule in the second period. Thus, after a rightist policy choice made by I , the leftist party fellows of I prefer any N from their party over I . Thus, after an informed, even successful, rightist

policy choice, the incumbent president will be replaced in his office by a newcomer from his own party.

It may be helpful to realize that under political harmonism, the party basis and not the voter is the major principal whom the incumbent president has to confront. The president will be disposed of by the majority of his own party fellows if he follows his signal in implementing P_R . This will occur even if the incumbent president would be a winning candidate in elections. And it will occur although everybody, including the president's party fellows, wants him to follow his signal and to implement P_R whenever necessary. Thus, although there are no ideologists, leftists want a leftist president. This is because leftists want someone for president who is as likely as possible to detect the state of the world l whenever it happens to prevail.

The equilibria existing under harmonism are all driven by this mechanism. Intuitively, equilibrium behavior should depend on the relative importance of the president's office motivation. As characterized below, there are at most four different equilibria, three of them being plausible, depending on the exact amount of the presidential office rent.

Define the ego rents

$$\begin{aligned} E_L &\equiv \frac{\sigma_L}{\sigma_L + (1 - \sigma_H)} - x - \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)], \\ E_H &\equiv x - \frac{(1 - \sigma_L)}{\sigma_H + (1 - \sigma_L)} - \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)] \end{aligned}$$

Theorem Suppose $E_L < E_H$. Then, there exist the following four pure strategy equilibria under political harmonism: (1) For $E < E_L$, there exists a pooling equilibrium. The incumbent president chooses the informed policy regardless of his type in the first period. (2) For $E_L < E < E_H$, there exists a separating equilibrium. If the incumbent president is a rightist, he chooses the informed policy in the first period; otherwise he implements P_L regardless of his signal. (3) For $E > E_H$, there exist two pooling equilibria. (3a) In the first pooling equilibrium, the incumbent president implements P_L in the first period, regardless of his signal. (3b) In the second pooling equilibrium, the incumbent president implements P_R in the first period, regardless of his signal. But this pooling equilibrium is implausible.

These equilibria will be represented separately and in more detail in Propositions 1–3 and Corollary 2 below. Accordingly, I discuss and prove them sequentially.

4.1 Equilibrium with low office motivation

Proposition 1 (i) For $E < E_L$, there exists a pooling equilibrium. The incumbent president chooses the informed policy regardless of his type in the first period. (ii) If and only if he implements P_L , he will become his party's appointed candidate for elections. Then, the incumbent party will be reelected. (iii) This equilibrium is first best.

Proof See Appendix.

Obviously, for any $E > E_L$, this efficient pooling equilibrium breaks down, because the costs which the incumbent politician has to bear when he renounces his office in order to implement P_R are growing to high.

4.2 Equilibrium with moderate office motivation

Intuitively, it is the leftist president who first gets an incentive to deviate from equilibrium, because anyway, he does not like P_R as much as P_L . The leftist president then starts to act according to the manifesto of his party.

Proposition 2 (i) For $E_L < E < E_H$, there exists a separating equilibrium. If the incumbent president is a rightist, he chooses the informed policy in the first period; otherwise he implements P_L regardless of his signal. (ii) If and only if he implements P_L , he will become his party's appointed candidate for elections. Then, the incumbent party will be reelected. (iii) This equilibrium is inefficient, because the leftist president discards his signal.

Proof See Appendix.

Obviously, the separating equilibrium characterized above does only exist if $E_L < E_H$. In fact, this condition does not hold necessarily. The intuitive reason is as follows. Suppose the president is a leftist and gets the signal $s_t^L = \hat{r}$. Then, he acknowledges that if even he, as a leftist, gets a signal that the rightist policy would be appropriate, this signal must be very reliable. Precisely because leftists are less likely to get the signal \hat{r} ,

they rely more on it than rightists.⁴ Thus, although leftists loose more in following the signal \hat{r} than rightists if this signal is wrong, the signal \hat{r} is less likely to be wrong if received by a leftist. It is not clear beforehand which of the two effects dominates. Therefore, E_L might be smaller but also larger than E_H .

In the following, it shall be assumed that $E_L < E_H$, so that the separating equilibrium characterized above exists.

Assumption 2 $E_L < E_H$.

Corollary 1 The equilibrium that is characterized in Proposition 2 is the unique (refined) perfect Bayesian separating equilibrium in pure strategies.

As Proposition 2 and Corollary 1 show, an ego rent from power that is higher than E_L is compatible with the efficient policy choice only if by chance, the ruling leader of the left wing incumbent party is a rightist. But also this possibility of efficient, informed policy breaks down, if the ego rent from power becomes even higher.

4.3 Equilibrium with high office motivation

Intuitively, if the office motivation of the incumbent president is strong enough, not even successfully implementing the favorite policy will be worth the loss of the office. Thus, with strong office motivation, both political types of president discard their signal and act according to the party manifesto.

Proposition 3 (i) For $E > E_H$, there exists a pooling equilibrium. Both types of incumbent president implement P_L in the first period, regardless of their signal. (ii) If and only if the incumbent president implements P_L , he will become his party's appointed candidate for elections. Then, the incumbent party will be reelected. (iii) This equilibrium is inefficient because both types discard their signal.

Proof See Appendix.

⁴This inverse correlation between frequency and weight of a signal is at the core of the arguments used to explain policy reversals in Cowen and Sutter (1998) and Cukierman and Tommasi (1998).

Intuitively, this pooling equilibrium is plausible. Because the party basis prefers a leftist for president in the second period, both types of president always implement the leftist policy. If the president chose to deviate and to implement P_R , he would become more likely to be a rightist in the eyes of his party. This off-equilibrium belief which sustains the equilibrium is plausible: Even if the deviating president believes to be confirmed in his office against equilibrium-expectations, P_R will lead to a higher expected payoff for him than P_L only if he has got the signal \hat{r} . This signal, however, is more likely to be received by a rightist.

However, among the Perfect Bayesian equilibria of the game there is another, thoroughly implausible, equilibrium in which both types pool on P_R .

Corollary 2 (i) For $E > E_H$, there exists a second pooling equilibrium. Both types of incumbent president implement P_R in the first period, regardless of their signal. (ii) If and only if the incumbent president implements P_R , he will become his party's appointed candidate for elections. Then, the incumbent party will be reelected. (iii) This equilibrium is inefficient because both types discard their signal.

Proof Suppose that the party members have the following off-equilibrium belief: If the president implements P_L , he is more likely to be a rightist than any newcomer from among the members of the left wing party. Then, the proof of Corollary 2 is on the lines of the proof provided for Proposition 3 in the Appendix; only indices change. Therefore, the proof shall be skipped here.

The off-equilibrium belief that sustains this pooling equilibrium is implausible. To see this, remember that if there were no reelection incentives, every type of president would always follow his signal. Consequently, the president should never deviate from implementing P_R unless he would have got the signal \hat{l} . But if he has got the signal \hat{l} , he must be more likely to be a leftist in the eyes of anybody who updates her beliefs according to Bayes Rule. Thus, it is not rational to believe that a president who had deviated from the supposed equilibrium and had implemented P_L would have become more likely to be a rightist.

Unfortunately, this kind of argument is not captured by standard refinements of perfect Bayesian equilibrium. Therefore, I define a refinement which is in the spirit of Farrell's neologism-proofness (but cannot be re-

duced to any straightforward generalization of it). I call this refinement deviation-rationalization-proofness and relegate it to the Appendix.

The equilibrium described in Corollary 1 is not deviation-rationalization-proof and can therefore be excluded from the set of admissible equilibria.

Corollary 3 The two pooling equilibria that are characterized in Propositions 1 and 3 are the unique deviation-rationalization-proof pooling equilibria in pure strategies.

Proof See Appendix.

In the present section, it has been shown that under political harmonism, when the voter is of the same type as most members of the incumbent party, the president might discard his signal in equilibrium. Although there are no ideologists involved in the political process, manifesto-driven policy will be the only equilibrium outcome if the presidential office rent is only large enough.

One remark about this equilibrium restriction on the office rent is appropriate now. The limiting rents E_L and E_H are both not necessarily larger than zero. They can even both be negative. Thus, even a president who is rather ashamed of his profession could exhibit the equilibrium behavior described in Proposition 3.

The reason is as follows. If the incumbent president is reelected, he can, trivially, be sure that someone of his one political type – namely he himself – will rule in the second period. However, he cannot be sure of this if someone else will become president.

Even without the assumption of the legacy motive, the incumbent president would always prefer the candidate with the highest probability of being of the same type as he himself to rule in the second period: He wants the candidate to rule who is most likely to detect the state of the world that promises the high payoff x to him. Thus, for this reason alone the incumbent president wants to be reelected, even if his ego rent from being president is zero or even negative. I summarize this in the

Remark All the equilibria characterized above allow for non-positive ego rents E .

In the next section, the case of political disharmonism will be discussed. I will show that for a certain parameter space, the situation will eventually

be improved if the voter and the majority of the ruling party are of different types.

5 Equilibria under political disharmonism

Suppose still the voter to be a leftist, whereas the incumbent party is now the right wing party. What this assumption changes is the following: Now, the incumbent president is C , and I is the challenger. Both C and his party anticipate that at the beginning of the second period, the voter will elect the candidate with the *lowest* probability of being a *rightist*, or, alternatively, with the highest probability of being a leftist. Thus, because $\pi_L^{C0} < \pi_L^{I0}$, the rightist party has no chance to be reelected with a newcomer as candidate for elections. Replacing C with a newcomer would result in zero utility for the party members; and therefore, they will never have an incentive to do so. But even the chance to be reelected with the incumbent president as candidate for elections might not exist. There are two possible cases.

In the first case, the incumbent president C is very much more likely ex ante to be a rightist than the challenger I . Then, whatever the policy choice of C in the first period might be, his updated probability π_R^C of being a rightist will be too high for him to be reelected by the voter. Thus, because in this case $\pi_R^C > (1 - \pi_L^{I0})$ always holds, the rightist party will never be reelected, and C will lose his office at any rate.

Consequently, in the case where $\pi_R^C > (1 - \pi_L^{I0})$ holds independently of what the incumbent president C does, the situation in the first period is exactly the same as if it were already the second period. Reelection incentives break down. The consequences are similar to the effects stated in Lemma 2: Because office motivation plays no role at all, the incumbent president C always acts according to his signal, making the efficient decision. This case shall be called *efficient resignation*.

There is also another conceivable possibility. It could be that the ex ante probabilities of being a rightist of the two politicians I and C are not too far away from each other. Consider now a supposed equilibrium in which at least some information about the president's type can be inferred from his doing. Then, it could happen that after the successful or unsuccessful implementation of one (but not the other) kind of policy, C will be deemed less likely to be a rightist than his challenger I , so that $\pi_R^C < (1 - \pi_L^{I0})$.

Then, the party members know that depending on C 's policy choice, their party can be reelected with C as a candidate for elections. If and

only if the incumbent party is reelected, the party members will have positive utility.³ Therefore, the rightist party members appoint the incumbent president whenever he has decided in a way so that $\pi_R^C < (1 - \pi_L^{I0})$. This re-awakens office motivation and constitutes an incentive for the president to choose the action that most likely decreases his probability of being a rightist. This case shall be called *contingent populism*.

All existing equilibria belong either to the one or to the other case. However, the case of contingent populism does not differ substantially from the results under political harmonism. Contingent populism as well as political harmonism result in office motivation having a say in the president's policy choice. As under political harmonism, efficient equilibria under populism exist only for low values of E . They are characterized in Propositions 4 and 5 below. First, define the following ego rents:

$$\begin{aligned} E_L^{CL(a)} &\equiv (1-x) - \frac{1-\sigma_H}{\sigma_L}x - \frac{1}{2}[\sigma_H x + \sigma_L(1-x)], \\ E_L^{CR(a)} &\equiv x - \frac{1-\sigma_L}{\sigma_H}(1-x) - \frac{1}{2}[\sigma_H x + \sigma_L(1-x)], \\ E_L^{CL(b)} &\equiv \frac{\sigma_L}{\sigma_L + (1-\sigma_H)} - x - \frac{1}{2}[\sigma_H x + \sigma_L(1-x)], \\ E_L^{CR(b)} &\equiv x - \frac{1-\sigma_L}{\sigma_H + (1-\sigma_L)} - \frac{1}{2}[\sigma_H x + \sigma_L(1-x)]. \end{aligned}$$

Proposition 4 For $\frac{\sigma_H}{\sigma_L} < \frac{\tau^2}{(1-\tau)^2} < \frac{1-\sigma_L}{1-\sigma_H}$ and $E < \min\{E_L^{CL(a)}, E_L^{CR(a)}\}$, there exists a pooling equilibrium under political disharmonism and *contingent populism*. The incumbent president C chooses the informed policy in the first period, regardless of his type. He will be reelected if he implements P_L *without success*. But if he implements P_R or successful P_L , the voter will elect I , and C will lose his office.

Proof See Appendix.

Proposition 5 For $\frac{\tau^2}{(1-\tau)^2} < \frac{\sigma_H}{\sigma_L}$ and $E < \min\{E_L^{CL(b)}, E_L^{CR(b)}\}$, there exists another pooling equilibrium with informed policy under political

³This is due to the assumption of the legacy motive (politicians care only for the policy that is implemented by themselves or their own party). But if I gave up this assumption, there would still exist a parameter space in which the above considerations are true. For more details see the discussion in the Conclusion of this paper.

disharmonism and *contingent populism*. The incumbent president C chooses the informed policy in the first period, regardless of his type. He will be reelected if he implements P_L , successful or not. But if he implements P_R , the voter will elect I , and C will lose his office.

Proof See Appendix.

Obviously, these equilibria break down whenever the ego rent of the president becomes high enough for him to discard his signal in favor of the populist policy P_L . As under harmonism, I assume that a president of the leftist type is the first to do so:

Assumption 3 $E_L^{CL(a)} < E_L^{CR(a)}$ and $E_L^{CL(b)} < E_L^{CR(b)}$.

Accordingly, there exist two separating equilibria, corresponding to the two efficient pooling equilibria described above. They are characterized in Propositions 6 and 7 below.

Proposition 6 For $\frac{1}{\sigma_L} < \frac{\tau^2}{(1-\tau)^2} < \frac{1}{(1-\sigma_H)}$ and $E > E_L^{CL(a)}$, there exists a separating equilibrium under political disharmonism and *contingent populism*. If the incumbent president C is a rightist, he will choose the informed policy; otherwise he will always implement P_L . He will be reelected if he implements P_L *without success*. But if he implements P_R or successful P_L , the voter will elect I , and C will lose his office.

Proof See Appendix.

Proposition 7 For $\frac{\tau^2}{(1-\tau)^2} < \frac{1}{\sigma_L}$ and $E_L^{CL(b)} < E < E_L^{CR(b)}$, there exists another separating equilibrium under political disharmonism and *contingent populism*. If the incumbent president C is a rightist, he will choose the informed policy; otherwise he will always implement P_L . He will be reelected if he implements P_L , successful or not. But if he implements P_R , the voter will elect I , and C will lose his office.

Proof See Appendix.

Corollary 4 In the case of political disharmonism, there is no pure-strategy equilibrium in which both types of president pool on one of the two policies P_L, P_R .

Proof Suppose both types pooled on $P \in \{P_L, P_R\}$. Then, the voter would not update her belief about the president's type. Consequently, she

would never reelect the incumbent party. But then, both types of president would want to deviate and act according to their signal.

Thus, contingent populism under political disharmonism differs from political harmonism in that the rightist type of president chooses the informed policy in all possible pure-strategy equilibria. Nevertheless, the interesting, novel case is efficient resignation. Efficient resignation alone does not include any incentive for any type of president to discard his signal. Thus, it is the leading question of this section which conditions make this case prevail. The answer is given in

Proposition 8 In the case of political disharmonism, a leftist voter is confronted with a rightist incumbent party, or vice versa. Then, there exists a pooling equilibrium where both types of president choose the informed policy in the first period. They become the appointed candidate for elections, but without being elected by the voter. This equilibrium of *efficient resignation* exists *independently of the values of E and e* if and only if $\frac{\tau^2}{(1-\tau)^2} > \frac{1-\sigma_L}{1-\sigma_H}$.

Proof See Appendix.

The requirement for this efficient pooling equilibrium differs from the condition for the corresponding equilibrium under political harmonism. There, the requirement that the office motivation be low, $E < E_L$, is necessary to sustain the equilibrium. Under political disharmonism, however, a pooling equilibrium with informed policy can also be established if the office motivation of the incumbent president is moderate, $E < E_L < E_H$, or even high, $E > E_H$.

What is needed then is only that *within* the two competing parties, political agreement is strong: The number of party members who differ from the majority must be low enough (τ must be high). Put differently, the political opposition of the two competing parties must be fierce enough in order to ensure that never the leader of the left wing party could be thought of as being more likely to be a rightist in his heart than the leader of the right wing party.

6 Extension: Electing the incumbent party

The question is now if the voter would be happier with or without *efficient resignation* and political disharmonism. Put differently, would she prefer

an incumbent party with a manifesto contrary to her own political type, but the president always acting according to his signal? Or would she prefer an incumbent party with a manifesto that suits her political type, its leader always acting according to it and discarding his signal?

Intuitively, it is conceivable that the voter is happier without *efficient resignation* and political disharmonism. The reason is that the efficient equilibrium under political disharmonism differs from the efficient equilibrium under political harmonism. Under political disharmonism, the president is less likely to be of the same political type as the voter. Therefore, the president is less likely to detect the state of the world that would give the voter the high payoff x in case of a successful policy. Thus, it is not straightforward that the voter is apt to exchange inefficiency under political harmonism for efficiency under political disharmonism.

In order to clarify this point, we extend the model by introducing elections at the beginning of the first period. Thus, the (leftist) voter has to elect the incumbent party. Apart from this, the structure of the model remains unchanged.

The voter knows the value of E and anticipates which of the three possible pure strategy equilibria would be played if she elected the leftist party at the beginning of the first period. She compares her expected utility from this equilibrium with the utility she expects from *efficient resignation* under political disharmonism. If and only if the latter expected utility is larger, she will vote for the rightist party in the first period.

Proposition 9 Suppose that $E > E_L$, $\frac{\tau^2}{(1-\tau)^2} > \frac{1-\sigma_L}{1-\sigma_H}$. The leftist voter then prefers the rightist party to be the incumbent party, given that the equilibrium with efficient, informed policy is played in the first period.⁵

Proof See Appendix.

The intuition is simple: When ego rents from power are high enough, the incumbent party whose majority is of the voter's political type would indirectly force the incumbent president to discard his signal. He would always act according to the party manifesto in order to keep his office.

If this did not take place, the voter would prefer the party whose majority is of her own type to be the ruling party. This would make it more

⁵Of course, an analogous result will be obtained if the model is calculated for a rightist instead of a leftist voter. Then, the rightist voter would elect the leftist party for incumbent if $E > E_L$ and $\frac{\tau^2}{(1-\tau)^2} > \frac{1-\sigma_L}{1-\sigma_H}$. Besides, if α was set to $\frac{1}{2}$, both versions of the model would be technically identical.

likely that the president, too, would be of her type. But she values successful policy so much more than ideological compliance that she is willing to accept a president whose type very probably differs from hers, if only he acts according to his signal.

Therefore, the voter makes use of the first-period elections in order to establish informed policy. Electing the rightist party for incumbent, the voter demolishes office considerations by credibly committing herself not to reelect the incumbent party at any rate. Thus, Proposition 9 gives a rationale for *swing voter behavior* in societies without ideologists when ego rents from power are high enough.

Obviously, the situation changes if ego rents are very low, $E < E_L$. Then, the efficient equilibrium is played even under harmonism; and the voter need not make any sacrifice in order to get the informed policy to be implemented always. The corresponding equilibrium is described in

Proposition 10 Suppose that $E < E_L$, $\frac{\tau^2}{(1-\tau)^2} > \frac{1-\sigma_L}{1-\sigma_H}$. The leftist voter would then prefer the leftist party to be the incumbent party.

Proof The proof is almost identical to the proof of Lemma 2 and shall therefore be skipped here.

To summarize, if the majority adhering to the party manifesto is large enough in each party, i.e. if $\frac{\tau^2}{(1-\tau)^2} > \frac{1-\sigma_L}{1-\sigma_H}$, the efficient equilibrium with informed policy will always be played in the extended model. Either ego rents from presidential power are low, $E < E_L$, and informed policy and political harmonism – or partisanship – are compatible with each other. Then, the voter always elects the candidate of the party whose majority is of her own political type. Or ego rents are not so low, $E > E_L$. Then, the voter exhibits swing voter behavior in order to abolish office motivation, so that the president is concerned with the success of his policy exclusively.

7 Conclusion

Politicians almost always act according to the manifesto of their party. Thus, their policy exhibits an ideological bias. One manifest explanation of this phenomenon would be that voters or politicians (or both) care more for the ideological coloring of policies than for their success in terms of welfare effects. But this explanation has its problems. First, political economists normally assume that the pivotal voter does not have any ideological

preferences – mainly because they apply the median voter model or want their results to be reproducible within the median voter model. Second, the assumption that although the voter himself is not ideological, he is not able to delegate the task of maximizing his welfare to a non-ideological agent is far from being obvious.

In this paper, I give a different explanation for the observable ideological behavior of politicians. I show that even though politicians, party members and the voter might initially prefer informed policies over ideological compliance, informed policies could be rare or even impossible.

The reason is the following. Political types – whether the politician is a leftist or a rightist – influence how politicians get or interpret their information. Therefore, a politician who implements an informed policy also transmits at least some information about his political type. This affects his reputation vis-a-vis his own party. Although the party basis wants the incumbent politician to choose the informed policy, the party faces a serious commitment problem. Preferring a leader of their own political type, the majority of party members will replace the incumbent politician whenever a newcomer from among them will guarantee equal reelection chances and a higher probability of being of their type.

Ironically, the problem is constituted by too much political agreement between the voter, the incumbent politician and the incumbent party. Anticipating that the voter will reelect the incumbent party, the party basis wants to make as sure as possible that the ruling politician in the second period is of the same type as they are. The incumbent president, on his part, wants to make believe that he *is* their man in fact. Accordingly, the incumbent politician chooses to implement the policy that is nearest to the creed of the party, regardless of the welfare effects of his policy apart from office rents.

If political diversity within parties is low, informed policies are nevertheless possible. The voter could then solve his commitment problem by electing for the first period the party whose creed she dislikes. Then, the voter succeeds in committing herself to not reelecting the incumbent party, and the impact of office spoils vanishes from the stage of policy. Thus, swing voter behavior could be an optimal reaction to the joined reputation and commitment problems that arise when ruling politicians depend on the support of their parties.

Finally, some remarks on the robustness of these results to the abandonment of the legacy motive are appropriate. The assumption of the legacy motive says that presidents have positive (expected) utility only from their

own policy implementations, not from policies implemented by their challengers, and that party members have positive (expected) utility only from policies implemented by their own party leader, not from policies implemented by the leader of the challenging party. This assumption has been adopted solely for simplification. If I gave up this assumption, the qualitative results would remain unaffected; only the parameter space in which they are true would change.

The reasons for this robustness are the following. Consider first the president and assume that the assumption of the legacy motive is *not* true, i.e. the president has positive utility from any policy implemented by anyone. What is affected by this abandonment of the legacy motive is the president's (expected) utility from the (future) policy choice in the second period, because it is possible that in the second period, someone else will be ruling instead of him. For all equilibrium results, only the *expected* utility from the policy choice in period two is important. Even without the legacy motive, the president's expected utility from his own future policy choice is necessarily higher than his expected utility from the future policy choice of somebody else: His expected utility from a future policy choice is strictly monotonously increasing in the probability that the individual who makes this choice is of his own political type. If someone else will be ruling in the second period, this probability will be less than one; it will be one if the president himself will be ruling. The assumption of the legacy motive enlarges this difference between the president's expected utility from his own future policy choice and his expected utility from the policy choice of someone else. But the sign of this difference does not change. Thus, if the assumption of the legacy motive is abandoned, the reelection incentive of the president becomes weaker. It would suffice to increase the president's ego rent to compensate for that. Therefore, only the parameter space in which the results hold will change; the results themselves will remain unaffected.

Consider now the members of the incumbent party and assume again that the assumption of the legacy motive is not true, i.e. the party members have positive utility from any policy implemented by anyone. Again, the abandonment of the assumption of the legacy motive affects their (expected) utility from the (future) policy choice in the second period. More precisely, their (expected) utility from a policy implemented by the leader of the challenging party becomes strictly positive. For the equilibrium results, the only important incentive of the party members is the incentive of their majority replace the president by a newcomer after the implemen-

tation of a policy that runs contrary to the party manifesto. Call this incentive the replacement incentive. The legacy motive does not affect the replacement-incentive directly, because it does not affect the difference in expected utilities from the policy choice of the incumbent president and a newcomer from the same party.

But the legacy motive affects the replacement incentive indirectly, via the reelection incentive. The majority of the incumbent party has a reelection incentive apart from their office rents even without the legacy motive. The reason is that even without the legacy motive, the majority of the incumbent party has a higher expected utility from a policy implemented by a newcomer from among them than from a policy implemented by the leader of the challenging party: Their expected utility from a future policy choice is strictly monotonously increasing in the probability that the individual who makes this choice is of their own political type. This probability will be strictly higher if a newcomer from among them becomes president than if the challenger does. The legacy motive increases the reelection incentive, if the reelection chances are positively correlated with replacement.

We have to consider three different cases here. In the first case, the incumbent party knows that she will be reelected (not reelected) whether or not she replaces the president. In these cases, the reelection incentive plays no role, and the abandonment of the legacy motive does not change anything. In the second case, the incumbent party knows that she will be reelected only if she replaces the president after the implementation of a policy that runs contrary to the party manifesto. Then, the abandonment of the legacy motive decreases the replacement incentive via decreasing the reelection incentive. One can compensate for this by increasing the office rent of the party members. In the third case, the incumbent party knows that she will be reelected only if she does *not* replace the president after a choice of policy that runs contrary to the party manifesto. (This is the case of contingent populism.) Abandoning the legacy motive has the effect that the case of contingent populism exists only if the office rents of the party members are high enough. Otherwise, only efficient resignation would exist under political disharmonism.

8 Appendix

Proof of Lemma 1 One part of Lemma 1 says that the president prefers acting according to his signal as long as the two possible policies P_L and P_R do not differ with respect to any reelection probabilities associated with them. The proof of this statement is included in the deduction of Assumption 1 and has already been given in the main part of the paper.

The remaining part of Lemma 1 says that the preferences of the politicians outside the presidential office are, under the *ceteris paribus* condition mentioned above, perfectly aligned with those of the president, whereas the voter prefers the informed policy regardless of reelection probabilities.

This can be proved to be implied by Assumption 1 as follows.

Let d_e^{it} be a dummy with $d_e^{it} = 1$ if i is a member of the ruling party in t and $d_e^{it} = 0$ otherwise. If president j in period t acts according to his signal s_t^j at any rate, the utility that a leftist individual $i \neq j, T^i = L$, expects from payoffs in t , amounts to

$$EU_{L,sig}^{it} = \frac{1}{2}\pi_{LL}^{jt}x + \frac{1}{2}\pi_{RR}^{jt}(1-x) + d_e^{it}e \quad (12)$$

with

$$\pi_{LL}^{jt} = \Pr\{s_1^j = \hat{l} \mid w = l, t, A\},$$

$$\pi_{RR}^{jt} = \Pr\{s_1^j = \hat{r} \mid w = r, t, A\},$$

and A representing the set of information accessible to i about eventual former policy choices made by j .

If, by contrast, the politician in office discards his signal and chooses policy $P \in \{P_L, P_R\}$ regardless of the state of the world, the expected utility of i is

$$EU_{L,nosig}^{it} = \frac{1}{2}x + d_e^{it}e \quad (13)$$

The comparison of $EU_{L,sig}^{it}$ and $EU_{L,nosig}^{it}$ yields that

$$\begin{aligned} EU_{L,sig}^{it} &> EU_{L,nosig}^{it} \\ &\iff \\ \frac{x}{1-x} &< \frac{\pi_{RR}^{jt}}{1-\pi_{LL}^{jt}} \end{aligned} \quad (14)$$

Given that at the beginning of period t , i believes the politician j to be a leftist with probability π_L^{jt} , it holds that

$$\pi_{LL}^{jt} = \pi_L^{jt} \sigma_H + (1 - \pi_L^{jt}) \sigma_L$$

and

$$\pi_{RR}^{jt} = \pi_L^{jt} \sigma_L + (1 - \pi_L^{jt}) \sigma_H$$

Substituting these two equations into (3) yields

$$\begin{aligned} EU_{L,sig}^{it} &> EU_{L,nosig}^{it} \\ &\iff \\ \frac{x}{1-x} &< \frac{\pi_L^{jt} \sigma_L + (1 - \pi_L^{jt}) \sigma_H}{1 - \pi_L^{jt} \sigma_H - (1 - \pi_L^{jt}) \sigma_L} \end{aligned} \quad (15)$$

If π_L^{jt} was zero, this inequality would reduce to Assumption 1 and therefore be true. It can easily be shown that the derivative of the right hand side of the inequality with respect to π_L^{jt} is positive because

$$\sigma_L + \sigma_H > 1.$$

Thus, for any probability $\pi_L^{jt} \geq 0$, Assumption 1 implies that $EU_{L,sig}^{it} > EU_{L,nosig}^{it}$. Consequently, a leftist politician outside the presidential office always prefers the policy implementation in t to be in accordance with the signal as long as the two possible policies P_L and P_R do not differ with respect to any reelection probabilities associated with them. The voter prefers the informed policy at any rate.

Consider now a *rightist* individual i outside the presidential office. A policy decision in line with the president's signal s_t^j would lead i to expect from payoffs in t the utility

$$EU_{R,sig}^i = \frac{1}{2} \pi_{RR}^{jt} x + \frac{1}{2} \pi_{LL}^{jt} (1-x) + d_e^{it} e.$$

If, in contrast, the president chooses policy $P \in \{P_L, P_R\}$ regardless of his signal, i expects from payoffs in t

$$EU_{L,nosig}^i = \frac{1}{2} x + d_e^{it} e$$

with all parameters as defined above. It can easily be shown that

$$\begin{aligned}
EU_{R,sig}^i &> EU_{L,nosig}^i \\
&\iff \\
\frac{x}{1-x} &< \frac{\pi_{LL}^j}{1-\pi_{RR}^j}
\end{aligned} \tag{16}$$

which becomes

$$\frac{x}{1-x} < \frac{\pi_L^j \sigma_H + (1 - \pi_L^j) \sigma_L}{1 - \pi_L^j \sigma_L - (1 - \pi_L^j) \sigma_H}. \tag{17}$$

For $\pi_L^j = 1$, this inequality reduces to Assumption 1. The derivative of the right hand side with respect to π_L^j is negative. Therefore, Assumption 1 implies the truth of inequality (6) for all $\pi_L^j \geq 0$. Thus, it follows from Assumption 1 that $EU_{R,sig}^i > EU_{L,nosig}^i$ for all $\pi_L^j \geq 0$.

Therefore, a policy decision according to the signal in t is always optimal from the perspective of a rightist voter, whereas it is optimal in the eyes of a rightist party member as long as P_L and P_R do not differ with respect to reelection probabilities eventually associated with them.

Proof of Lemma 3 Lemma 2 says that the president j who rules in the second period will decide according to his signal. Let T^j denote the true type of the president and T^i the type of the voter. Besides, let π_v denote the updated probability that the president is of the voter's type. A stands for the set of relevant information about j that is accessible to the voter at the beginning of the second period. Then, the expected utility of the voter is

$$EU^i(P | A) = \frac{1}{2} \pi_v (\sigma_H x + \sigma_L (1 - x)) + \frac{1}{2} (1 - \pi_v) (\sigma_H (1 - x) + \sigma_L x)$$

Because $EU^i(P | A)$ is increasing in π_v , the voter will always vote for the candidate most likely to be of the same political type.

Proof of Proposition 1 Suppose that the incumbent president I always acts according to his signal. Then, his party can infer the signal from the policy choice. The leftists have the majority in the party; therefore the decision is in line with their preferences.

Suppose that I has implemented P_L and that P_L has been successful. Let A represent this information. The updated probability that I is a leftist is $\pi_L^I = \pi_{LSL}^I$ as defined in (7), with $\pi_{LSL}^I > \pi_L^{N0} > \pi_L^{C0} = (1 - \pi_R^{C0})$.

If $K \in \{I, N\}$ becomes the incumbent party's candidate for elections, the voter will elect him and not C for sure. Accordingly, the expected utility which any leftist member i of the incumbent party gets from appointing K as candidate for elections amounts to

$$EU_L^i(K | A) = \frac{1}{2}\pi_{LL}^K x + \frac{1}{2}\pi_{RR}^K (1 - x) + e \quad (18)$$

with

$$\pi_{LL}^K = \pi_L^{KA} \sigma_H + (1 - \pi_L^{KA}) \sigma_L$$

and

$$\pi_{RR}^K = \pi_L^{KA} \sigma_L + (1 - \pi_L^{KA}) \sigma_H,$$

$$\pi_L^{KA} = \Pr\{T^K = L | A\} \in \{\pi_{LSL}^I, \pi_L^{N0}\}.$$

It is easy to see that the right hand side of (18) is increasing in π_L^{KA} . Therefore, $K = I$ is the optimal decision of the party basis.

If I has implemented P_L and P_L has not been successful, the updated probability that I is a leftist is $\pi_L^I = \pi_{LUL}^I$ as defined in (8). The proof that the optimal decision taken by the incumbent party is $K = I$ is completely analogously to the one above.

Suppose now, by contrast, that I has implemented P_R and that P_R has been successful. Let A' represent this information. The updated probability that I is a leftist is $\pi_L^I = \pi_{LSR}^I$ as defined in (10), with $\pi_{LSR}^I < \pi_L^{N0}$.

There are two possible cases:

$$\pi_{LSR}^I < \pi_{L0}^C$$

or

$$\pi_{LSR}^I > \pi_{L0}^C.$$

In the case where $\pi_{LSR}^I < \pi_{L0}^C$, the incumbent party knows that if I became the candidate for elections, the voter would elect C . Therefore, the expected utility that any leftist member of the incumbent party would get from the decision $K = I$ is zero.

By contrast, the expected utility that a leftist member of the incumbent party would get from the decision $K = N$ amounts to

$$EU_L(K = N | A') = \frac{1}{2}\pi_{LL}^N x + \frac{1}{2}\pi_{RR}^N (1 - x) + e > 0$$

with

$$\pi_{LL}^N = \pi_L^{N0}\sigma_H + (1 - \pi_L^{N0})\sigma_L$$

and

$$\pi_{RR}^N = \pi_L^{N0}\sigma_L + (1 - \pi_L^{N0})\sigma_H.$$

Thus, the optimal decision of the party basis is $K = N$.

In the case where $\pi_{LSR}^I > \pi_{L0}^C$, the incumbent party will become re-elected regardless of the question whether or not I is appointed again. Let $EU_L(K | A')$ represent the expected utility that a leftist party member gets from $K \in \{I, N\}$ ruling in the second period. Besides, let $\pi_L^{KA'} = \Pr\{T^K = L | A'\} \in \{\pi_{LSR}^I, \pi_L^{N0}\}$ represent the conditional probability that K is a leftist. It is easy to see that $EU_L(K | A')$ increases in $\pi_L^{KA'}$, so that the optimal decision is again $K = N$.

The proof that it will be optimal for the party basis to replace I by N if I implements P_R *without success* is completely analogous and shall therefore be skipped here.

This proves part (ii) of Proposition 1.

Now consider the decision situation of a leftist incumbent president, given the equilibrium behavior of his party basis and the voter, which has been described above. His expected utility from choosing P_L when he has got a signal $s_0^I = \hat{l}$ amounts to

$$EU_L^I(P_L | s_0^I = \hat{l}) = \frac{\sigma_H}{\sigma_H + (1 - \sigma_L)}x + E + \frac{1}{2}[\sigma_H x + \sigma_L(1 - x)]$$

whereas his expected utility from deviating and implementing P_R would be

$$\begin{aligned} EU_L^I(P_R | s_0^I = \hat{l}) &= \frac{(1 - \sigma_L)}{\sigma_H + (1 - \sigma_L)}(1 - x) \\ &< EU_L^I(P_L | s_1^I = \hat{l}) \end{aligned}$$

Thus, it is optimal not to deviate.

If, by contrast, it is a *rightist* I who has got the signal $s_0^I = \hat{l}$, his expected payoffs from choosing P_L and P_R are

$$EU_R^I(P_L | s_0^I = \hat{l}) = \frac{\sigma_L}{\sigma_L + (1 - \sigma_H)} (1 - x) + E + \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)]$$

and

$$EU_R^I(P_R | s_0^I = \hat{l}) = \frac{(1 - \sigma_H)}{\sigma_L + (1 - \sigma_H)} x,$$

respectively.

Assumption 1 implies that

$$EU_R^I(P_L | s_0^I = \hat{l}) > EU_R^I(P_R | s_1^I = \hat{l}),$$

so that it is optimal not to deviate.

If, now, the incumbent politician I has got a signal $s_1^I = \hat{r}$, his expected payoffs from implementing P_R and P_L are

$$EU_L^I(P_R | s_0^I = \hat{r}) = \frac{\sigma_L}{\sigma_L + (1 - \sigma_H)} (1 - x)$$

and

$$EU_L^I(P_L | s_0^I = \hat{r}) = \frac{(1 - \sigma_H)}{\sigma_L + (1 - \sigma_H)} x + E + \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)],$$

respectively, if he is a leftist. They are

$$EU_R^I(P_R | s_0^I = \hat{r}) = \frac{\sigma_H}{\sigma_H + (1 - \sigma_L)} x$$

and

$$EU_R^I(P_L | s_0^I = \hat{r}) = \frac{(1 - \sigma_L)}{\sigma_H + (1 - \sigma_L)} (1 - x) + E + \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)],$$

respectively, if he is a rightist.

It is optimal not to deviate for any type of incumbent I if and only if

$$EU_L^I(P_R | s_0^I = \hat{r}) > EU_L^I(P_L | s_0^I = \hat{r})$$

and

$$EU_R^I(P_R | s_0^I = \hat{r}) > EU_R^I(P_L | s_0^I = \hat{r}).$$

With the help of simple algebra, it can be shown that these conditions are equivalent to

$$E < \frac{\sigma_L}{\sigma_L + (1 - \sigma_H)} - x - \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)] = E_L.$$

This proves the part (i) of the Proposition.

Part (iii), namely the claim that this equilibrium is first best, follows from Assumption 1 and the preferences of the voter, the president, and the party members. The proof is on the lines of the one for Lemma 2 and shall therefore be skipped here.

Thus, Proposition 1 has been proved.

Proof of Proposition 2 Consider first part (ii) of Proposition 2 which characterizes the equilibrium behavior of the party basis. The only difference to the proof of the second part of Proposition 1 is that the possible values for the updated probability π_L^I that I is a leftist change to

$$\begin{aligned}\pi_{LSL}^I &= \frac{\alpha\tau}{\alpha\tau + (1 - \alpha)(1 - \tau)\sigma_L}, \\ \pi_{LUL}^I &= \frac{\alpha\tau}{\alpha\tau + (1 - \alpha)(1 - \tau)(1 - \sigma_H)},\end{aligned}$$

and

$$\pi_{LSR}^I = \pi_{LUR}^I = 0$$

In spite of these changes, the proof has exactly the same structure as the one for part (ii) of Proposition 1 and shall therefore be skipped here.

Consider now part (i) of Proposition 2. The incentives for both types of president not to deviate when they have got the signal $s_0^I = \hat{l}$ are identical to the corresponding incentives in the equilibrium characterized in Proposition 1.

The incentive for the rightist president not to deviate when he has got the signal $s_0^I = \hat{r}$ implies the following restriction. The rightist president acts according to the signal $s_0^I = \hat{r}$, if and only if

$$E < x - \frac{(1 - \sigma_L)}{\sigma_H + (1 - \sigma_L)} - \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)] = E_H. \quad (19)$$

The condition under which the leftist president does not deviate from his separating equilibrium strategy is

$$EU_L(P_R | s_0^I = \hat{r}) < EU_L(P_L | s_0^I = \hat{r}).$$

The values of $EU_L(P_R | s_0^I = \hat{r})$ and $EU_L(P_L | s_0^I = \hat{r})$ are identical to the ones given in the proof of Proposition 1. Therefore, the above inequality is equivalent to

$$E > \frac{\sigma_L}{\sigma_L + (1 - \sigma_H)} - x - \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)] = E_L. \quad (20)$$

The two inequalities (19) and (20) prove part (i) of the proposition.

Part (iii) follows from Assumption 1 and the preferences of the voter, the party members and the politicians. The proof is analogous to the one for Lemma 1 and can therefore be skipped here.

Proof of Corollary 1 The only other conceivable separating equilibria in pure strategies would be characterized by the following strategies of the incumbent president:

- (i) Any leftist president always chooses P_L , whereas any rightist president always chooses P_R .
- (ii) Any leftist president always chooses P_R , whereas any rightist president always chooses P_L .
- (iii) The rightist president always acts according to his signal, and the leftist president always implements P_R .
- (iv) The leftist president always acts according to his signal, and the rightist president always implements P_R .
- (v) The leftist president always acts according to his signal, and the rightist president always implements P_L .

The strategies (i) and (ii) are refuted as equilibrium strategies by sequential rationality of the party basis and Assumption 1. Given the behavior described in (i)/(ii), the party basis would re-nominate the incumbent president after the implementation of P_L/P_R and replace him by N after the implementation of P_R/P_L . But then, Assumption 1 implies that the rightist/leftist president finds it optimal to deviate and to act according to his signal.

The strategies described in (iii), by contrast, are excluded from the set of possible equilibria strategies by Assumption 2. The proof is as follows.

Suppose that a leftist incumbent president has got a signal $s_0^I = \hat{l}$. The condition that he does not deviate from the strategy described in (iii) is that

$$EU_L(P_R | s_0^I = \hat{l}) > EU_L(P_L | s_0^I = \hat{l})$$

which is equivalent to

$$E > x - \frac{1 - \sigma_L}{\sigma_H + (1 - \sigma_L)} - \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)] = E_H \quad (21)$$

Suppose now that a rightist incumbent president has got a signal $s_0^I = \hat{l}$. The condition that he does not deviate from the strategy described in (iii) is that

$$EU_R(P_R | s_0^I = \hat{l}) < EU_R(P_L | s_0^I = \hat{l})$$

which is equivalent to

$$E < \frac{\sigma_L}{\sigma_L + (1 - \sigma_H)} - x - \frac{1}{2} [\sigma_H x + \sigma_L (1 - x)] = E_L \quad (22)$$

The two inequalities (10) and (11) together imply that

$$E_L > E_H$$

which is excluded by Assumption 2.

Consider now the strategies described in (iv). If they constituted an equilibrium, the party basis would re-appoint the incumbent president after the implementation of P_L and replace him after the implementation of P_R , because after the implementation of P_L , $\pi_L^I > \pi_L^{N0}$, and after the implementation of P_R , $\pi_L^I < \pi_L^{N0}$. But then, Assumption 1 implies that the rightist president will have an incentive to deviate and implement P_L if he gets a signal $s_0^I = \hat{l}$. Thus, the strategies described in (iv) do not constitute an equilibrium.

Finally, consider the strategies that are given in (v). Here, the party basis would re-appoint the incumbent president after the implementation of P_R and replace him after the implementation of P_L , because after the implementation of P_R , $\pi_L^I > \pi_L^{N0}$, whereas after the implementation of P_L , $\pi_L^I < \pi_L^{N0}$. But then, Assumption 1 implies that the rightist president has an incentive to deviate and implement P_R if he gets a signal $s_0^I = \hat{r}$. Thus, the strategies described in (iv) do not constitute an equilibrium.

Proof of Proposition 3 Given that both types of president always implement P_L , neither the party basis nor the voter can update beliefs conditional on the policy choice. Thus, on the equilibrium path $\pi_L^I = \pi_L^{I0}$

always. The party basis is indifferent between I and N , and I becomes the candidate for elections. Because $\pi_L^{I0} > \pi_L^{C0}$, the voter always elects I .

Assumption 1 is compatible with the equilibrium behavior of the president only if after the implementation of P_R , he would lose his office. Replacing the president is optimal for the leftist party members only if after having observed P_R , they would believe that the president's probability of being a leftist is smaller than π_L^{N0} .

Define this off-equilibrium belief as

$$\Pr\{T^I = L \mid P = P_R\} \equiv \pi_L^{Ioff1} < \pi_L^{N0}.$$

I first prove that given the beliefs and the strategy of the party basis and the voter, it is optimal for any incumbent president to always implement P_L if and only if $E > E_H$.

Suppose that the incumbent president has got the signal $s_0^I = \hat{l}$. Then, Assumption 1 implies that he prefers implementing P_L over implementing P_R . Thus, it remains to be proved that even after having received the signal $s_0^I = \hat{r}$, it is optimal for any type of president to keep at P_L .

The conditions that are sufficient and necessary for both types not to deviate are

$$EU_L^I(P_R \mid s_0^I = \hat{r}) < EU_L^I(P_L \mid s_0^I = \hat{r}) \quad (23)$$

and

$$EU_R^I(P_R \mid s_0^I = \hat{r}) < EU_R^I(P_L \mid s_0^I = \hat{r}). \quad (24)$$

The second inequality implies the first one and is therefore more restrictive. It is easy to see that (24) is equivalent to

$$E > E_H.$$

Thus, the equilibrium characterized in Proposition 3 exists. The inefficiency of the equilibrium follows again from Assumption 1 and the preferences of the voter, the politicians and the party members.

This proves Proposition 3.

The equilibrium characterized in Proposition 3 is admissible if and only if the off-equilibrium belief π_L^{Ioff1} cannot be eliminated by a deviation-rationalization. It is easy to see that a true and convincing deviation-rationalization does not exist. The definition of deviation-rationalization-proofness is given in line with the proof of Corollary 3.

Proof of Corollary 3 First, I define deviation-rationalization-proofness.

Deviation-rationalization-proofness

Consider a signalling game of the following structure. Nature draws a random variable $\tilde{y} \sim \mathcal{F}(\tilde{y})$. Besides, nature draws a type \tilde{t} from a finite set T for the Sender SE , and a type \tilde{h} from a finite set H for SE . The type \tilde{t} is drawn according to the distribution $F(\tilde{t})$; and type \tilde{h} is drawn according to the conditional distribution $G_t(\tilde{h} | \tilde{y})$. The shape of $G_t(\tilde{h} | \tilde{y})$ depends on t . SE learns the realizations t and h , updates his beliefs π_{SE} according to Bayes rule wherever possible and sends a message $m_{SE} \in M_{SE}$ to the Receiver RE . M_{SE} is the finite message space of SE . RE observes m_{SE} , updates his beliefs π_{RE} according to Bayes rule wherever possible and takes an action $a_{RE} \in A_{RE}$, where A is finite.

Let C^* denote the equilibrium path expected to be taken in the continuation game. Besides, let m_{SE}^* denote the equilibrium message of SE and a_{RE}^* the equilibrium action of RE . Then, the (expected) equilibrium payoffs of SE and RE are $EU^{SE}(\tilde{y}, m_{SE}^*, t, a_{RE}^*, C^*)$ and $EU^{RE}(\tilde{y}, m_{SE}^*, C^*)$, respectively.

Let $\{M_{SE}^{PB}, A_{RE}^{PB}, \Pi_{SE}^{PB}, \Pi_{RE}^{PB}, C^{PB}\}$ denote the set of strategies and beliefs sustaining the Perfect Bayesian equilibrium of the game. A perfect Bayesian equilibrium of such a signalling game is reasonable if and only if it is deviation-rationalization-proof. The equilibrium will be broken by a message $m'_{SE} \in M, m'_{SE} \neq m_{SE}^*$ if and only if there is a true and credible deviation-rationalization $d \in D$ that SE could send to RE after defection. D is infinite and contains all possible and arbitrarily long utterances in ordinary languages shared by SE and RE that have a focal meaning eligible for deviation-rationalization. A deviation-rationalization d can be defined as follows.

Let $a_{RE}(m_{SE}, \pi_{RE})$ denote the optimal response a_{RE} of RE to the message m_{SE} , given the corresponding beliefs π_{RE} of RE .

Let C' represent the equilibrium path in the continuation game after $a_{RE}^{PB}(m'_{SE}, \pi_{RE}^{m'_{SE}, PB})$ has been taken, where $\pi_{RE}^{m'_{SE}, PB}$ represents the equilibrium-sustaining beliefs of RE after observation of m'_{SE} . Besides, let $\pi_{RE}^{m'_{SE}, d}$ denote the beliefs that RE will rationally form if he observes m'_{SE} and believes the sender's speech d . Then, if there exists a $m'_{SE} \in M, m'_{SE} \neq m_{SE}^*$ such that

$$\begin{aligned} & EU^{SE}(\tilde{y}, m_{SE}^*, t, a_{RE}^*, C^* \mid h = h') \\ & < EU^{SE}(\tilde{y}, m'_{SE}, t, a_{RE}^*, C^* \mid h = h'), \end{aligned} \quad (25)$$

$$\begin{aligned} & EU^{SE}(\tilde{y}, m_{SE}^*, t, a_{RE}^*, C^* \mid h \neq h') \\ & > EU^{SE}(\tilde{y}, m'_{SE}, t, a_{RE}^*, C^* \mid h \neq h'), \end{aligned} \quad (26)$$

$$\begin{aligned} & EU^{SE}(\tilde{y}, m_{SE}^*, t, a_{RE}^*, C^* \mid h \in H) \\ & > EU^{SE}(\tilde{y}, m'_{SE}, t, a_{RE}^{PB} \left(m'_{SE}, \pi_{RE}^{m'_{SE}, PB} \right), C' \mid h \in H), \end{aligned} \quad (27)$$

and

$$\exists \pi'_{RE} [a_{RE}(m'_{SE}, \pi'_{RE}) = a_{RE}^*], \quad (28)$$

then m'_{SE} breaks the equilibrium if and only if there exists some unexpected speech $d \in D$ asserting

- (i) that (25), (26), (27) and (28) are true,
- (ii) that therefore RE should rationally believe SE to be of type h' ,
- (iii) that $\pi'_{RE} = \Pr\{t = t' \mid h = h'\}$, and

that therefore SE should form beliefs $\pi_{RE}^{m'_{SE}, d} = \pi'_{RE}$ and choose action a_{RE}^* .

Such a speech d is self-enforcing. The Sender SE will want to make it only if it is true. Therefore, it is utterly convincing and rationalizes the deviation from equilibrium.

Application to the model In the present setting, y is the state of the world w , t is the political type of the president, and h is the signal he has got. The deviation m'_{SE} would consist in choosing to act according to the signal. The equilibrium message m_{SE}^* would be the manifesto-driven policy on which there is pooling in the supposed equilibrium. The action a_{RE}^* is the reelection of the president, whereas $a_{RE}^{PB} \left(m'_{SE}, \pi_{RE}^{m'_{SE}, PB} \right)$ is the replacement of the president by a newcomer.

The equilibrium with pooling on P_R that has been described in Corollary 2 is sustained by the off-equilibrium belief of the leftist members of the incumbent party that

$$\Pr\{T^I = L \mid P = P_L\} \equiv \pi_L^{Ioff1} < \pi_{L0}^N.$$

But the belief $\pi_L^{Ioff1} < \pi_L^{N0}$ and therefore the equilibrium under consideration is not deviation-rationalization-proof. In order to see this, consider

the following deviation-rationalization uttered by a president after the implementation of P_L :

"I deviated from the equilibrium in choosing action P_L , as you can see. Deviating is optimal for me if and only if

(i) I can convince you that my conditional probability of being a leftist did not decrease after deviation. Then, it will be optimal for you to appoint me as candidate for elections.

(ii) I got a signal $s_0^I = \hat{l}$.

I tell you two things. Firstly, I indeed got a signal $s_0^I = \hat{l}$. Secondly, the signal $s_0^I = \hat{l}$ is received with higher probability by a leftist politician than by a rightist one. Consequently, the conditional probability that I am a leftist, given that my deviation was rational, did increase and not decrease. Therefore, you should not replace me."

This speech is true and convincing; and therefore the pooling equilibrium where both types of president always implement P_R is not deviation-rationalization-proof.

That, by contrast, the other two pooling equilibria described in Propositions 1 and 3 are deviation-rationalization-proof can be seen easily from the impossibility of formulating a speech along the same lines as the one above that would rationalize a deviation from them. If one did, this speech would not be true or would not rationalize a deviation from these equilibria.

This proves Corollary 3.

Because the proofs of Propositions 4–7 are similar in spirit to the proofs already provided for Propositions 1–2, I will only sketch the logic of these proofs. The detailed calculations can be obtained on request by the author.

Proof of Proposition 4 Define $\Pr\{T^C = R \mid P = P_L \wedge w = r\} \equiv \pi_{RUL}^C$, $\Pr\{T^C = R \mid P = P_L \wedge w = l\} \equiv \pi_{RSL}^C$, $\Pr\{T^C = R \mid P = P_R \wedge w = l\} \equiv \pi_{RUR}^C$ and $\Pr\{T^C = R \mid P = P_R \wedge w = r\} \equiv \pi_{RSR}^C$. Suppose the president to act according to his signal. Then, calculating these probabilities, it is easy to see that $\pi_{RUL}^C < \pi_{RSL}^C$ and $\pi_{RUR}^C > \pi_{RSR}^C > (1 - \pi_L^{I0})$. It follows from the second inequality that C will not be reelected after the implementation of P_R .

Thus, the voter behaves as described in Proposition 4 if and only if $\pi_{RUL}^C < (1 - \pi_L^{I0}) < \pi_{RSL}^C$. Given the supposed behavior of the president, this inequality is equivalent to $\frac{\sigma_H}{\sigma_L} < \frac{\tau^2}{(1-\tau)^2} < \frac{1-\sigma_L}{1-\sigma_H}$.

Calculating and comparing the expected utilities from informed policy and populist implementation of P_L for both political types of president, it can be shown easily that C acts according to his signal if and only if $E < \min\{E_L^{CL(a)}, E_L^{CR(a)}\}$.

Proof of Proposition 5 Suppose the president to act according to his signal. Because $\pi_{RUR}^C > \pi_{RSR}^C > (1 - \pi_L^{I0})$, C will not be reelected after the implementation of P_R . Thus, the voter behaves as described in Proposition 4 if and only if $\pi_{RUL}^C < \pi_{RSL}^C < (1 - \pi_L^{I0})$. The first part of this inequality is easily shown to hold in general, given the behavior of the president. The second part is equivalent to $\frac{\tau^2}{(1-\tau)^2} < \frac{\sigma_H}{\sigma_L}$.

Calculating and comparing the expected utilities from informed policy and populist implementation of P_L for both political types of president, it can be shown easily that C acts according to his signal if and only if $E < \min\{E_L^{CL(b)}, E_L^{CR(b)}\}$.

This proves Proposition 5.

Proof of Proposition 6 Suppose C to act according to his signal if he is a rightist and to implement P_L regardless of his signal if he is a leftist. Then, the voter behaves as described in Proposition 6 if and only if $\pi_{RUL}^C < (1 - \pi_L^{I0}) < \pi_{RSL}^C$. Given the behavior of the president, this inequality is equivalent to $\frac{1}{\sigma_L} < \frac{\tau^2}{(1-\tau)^2} < \frac{1}{1-\sigma_H}$.

Calculating and comparing the expected utilities from informed policy and populist implementation of P_L for both political types of president, it can be shown easily that given Assumption 3, C acts as described in Proposition 6 if and only if $E_L^{CL(a)} < E < E_L^{CR(a)}$.

Proof of Proposition 7 Suppose C to act according to his signal if he is a rightist and to implement P_L regardless of his signal if he is a leftist. Then, the voter behaves as described in Proposition 7 if and only if $\pi_{RUL}^C < \pi_{RSL}^C < (1 - \pi_L^{I0})$. Given the behavior of the president, the first part of this inequality holds in general, and its second part is equivalent to $\frac{\tau^2}{(1-\tau)^2} > \frac{1}{\sigma_L}$.

Calculating and comparing the expected utilities from informed policy and populist implementation of P_L for both political types of president, it can be shown easily that given Assumption 3, C acts as described in Proposition 7 if and only if $E_L^{CL(b)} < E < E_L^{CR(b)}$.

Proof of Proposition 8 Consider first a rightist voter confronted by the leftist incumbent party. If and only if the incumbent party will be

relegated regardless of the president's policy choice, it is optimal for both types of president and *for all values of e and E* to always act according to their signal in the first period.

It is easy to see that the voter will elect the challenger C independently of the policy implemented in the first period if and only if I can be deemed more likely to be a leftist than C even after having implemented an unsuccessful right wing policy. This condition is equivalent to

$$\begin{aligned} & \frac{\alpha \tau (1 - \sigma_H)}{\alpha \tau (1 - \sigma_H) + (1 - \alpha) (1 - \tau) (1 - \sigma_L)} \\ & > \frac{\alpha (1 - \tau)}{\alpha (1 - \tau) + (1 - \alpha) \tau} \end{aligned}$$

which can be written as

$$\frac{\tau^2}{(1 - \tau)^2} > \frac{1 - \sigma_L}{1 - \sigma_H}.$$

If and only if this condition is fulfilled, the incumbent president always acts according to his signal, independently of the value of E .

Consider now a leftist voter confronted by the rightist party that has become the incumbent party. If and only if the rightist party will be relegated regardless of the president's policy choice, it is optimal for both types of president and *for all values of e and E* to always act according to their signal in the first period.

It is easy to see that the voter will elect the challenger I independently of the policy implemented in the first period if and only if C can be deemed more likely to be a rightist than I even after having implemented an unsuccessful left wing policy. Formally, this condition says that

$$\begin{aligned} & \frac{(1 - \alpha) \tau (1 - \sigma_H)}{(1 - \alpha) \tau (1 - \sigma_H) + \alpha (1 - \tau) (1 - \sigma_L)} \\ & > \frac{(1 - \alpha) (1 - \tau)}{\alpha \tau + (1 - \alpha) (1 - \tau)}. \end{aligned}$$

This, too, is equivalent to

$$\frac{\tau^2}{(1 - \tau)^2} > \frac{1 - \sigma_L}{1 - \sigma_H}.$$

Proof of Proposition 9 It is easy to see that the second-period utility expected by the voter at the beginning of the first period does not

depend on what happens in the first period. Therefore, only first-period utilities must be compared across equilibria.

Consider first the case where $E_L < E < E_H$. If the voter elected the leftist party for incumbent, the inefficient separating equilibrium described in Proposition 2 would be played. Her expected first-period utility from this equilibrium amounts to

$$\begin{aligned} EU_L^{\text{hsep}} &= \pi_L^{I0} \frac{1}{2}x + \left(1 - \pi_L^{I0}\right) \left[\frac{1}{2}\sigma_L x + \frac{1}{2}\sigma_H (1 - x)\right] \\ &= \frac{1}{2}x[\pi_L^{I0} + (1 - \pi_L^{I0})\sigma_L] + \frac{1}{2}(1 - x)(1 - \pi_L^{I0})\sigma_H. \end{aligned}$$

If, however, the voter elects the rightist party for incumbent, her expected first-period utility from the resulting efficient equilibrium described in Proposition 4 will be

$$\begin{aligned} EU_L^{\text{disheff}} &= \pi_R^{C0} \left[\frac{1}{2}\sigma_L x + \frac{1}{2}\sigma_H (1 - x)\right] + \left(1 - \pi_R^{C0}\right) \left[\frac{1}{2}\sigma_H x + \frac{1}{2}\sigma_L (1 - x)\right] \\ &= \frac{1}{2}x[\pi_R^{C0}\sigma_L + (1 - \pi_R^{C0})\sigma_H] + \frac{1}{2}(1 - x)[\pi_R^{C0}\sigma_H + (1 - \pi_R^{C0})\sigma_L]. \end{aligned}$$

Define $\Delta EU^{\text{dhsep}} \equiv EU_L^{\text{disheff}} - EU_L^{\text{hsep}}$. The voter will decide for the efficient equilibrium under political disharmonism if and only if

$$\Delta EU^{\text{dhsep}} > 0.$$

Calculating ΔEU^{dhsep} , substituting the right hand sides of (1) and (2) for π_L^{I0} and π_R^{C0} in the above inequality, and simplifying with the help of simple algebra, one finds that

$$\Delta EU^{\text{dhsep}} > 0$$

if and only if

$$\begin{aligned} &\frac{1}{2}\alpha(1 - \alpha)\tau^2[\sigma_L x - x + \sigma_H(1 - x)] \\ &+ \alpha^2\tau(1 - \tau)[\sigma_H x - x + \sigma_L(1 - x)] \\ &+ \alpha(1 - \alpha)(1 - \tau)^2[(\sigma_H - \sigma_L)(2x - 1)] \\ &> 0. \end{aligned} \tag{29}$$

It is straightforward to see that the third term in brackets in (29) is strictly positive. If $[\sigma_L x - x + \sigma_H(1 - x)] > 0$, then also

$[\sigma_H x - x + \sigma_L (1 - x)] > 0$. It is easy to see that $[\sigma_L x - x + \sigma_H (1 - x)] > 0$ if and only if $\frac{x}{1-x} < \frac{\sigma_H}{1-\sigma_L}$. The latter inequality has been assumed to hold true in Assumption 1.

Thus, all the terms in brackets in (29) are strictly positive; and (29) holds true. Accordingly, $\Delta EU^{\text{dhsep}} > 0$. The leftist voter elects the rightist party for incumbent whenever $E_L < E < E_H$.

It remains to show that for $E > E_H$, the leftist voter also prefers to elect the rightist party. It is easy to see that the first-period utility the voter would expect from the inefficient pooling equilibrium described in Proposition 3 is less than EU_L^{hsep} . But if she elected the leftist party for incumbent and $E > E_H$, this inefficient pooling equilibrium would be played. Therefore, and because $EU_L^{\text{hsep}} < EU_L^{\text{disheff}}$ as demonstrated above, the voter elects the rightist party for incumbent whenever $E > E_H$.

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